

Fall 1981

WPJ Journal

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Editor: In your recent survey of alumni, I indicated a superior rating for Tech's publications. The most recent publication with a featured article on a so-called "inventor" appalled me.



Trustee nominations sought

Every year, the WPI Alumni Association has the opportunity to nominate three alumni to serve as alumni term members of the WPI Board of Trustees. Paul W. Bayliss, '60, of Barrington, Ill., chairman of the Association's Trustee Search Committee, announces that the committee is now receiving petitions for consideration and nomination for 8-year terms beginning in July 1982.

In my opinion, the article was an expose of a patent seeker. As a holder of world-wide patents for basic high speed taping systems mainly used in the wire industry, it is repugnant to me to denigrate the role of a true inventor whose patented achievements sufficiently add to the world's technology base to warrant acceptance of royalty based licences throughout the world.

Your article, again, in my opinion, did an extreme disservice to engineering students and young graduate engineers. While there certainly is a warranted historical place in industry for leisure games, and fine national and foreign firms enjoy

large markets for such products, most electronic games and toys are seemingly more representative of marketing applications of various assemblies and packaging of basic components wherein the fundamental technology, or inventiveness exists.

Finally, what especially exasperates me is my view that the entire article could be construed as a sales pitch for the author's planned new endeavors.

Constructively, please consider a future article based on the contributions Worcester Tech alumni true inventors have added to the world's technology base. A little research will give you quite a list.

—John M. Townsend, '42
Guilford, Connecticut

1982 marks the second year of transition to the new 8-year alumni trustee term. Two trustees, Len White, '41 and Dick Davis, '53, will be completing their first five-year terms in June 1982. In accordance with the by-laws as revised in June 1980, both have elected to seek second five-year terms and have the recommendation of the Trustee Search Committee of the Alumni Association. Anson Fyler, '45, completes his second five-year term in June 1982 and is not eligible for another term. The Committee will recommend a candidate for an 8-year term to succeed Mr. Fyler.

Until 1989 when the transition to eight-year trustee terms will be complete, the Committee will endeavor to assure that at least one alumni term trusteeship will complete each year thereby assuring regular and orderly introduction of new members to the board under the new term arrangements.

The Committee seeks your suggestions concerning candidates for consideration for alumni trusteeships. Alumni may submit petitions on or before December 1, 1981, and they should be mailed to Mr. Bayliss c/o the WPI Alumni Office, Boynton Hall, WPI, Worcester, MA 01609. Any questions regarding procedures for the formal submission of proposals should be directed to Stephen J. Hebert, '66, alumni secretary-treasurer, at WPI (617-793-5600).

WPI Journal

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product liabilities, that is
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Cover: This mysterious-looking photograph of Boynton Tower was taken by Mechanical Engineering technician George Schmidt through a special prism lens.

An important note to Journal readers:

THIS IS THE 48TH and last issue of the *WPI Journal* which will be edited by H. Russell Kay. Russ has submitted his resignation to accept a position with the Computer Security Institute in Northboro, Massachusetts, effective December 1, 1981.

During the past eleven years as Director of Publications at WPI and as editor of the *WPI Journal*, the quality and scope of our college publications has increased immensely. A style has been developed which has been easily recognizable, aesthetically pleasing, and editorially effective, thanks to Russ's careful nurturing of the myriad number of publications he has been responsible for. In fact, during his years at WPI the number of publications he has produced annually has increased from approximately 50 to nearly 300 this past year.

We congratulate and thank Russ for the excellent job he has done for WPI and for the *WPI Journal* and we wish him much success in his new position.

—Donald E. Ross, '54
CHAIRMAN,
WPI PUBLICATIONS COMMITTEE

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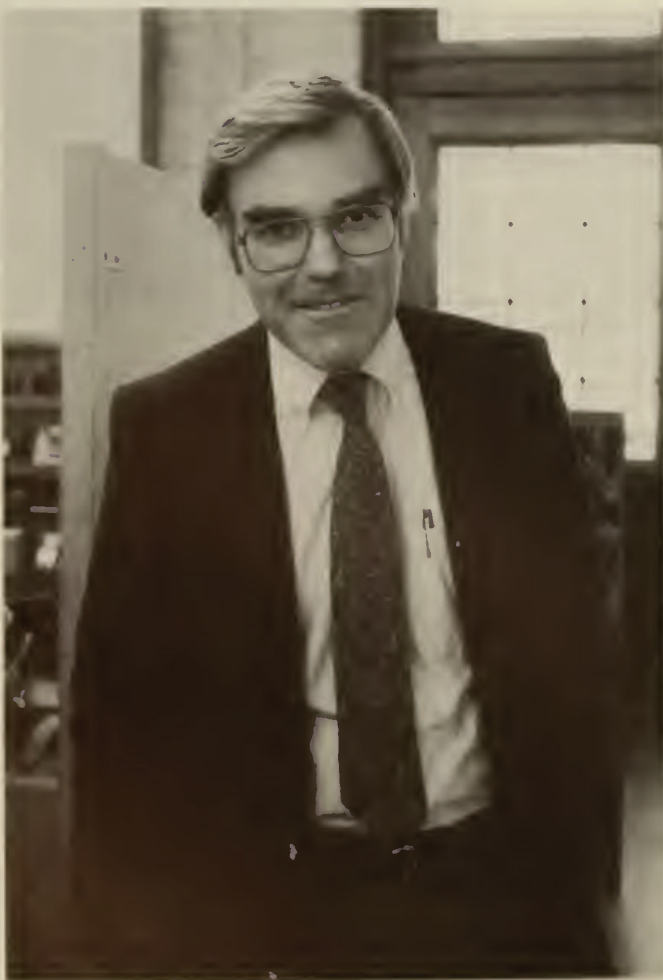
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Ray Hagglund:

A WPI asset who's concerned with liabilities . . . product liabilities, that is.



MENTION THE WORDS **products liability** to someone in the manufacturing industry, and chances are you'll get a reaction of pain and frustration. Although it has been around for quite a while, only in recent years has products liability—what might be called manufacturing malpractice—occupied a prominent place in American civil litigation. Because it is so recent a phenomenon, many engineers and managers don't have much experience to go on, and they have to rely on instinct. That can be a dangerous course of action when entering the territory of the law.

Mechanical engineering professor **RAYMOND R. HAGGLUND**, '56, has more experience in, more knowledge of this new area than most engineers or educators will ever dream of. Hagglund comes at products liability from a unique perspective—the consulting technical expert who testifies in court, a veteran of more than 300 cases in the past decade.

In the interview which follows, what is perhaps most interesting—even more than some of his “war stories”—is the way in which Hagglund uses his experience to further his teaching at WPI; how he helps ensure that the next generation of engineers will be better able to cope with the legal implications of their professional work.

Q: How did you first get involved with products liability?

I have always been interested in consulting on technical problems, that is, applied problems rather than problems involving pure research. I'm interested in systems, also—not just the calculations for a shaft, but the whole machine. That's just my nature. I handle systems which are interdisciplinary in their nature; I apply a lot of technological knowledge, and where I don't have the knowledge required, of course, I can get someone to consult with me. That's how I like to address problems—wide open. I've always been that way.

I have worked as a consultant since I graduated from WPI in 1956. (Of course, you're kind of limited in what you can do at that point in your career, and people don't call you because you can't do very much, but you're young; you live through it.) But I did find work, and I was successful at it, and I had fun too.

In 1962, another teacher at WPI started a business called Massachusetts Materials Research. I agreed to work with him, and so I got involved with a lot of consulting. There came a time when I had to make a decision, whether to go with the company full-time or stay in teaching. I decided to stay at WPI, and the company hired a technical director. I'm still a consultant to them.

These were mostly quite technical problems that I encountered from 1962 to 1968 or so. A few of these consulting problems involved failure of a machine or an accident, where I had to go to a factory, determine what happened, and make a report (perhaps suggesting a design change)—which would go to an insurance company.

Then a couple of those reports ended up in lawyer's hands too, and I found myself being requested to appear in court. Even though products liability law had been around for a long time, there was very little happening with it until the middle 1960s, when it started to become active. It didn't become a major area of law until the early 1970s, and at that time there were still very few lawyers in this field.

Q: What was your first major products liability case like?

In 1970, I was engaged to look at an automobile that had been involved in a rear-end collision. It was a 1970 Ford Maverick, and it had what is known as a drop-in fuel tank at the rear of the vehicle. The gas tank drops into a hole in the trunk floor and therefore becomes part of the structural strength of the rear of the car. By doing this, Ford saved a piece of metal, which saved some money. But in a rear-end collision, after the bumper gets hit, it

doesn't take much to start hitting the trunk floor, which starts squeezing the fuel tank, which then shears, tears, and dumps raw gasoline into the trunk. The filler plumbing is located in the trunk, and that also separates to dump more gasoline into the trunk.

I declared that this was terrible design, and I backed my statement with "state of the art" research that Ford itself had funded in 1967, where they found that this was bad design. Yet three years later they were still making the 1970 Maverick in the old, bad way.

This sat for quite a while, and I didn't think anything more of it. But then, in 1973, it came to trial in Providence, Rhode Island. Suit was filed on behalf of the 16-year old who had died in that accident. This became known as the Turcotte case, and it was the first major trial I was involved in.

I explained to the jury that this particular fuel tank design was bad design, was negligent design. There were experts on the other side saying it wasn't. The jury made a finding for the plaintiff, awarding the estate \$500,000. This was an important case, and it hit the newspapers across the country. The case was appealed, and the reviewing judge ruled that the original finding and award would hold. This case set a legal precedent in what is known as "second collision" theory. I made the grand sum of about \$300 on that one.

But my name began to be known, and I started receiving phone calls from all over—Virginia, Alabama, Texas—anywhere someone had a similar accident case.

Q: Did all these cases involve Fords?

No, in fact all of these others involved American Motors Corporation Gremlins, which had fuel tank designs that were much worse than the Fords. You know, at one time I got scared; I thought that AMC might put out a Mafia contract on me, because I was involved in so much litigation against them.

The AMC Gremlin had a terrible design. The fuel filler neck is in the back of the car. When the car is hit at 15 miles an hour, the plastic upholstery will pop off and the rubber connection will separate. At a little higher speed, the gas tank gets crushed against the differential, and the nozzle inside the car, pointing forward, will spray gasoline on the driver and the passengers. The wires in the taillight, scraping against metal, will fray and spark. In seconds there will be an explosion and a fire.

Sometime later in my products liability career, I flew down to Alabama to prepare for one trial against AMC. My first job was to gear up the trial attorney. By this time, I knew what the attorney has to do for opening statements and trial organization. I selected,

from material I had brought with me, documents for him to read and burn into his memory. I explained the important pieces of the documents, and then he could decide whether to incorporate that into his opening statements.

On Wednesday, when the trial was proceeding, the defense thought they had me in a corner. I was asked, "Professor Hagglund, you said there was a fire in the vehicle."

I said, "There surely was a fire; some of this material has been damaged."

"But the fire was at the front of the vehicle, wasn't it?"

I said, "No, it was in the rear of the vehicle also."

He continued, "Look at this photograph." It was a picture of the area to the left of the filler neck. "The floor paint isn't even touched by fire. Therefore there could not have been fire there. Would you not agree?"

"No," I said, "that's faulty reasoning. There was a fire above the paint. The fire did not touch the paint. It didn't burn there because there was too much gasoline. The gasoline sloshed over there, and too much gasoline doesn't burn. Flammable vapors have to exist, and that means you have to have a certain proportion of gasoline to air to have a fire. Too much is like a flooded car. When you try to start your car, the engine won't fire. Too little is like an empty gas tank. You have to be in the right range."

My attorneys were shocked. They had never heard this before, and they got scared. They came up to me as the day ended, asking what was I doing?

"You don't understand what I'm talking about, do you?" I replied.

"No way, it couldn't possibly be true. Gasoline burns; everyone knows that."

"Listen," I said back to them. "You're not going to believe what I tell you. Before we do any more work tonight, I want you to get in touch with the local fire marshal. Ask him some questions and see what he says. Then we'll talk."

They did that, and, to their amazement, found out I was right. When they came back, we started work on how to cross-examine the AMC expert. "You have to box him into that same corner," I told them. I laid out the questions they had to ask. We talked and talked, and they couldn't quite grasp everything, but at least they had the questions, the essence of what I was saying. They got the AMC expert on the stand the next day, and they kept working and working on him, and finally, after three hours, got the man to agree with me. At that point the case was settled, instantly.



Q: You do a lot of work with automobile cases. Why is that?

These early cases were automobile-related. Once started in this sort of thing, I became an "expert". I happen to have a keen interest in cars and in working on them; I do all my own car repairs, for example. I understand a lot about automobile systems, and I can match what I see with engineering theory.

Q: In all this work with the legal system, in courtrooms and lawyers' offices, how did you cope as an engineer without legal training?

Because of my courtroom work, I became fascinated with law. I started to collect and read law books, because the lawyers I dealt with were talking a language I didn't understand. What was worse, I didn't understand the logic of what was going on. So I started my own law library in this new field of products liability, reading—with considerable effort at first—all the major books.

Q: Can you discuss a non-automotive products liability case?

I went up to St. Johns, New Brunswick, where the Erving Pulp and Paper Mill had a small pulp mill. (Small in this context means that it only cost \$200 million and uses 3,000 cord of wood a day; big ones use 12,000 cord!) This mill had a \$30 million boiler that generated steam for the process. In this boiler was an economizer, a section that preheats water going into the boiler. This is a big bank of tubes—two inches in diameter, spaced just one inch apart, jammed together into a small area. The mill was experiencing tube failures, which meant water leaks. In this particular type of boiler, when you have a serious leak you can have a violent explosion which will level the entire building and kill everyone in it. It's important not to have leaks.

Two years after the boiler had been installed, these leaks were now coming once and twice a week. Each time it would take 24 to 48 hours to correct the problem. This meant shutting down the system, finding the leak, cutting away good tubes in order to get to the leaking tube, then rewelding the bad tube and all the ones that had to be cut to get in there. It probably cost the company \$250,000 a day, money they could never recover again.

When I was called in to look at this, I made some calculations and determined that the tubes failed in fatigue because of a very sophisticated vibration problem. Gas flow through the tubes was leaving vortices behind each tube—like eddies in a stream—and the vortex frequencies matched the tubes' natural resonant frequency, and also matched the "organ-pipe" frequency across the walls. This created serious vibration, and it stressed the tubes until they started failing.

I was there to solve a problem. There were another 20 people from around the world, who were there not really to solve this problem but to save their asses because they had helped build this boiler which kept leaking.

My work on that case expanded over the next three years. I put together a major report in which I advised the company, on the basis of my calculations, to forget about welding and rewelding the tubes; but instead to make some changes and install a new \$2 million tube module, after which they would have no trouble. (And indeed they have not.) Then I advised them to enter a products liability suit against Babcock & Wilcox, Ltd., in London, who had designed this boiler and done it improperly.

To follow up on that, I had to go back and conduct major studies because there were so many different people involved, and each had a different viewpoint. I did mathematical analyses, ran experiments on the boiler system, and made videotapes. I went to London and met

with B&W people, and then I presented my report. The first part of the report contains all my base calculations; the appendices contain what is called the "state of the art." This is what was known and published about boiler tube vibration, and prediction of boiler tube vibration, at the time the boiler was made in 1972. I found that B&W did not use the state of the art—I think, in fact, that they just guessed at what they were doing.

I was able to do all this for the paper mill because I had been studying law. I knew the structure of the law; the logic of law. Now I could produce a report suitable to be handed directly to an attorney. There is now a \$4 or \$5 million damage suit pending in London. The mill's attorneys drafted a "complaint" (which details the particulars of the suit) and sent it to me for comment. I rewrote it completely, to eliminate technical errors and misunderstandings, and returned it to London. I expect I will have to go to London to testify before this case is finished.

This is a case that involves every discipline of mechanical engineering that you could put together; now I use the problem in my courses here at WPI as a vehicle for teaching.

Q: How do you do that? What do you carry over from that case into the classroom?

In the Interactive Qualifying Projects (IQP) I advise, I have my students read a legal book on products liability, including case studies that I have developed. I want to get them accustomed to the strange and dense language of the legal literature. I give them reports like the one on the boiler tubes to look at, and we discuss these in class. Then I give them a simple case and ask them to determine whether a particular product is reasonably or defectively designed and manufactured. We discuss that case and suddenly begin to see very different opinions in the classroom. I bring in a judge to discuss his role in a products liability case, then a plaintiff's attorney, a defense attorney, and maybe an insurance company representative, each presenting their sides of products liability. Then we'll go to an actual court case—visit a trial in progress, if possible. I'll have them sit in on actual depositions to see what is involved.

Finally, I'll give my students the raw material of a new case, perhaps something I've worked on which has already been to court, and they each have to produce an expert's report.

Products Liability— definitions and a few recommendations

IN ORDER TO clearly understand some of the things mentioned in this interview please note some of these key concepts which are invoked in products liability litigation:

WHAT IS PRODUCTS LIABILITY?

Products liability is the name for a special branch of law which deals with suits alleging injury to a person (or his own product) as a result of an alleged defect in a product.

NEGLIGENCE.

If the product was poorly designed or manufactured because care wasn't taken, then the manufacturer can be held responsible due to his negligence.

STRICT LIABILITY.

No matter what the reason for the product's failure, no matter how many precautions were taken by the manufacturer, he might be held responsible under the doctrine of strict liability if the defect was in the product when it left the manufacturer.

IMPLIED WARRANTY.

The fact that an item is offered for sale is an implicit statement that it will do its job and that it is reasonably safe. This doctrine of implied warranty helps protect the consumer.

EXPRESS WARRANTY.

Anytime the manufacturer or seller makes a specific statement of a product's properties or capabilities, this can be held to be an express warranty applicable to that product.

BASED ON HIS WORK, Professor Hagglund suggests that any person involved in product development or manufacturing consider these 4 critical questions:

1. How will the product be used?
2. In what unusual but foreseeable ways will the product be used?
3. How could a person be hurt while using the product?
4. How could another company's product—a system—be damaged as a result of a defect in a component product?

IN ADDITION, Hagglund lists the following 10 common charges of negligence often encountered in the product development cycle. He notes that if these are considered early on in the design and manufacturing processes, the chances of successful product liability litigation against the manufacturer are significantly reduced.

Creating a design:

1. The designer did not foresee possible alternative use of the product.
2. The design did not incorporate proper safety devices.

Analyzing the design:

3. The product was defectively designed. Examples—improper calculations; no calculations; improper use of codes and standards; current state of the art not used; improper selection of materials.

Preparing the design for manufacturing:

4. The product was not tested prior to being released to manufacturing.

Manufacturing the product:

5. The product was defectively manufactured. Examples—improper welding; improper fasteners; defective materials; improper heat treatment.

Testing the product:

6. The product lacked sufficient quality control testing. Examples—dimensions out of tolerance; a lower-quality substitute component incorporated; no x-ray testing; no testing of the final product as it will actually or foreseeably be used.

Selling the product:

7. The product was improperly advertised. Examples—misleading claims; over-energetic salesperson.
8. Instructions for proper and safe use of the product were not given.
9. The product lacked proper warning signs.

Post sales:

10. The manufacturer did not notify all owners of the products that new safety devices were available or that a design modification had been made to improve the safety of the product.

SUGGESTED FURTHER READING:

General:

Alvin Weinstein, et al., *Products liability and the reasonably safe product* (John Wiley & Sons, 1978).

Legal:

E.N. Swartz, "Hazardous products litigation," Chapter II of *Theories of liability* (Lawyers Cooperative, 1973).

Harry M. Philo, *Lawyer's Desk Reference*, volumes I and II.

Codes and Standards:

Accident prevention manual for industrial operations (National Safety Council, 1974).

American National Standards Institute (ANSI), 1430 Broadway, New York, NY 10018

Q: In your products liability work, do you usually work for the defense?

Of all the cases I look at, I would say they divide up pretty evenly—about one-third of the time I work for the defense, one-third for the plaintiff, and the remaining one-third I don't see a case to be made, so I don't go any further.

Q: How involved do you get with the legal procedures involved in suits, other than just testifying?

Look at a current case I'm working on. A well-drilling rig had been working on top of a mountain in Vermont. The driver started to take the rig down the hill when he heard an air leak in the cab. He felt around, trying to find the source of the leak. What it was, of course, was the air brakes, but the leak wasn't big enough to trigger the automatic emergency brakes. The driver tried to regain control of his truck; he was still traveling only 15 miles an hour. But with a 15-speed transmission, you can't just downshift and upshift whenever you want. The driver couldn't get control. The main ("service") brakes wouldn't slow the truck, and the driver couldn't downshift . . . he had to upshift, in fact, which only made matters worse, because it let the truck go even faster. The trucker had a mile to go down the hill. After he began really moving, he pushed the button to apply the emergency brakes. But this didn't slow him down much. He was driving this 44,000 pound well-drilling rig down the mountain, no brakes, taking turns on two wheels, with the speedometer pegged at 80 miles an hour. He finally made it down the mountain to face a T-intersection. He saw ahead of him a field, so he went straight ahead. But it wasn't a field; what he thought were bushes were the tops of trees. He went down a 70-foot drop, about 300 feet into the woods.

I went up to Vermont and ran physical tests using a comparable rig on those same mountains. It turned out the braking system for that truck was totally inadequate; it had been defectively designed. This was a 1965 truck, and the accident occurred in 1976, only two months after the truck had been refurbished and resold. I declared that it was refurbished improperly, because the brakes had never been touched. On level ground, this truck took 90 feet to stop from 20 miles per hour. (And with the emergency brake it went almost 200 feet.) All laws require that a vehicle stop in no more than 40 feet from that speed using the service brake.

I had to construct the entire legal case: the basic elements of the demand and the interrogatories—questions to the companies being sued for the purpose of getting information which I needed and which should be available. By law, they have to answer these within 30 days. I prepare these, and then the lawyers put in the necessary legal language at the beginning and the end, but they leave the technical material the way I write it.

I word these interrogatories so they are quite specific, so there is a definite answer which must be given. For this case I put together perhaps 100 questions. After reviewing the answers to this first set of interrogatories, I put together a second set, aiming at getting more refined answers. In this case we have not received the signed answers to the second set, because they will not answer one of my questions—and they don't want to do it because their answer will nail together my entire case.

Depositions are another area. After you know a little about a case, you want to find out specifically what the expert at a particular company knows about what that company did. So a deposition is taken from that expert, under oath, and it can be used in the courtroom. I prepare the attorneys carefully for each deposition. I write out the questions for them to ask. We talk about what they want to cover, get the logical framework right, then I sit with them at the deposition to hear the answers. Based on the answers, I write out subquestions, where we need further probing. This way we get the information we need, on target. Most depositions which are taken by an attorney alone, without technical support, are so broad and ramble all over the place, that the information is often of no use. When I see that, I wish they could take another deposition; but under the law they only get one chance at it. Technical backup is extremely important here.

Q: In a case like this, who is actually being sued?

Here we first have a company that sold a drilling rig consisting of a drilling unit mounted on a truck. To produce this they needed a truck, which they ordered from a truck manufacturer according to their own specifications. For example, no front brakes. For example, emergency brakes only on one of the two rear axles. For example, the small size of the brakes to be used. Yet the company which issued these specifications had no expertise whatsoever in brake technology or in the stopping of vehicles.

The truck maker builds the truck. Now we're dealing with ethical questions. Is it proper for the truck maker to build the truck according to the specifications of the purchaser, knowing full well that this vehicle will be driven on the roads of the United States and that it does not meet, and has no chance of meeting, any state requirements for braking performance? The maker of the truck is negligent. He should not have taken that order unless he convinced the customer to do things differently. It just happens that truck maker built trucks of a similar type for other companies during that same year, 1965, and in those other trucks it employed the best brake technology available at that time.

So the truck maker is at fault. The company that ordered the truck and put on the drilling unit is at fault. Now another company comes into the picture, some eleven years later. In 1976 we have an old truck, with an old drilling package. This latest company painted the old truck and put a brand new drilling package on it. This truck is sold, again to be driven on the highways, but it has no chance of being properly registered in any state. The braking system doesn't even begin to comply with the newer, more stringent requirements in effect for truck braking systems.

This company says that they don't build trucks, so it's not really their problem. But I say that they sold the truck, and they should have had the brakes repaired and upgraded, because it was possible to do so. This rig sold for \$100,000 in 1976, and it would have cost only an additional \$240-\$500 to upgrade the braking capacity of that truck so that it would have been able to stop properly.

Q: You've talked about the technical side of your cases. What happens, though, when these cases come to court? How do the attorneys on the other side counter your testimony?

If you know the system, you're really in business. I went to Sandusky, Ohio, to testify about an accident that took place in Worcester. A boy was hurt in a shear-grinding machine which required that the operator place his hand very near the grinding wheel when he turned it on. It took four seconds for the machine to grind off two fingers. To expose a person to this kind of injury is bad design.

I arrived in Sandusky to discover that the trial attorney had just been selected, and he didn't know anything about the case. I met with him on Sunday to prepare him to make his opening statements to the jury on Monday. I had to be sure that he knew what to ask of witnesses, to elicit the right answers which would set the basis of fact on which I could then speak and render an opinion. If the factual base isn't set right, then no opinions can be given.

I worked with the attorney through Tuesday, when the case hit a severe snag. The law of Massachusetts had to be applied there in Ohio, and they didn't know which law that was. Fortunately I had my law books with me, and I could give them the proper legal citations so they could find the actual law. The case continued without delay.

I was on the stand testifying, when this question was put to me: "Professor Hagglund, wouldn't a reasonably prudent person have pressed the stop button?" 'Reasonably prudent' are the magic keywords here—you just have to know that. I said "No"; and it happened that the judge recessed the trial until the next day. The defense attorney came over to me and said that he was not going to call me in the morning, and that I was free to return to Massachusetts. I could leave that night, in other words. I knew this had to be a set-up, so I quickly went to see my trial attorney. I told him, "I guess I'm going home tonight, Tom, because I've just been given permission to leave." He almost flipped because of the unethical nature of that defense attorney's behavior.

Of course I didn't leave. I stayed to tell the jury my side of the case, and it resulted in an award of \$60,000, which was a big award then for two fingers. This case, after review, set a legal precedent in the area of machine design.

Q: The other side doesn't always want you to be there, do they?

No. That was one tactic that has been used to get me out of the courtroom. A different one was used in the Turcotte case in Rhode Island. I was asked to identify the accident car in some photographs handed me by the defense attorney. I had taken my own photographs in the case, some three years earlier, but I hadn't looked at them in a long time. So I told the judge I needed more time to study the pictures before I could give my answer. The defense attorney pressed hard for an immediate answer, but I said I needed to compare these new pictures with the ones I had taken, looking at scratches and so forth. The judge recessed the jury to give me time to study the pictures. They were pictures of a different car, not the one involved in this case at all. Clearly, the defense attorney wanted me to identify the pictures as showing the accident vehicle, and then he could discredit my identification and thus all of my testimony.

Another case happened in Worcester. An attorney whom I'd run into before didn't want me to testify in a punch press case. He brought in his own expert, who worked for the maker of the punch press. This lawyer then asked his witness, "By the way, this machine was made in 1943. When were you born?" And the fellow replied, 1937. "My gracious, then you were how old when

this machine was built? Six years old? You didn't have an engineering degree then, did you? Did you know very much about engineering? Did you do any engineering at that time?" Well of course the answers were all No. He then looked at the judge and said, "Your honor, I move that my witness, my own expert, be discredited, disqualified, for he did not know anything about the practice of engineering at the time this machine was built." The judge said, "Of course."

Then I was called to the stand. "Professor Hagg-lund, when were you born?" 1934. "How old were you in 1943? Did you have a degree? Did you practice engineering? Were you employed by any engineering companies?" Of course not. "Judge, I move that this witness be disqualified." I was off the stand in a flash.

That brought the case into a state of limbo. There were no witnesses to testify. How could the case go on? It either had to be settled, or there had to be a motion for a new trial. I recommended a settlement in this case. But it certainly was a cute tactic.

Q: It sounds as if you really enjoy the cut and thrust of the courtroom.

I do, and I can accept the pressures. My absolute rule, whether I'm working for the plaintiff or the defense, is that I handle my own case completely, with no restrictions from anybody imposed on me. And when I take a position—which might be 'there is no case here'—that's it. If I decide there is a case, then I insist it has to be fully developed, with no loose ends at all. And good attorneys only want it that way.

The problem is that, when you do a thorough job, it costs money. However, if you don't do a thorough job, you're made to look like a fool, and I don't like that. I won't be made to look a fool. I won't even touch a case unless I have full rein.

I have a lot of respect for attorneys. Some of them are incredibly brilliant, super people. A lot of engineers take the position that they don't like attorneys; therefore they won't work with attorneys. They won't do products liability work.

Well, I've worked with attorneys all over the country, and I would say that, out of several hundred, there are only three I have encountered who are unethical in the way they handle things. I cannot say, on the other hand, that I have seen many ethical experts. Instead, I've seen unethical and unprepared experts, people who are simply not qualified. There are many experts—I could name names—who will give you any opinion you want so long as you pay for it. That's terrible. And they are engineers.

I think what the system needs is more people from the academic world, who don't make their entire living this way, and who therefore can be more objective, more free to take a position or not take a position . . . and they also have more expertise than most of the experts I see. The only trouble is, the academic people don't want to get involved because of the pressures that accompany the legal process. Some people's emotional systems cannot stand that pressure. I happen to have the chemistry, the temperament, to take it and give it back. I enjoy the confrontation. I wish we had more people who did.

About 1975 or 76, I thought seriously about quitting WPI and going to law school. I could sense that I had an affinity for the legal work, and I knew I could put it together with my engineering background. But that would have involved three years of law school, and then I'd have to start to build a law practice from scratch. I decided not to become a lawyer, finally, because I enjoyed and was successful at what I was already doing.

Q: Are there times when your technical findings are ignored or not used by your clients?

There was a fire, outside of Yosemite National Park, where a person was terribly burned, and it was charged that an improperly designed gas hot water heater control was at fault. I flew to St. Paul, Minnesota, to look at the actual control and take photographs. I could see that this control had been totally abused. Abuse is a valid defense. An engineer has no obligation to build a totally accident-proof device, but he does have to build a reasonably safe product.

The plaintiff, I knew, would argue that the product was defective and unsafe. I would argue that it had been abused and was, in fact, safe. I did tests to show that. Then I met over a weekend with the defense attorney from San Francisco. We talked the case through, and knew there was a solid defense case. But he called me back at 1:30 in the morning and said, "Ray, I've thought about it, and we're not going to have you deposed. We don't want to put the plaintiff's attorney through college. They have called in five experts, who are not knowledgeable at all. They have done no testing, they don't have any theory about how the accident happened, they just contend that anything made out of plastic is bad. That's their position. Since they don't have a theory, and since they don't have any physical test evidence, and since their lawyer doesn't even seem to know just where he is going, all we could do with this type of defense would be to educate our opponents.

"And besides, even if this attorney doesn't use the information in this case, we know that he will seek out other gas hot water heater cases just so that he can make use of it."

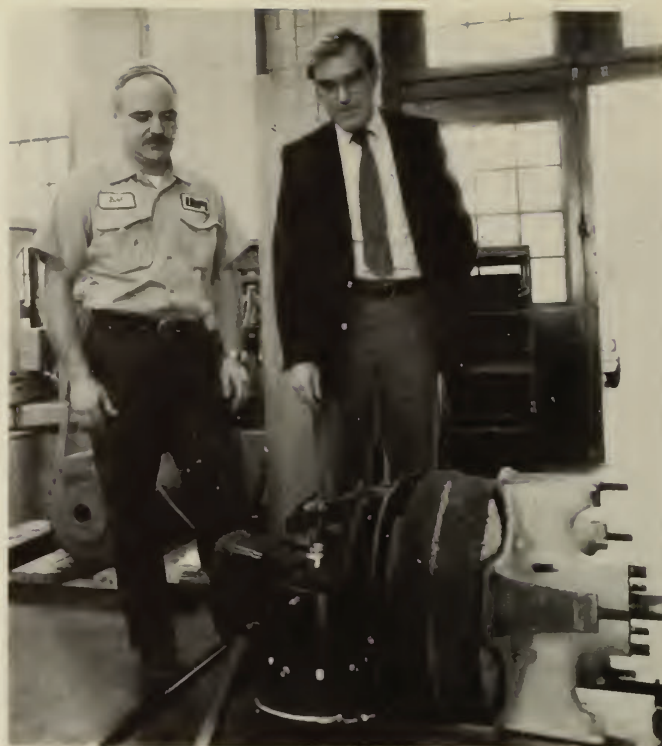
Therefore I was not deposed. On that Monday morning, the plaintiff's attorney of the questionable ethics telephoned me and wanted me to give him a summary of what I would have said if we'd gone through with the deposition. That is totally unethical behavior. I've run into this man two times, and he has acted unethically twice.

In this case, the court strategy is rather strange to me: we have a solid case, but we don't want to use it because it would give the plaintiff attorney ideas for his next case, and my testimony would become public information. However, the defending company attorneys know how to cross-examine the other side, based on what I have explained to them in private, and so here I am retained strictly as a consultant. Conceivably, at trial time I could fly to California to consult with them and help direct the attorney in his cross-examination of the witnesses. We'll have to see.

Q: In the cases you've been discussing so far, they appear—the way you present them—to be fairly clear-cut examples of liability or not, even though some involve fairly sophisticated technical knowledge. Do you find most cases are this way?

When I look at a case, if I find there is a legitimate defense, I will work for them. If I find there is not a good case, I will advise them to get out and settle. I just call it as I see it.

Once I decide there is a case, I do my utmost to pull together the complete logic that will be used in the courtroom, to show the clarity of the case. Remember, there is somebody on the other side who is (hopefully) doing the same kind of thing. Because of these two viewpoints, the case may become quite unclear now to the jury. It isn't black and white. In fact, if a case is totally black and white after everyone has done their homework, the case will settle outside of the court. Through depositions, the defense and the plaintiff each have a pretty good idea of what the other side is going to say. If they can all see that it will work to the advantage of the plaintiff, there will be a settlement. If it will work for the defense side, the trial may go on, or there may still be a settlement (a lower one). But if both sides are well balanced, and they each believe in their cases, it will go to trial and the jury will make the final determination.



That's another ball game, of course, because of the jury. They have no special skills in calculation, no special knowledge of technology or whatever else may end up being introduced into that courtroom. They generally don't take notes, and a long products liability trial can last three to six weeks. They can't even talk to one another during the trial until the very end, when they deliberate. An awful lot of testimony must get lost in the process, because they can't possibly remember all the important statements. I've been on the stand for as long as four days in a row. That's a lot of testimony. How can jurors possibly retain all that's important? They can't, of course, and so it becomes more an issue of the witness's credibility.

For example, take an accident case that occurred in New Hampshire, where a motorcycle hit a Cadillac. After examining the police report, I was able to calculate that the motorcycle hit the Cadillac at 84 miles per hour, and that it was accelerating at the time. I did this on the basis of the trajectory of the sunglasses the motorcyclist had been wearing.

This was a \$1 million lawsuit. When we went to trial, I gave the jury a course in calculus and a course in dynamics. I derived every single equation that I used. I explained fully to the jury that I didn't expect them to follow what I was doing to the point where they would become engineers, but I wanted them to see that there was logic behind all the final equations, and the other expert was free to shoot them down if he could. Either they had to show Isaac Newton was wrong, or I made an error.

We won that case. It took a major amount of effort, and the jury surely didn't understand all they heard, but they had somehow to believe in what I was doing. So they were in college for four days.

Q: It sounds like the fact that you're a professor and used to teaching is a distinct advantage at times.

I think that's true when you're trying to explain something to a jury. Trials can be very complicated. Products liability is one type of thing, and accident reconstruction is another, but they kind of blend together in motor vehicle cases, where you need to use dynamical calculations and mathematics to determine the speeds of vehicles. The real question often is, was it the speed of the vehicle or the defect in the automobile that really led to the injury? In most of these accident reconstruction cases, or cases involving calculations, some lawyers really get lost—particularly the ones who majored in English or history. In those cases, I write out all the questions the attorney is to ask, then I give them the answers they should expect, and if they don't get the right answer, then they have to probe around until they do come up with the answer we need. That kind of direction helps even a non-skilled witness come across in a convincing way, because the questions have an order to them that makes things work out.

I don't want you to get the impression I'm always on the winning side. I lose cases too, and that takes getting used to. Juries can be quite peculiar. As firmly as I may believe the facts point inescapably to one conclusion, sometimes I know the jury finds the other way out of sympathy for the person involved. That's hard on me as an engineer and as a person, because it seems to violate everything I stand for. When I lose a case like that, I get kind of depressed and discouraged, but I have to be able to get back to work and pull myself out of it, and in a couple of weeks the depression will pass.

Q: You seem to do just about everything, don't you? Does that make you the "technological humanist" we talk about at WPI—the person who can temper his technical skills with judgment, and relate his professional work in a meaningful way to social concerns and human values?

Maybe. I do know that I have a lot of respect for the Interactive Qualifying Project (IQP) which we require of all WPI undergraduates. In the IQP we have our students do a project where they have to relate their technical skills to the real needs of society. Sometimes I'm not sure just how many students or even professors really understand what the IQP is all about. But I consider myself to be an acting professional in the field of IQPs (in the area of products liability). It's an exact match of technology to law to IQP to what we do here at WPI. I think my work provides an example, a role model, of what one person at WPI can do, what the IQP is in the technology-law area, what one engineering professional does in this field as a consultant.

My IQP students do their projects in the field of products liability, and they learn all that that entails. Humanities Professor Tom Shannon teaches a course on ethics, and I visit that class and talk about what I do: the tough professional decisions, the ethical decisions you have to make when you can't use equations—the judgment calls.

A few years ago, I presented a talk at the University of Massachusetts on ways of introducing products liability into engineering education. It frightened the professors I addressed even to consider this a part of their responsibility. They'd never thought about it. It wasn't their job.

As far as I'm concerned, it's an important part of my job.

Basically Bernie

by Ruth Trask

QUOTE FROM A PARENT of an incoming freshman after attending the newly instituted WPI parent-student summer orientation program held on campus in June: "I posed a question to the program director [Dean Brown], which he had to research and answer. He sought me out among the crowd and answered my question. I thought to myself, 'Now *that's* incredible.'"

Add approachable, imaginative, and innovative to that parent's 'incredible,' and you'll get the basic Bernard H. Brown, Dean of Students at WPI. During Bernie's 15-year career at WPI, he's had plenty of opportunity to display his many talents, but perhaps, never to such advantage to WPI as this summer during his shepherding of the all-new orientation program.

"The program was purely voluntary," Bernie explains. "We selected a cross-section of 150 incoming freshmen and their parents to spend a weekend on campus. Among the people who spoke to the parents and students during the weekend were staff members from Student Affairs, various department heads, professors, and project advisors. Of special importance were the student orientation leaders, who were available to give first-hand information from the student perspective about WPI's academic program, the faculty, staff, and student life in general."

On two consecutive weekends, different sets of parents and students were housed in separate residence halls and served traditional meals. They attended orientation

sessions and engaged in lively post-lecture discussions. One of the most popular features was a non-scripted video-taped session dealing with typical campus situations, such as roommate adjustment, peer pressures, academic concerns, and parents' anxieties. (A number of parents had not attended college, and they found the tapes as informative as did their sons and daughters.) The tapes were created by the Instructional Media Center on campus with WPI students from theater-related courses role-playing the various situations.

The orientation effort was the initial step in a totally new parents' program which will include a complete Parents' Day in November, communications throughout the year to parents, and a Parents' Handbook to assist in their understanding of WPI and the environment their son or daughter is about to experience.

The summer program will be evaluated by the Office of Student Affairs, and a recommendation given to the President's Advisory Council some time this fall. Says Bernie, "The problem with creating a successful program like this is that it puts greater demands on an already overworked staff to do an even better job the next time."

Overall comment following the fledgling program was highly favorable. Over 60 percent of the parents and incoming students returned evaluation questionnaires. One parent wrote: "Everyone involved was most helpful We felt privileged to be a part of it It was the most rewarding and profitable one-and-a-half days that we've spent in a long time." Another said: "The manner in which the faculty and students conducted themselves is excellent advertising for WPI and gives parents a nice feeling about the school."

The incoming freshmen were also impressed. Said one, "There was an unusual atmosphere of friendliness in everyone I met." Another agreed: "One of the best parts of the program was meeting new people, both staff and students." Yet

another summed up what most of the prospective students indicated: "I feel the summer orientation program is an excellent idea and should continue to be offered I learned a great deal about the academics, programs, activities, and student life. If I had not participated, I think I would be like a chicken running around without its head in the fall."

According to the evaluation sheets, the number of headless chickens at WPI should be far fewer this fall, thanks to Bernie Brown's progressive-looking orientation program.

AN EARLIER BROWN VENTURE is Cinematech, a program in which many of the best contemporary international films available are shown free to the campus and Worcester community. "Actually, one of our early social chairmen approached me with the idea about eleven years ago," he says. "He was interested in showing some international films, and had discovered a 'gem' by the name of Minnie Levenson, who had previously been affiliated with films at the Worcester Art Museum. Minnie has been with us ever since. The first couple of years we had to drag students in as they passed by Alden Memorial Auditorium. This past season was Cinematech's finest hour, as we had two showings of all the films and





turned people away practically every showing. The program has such a good reputation now, thanks to Minnie Levenson's expertise and hard work, that the Canadian consulate has offered us a film for this year's series at no charge. They want very much to be a part of such a prestigious program."

Besides using his innovative touch with the orientation program and Cinematech, Bernie has helped inject new ideas into the 1981-82 Student Handbook. "Last year we scrapped the freshman directory, at least the kind we used to have," he says. "We opted for an all-student type of publication which would serve the entire campus. And this year we've added a touch of humor."

A perusal of the new handbook, which Bernie has worked on with Charlotte Wharton, graphic designer from Publications, proves his point. Interspersed with nuts and bolts information about everything on campus from academics to activities, are off-beat illustrations and old-time movie photos with new, WPI-related captions. For example, under a photo of Laurel and Hardy costumed as elves in Santa's workshop runs the caption: "The Project Center is open every weekday evening for students to research their IQP's."

Along with his recent promotion, Bernie, who came to WPI via Springfield College and the University of Connecticut, continues with his long-term responsibilities for international students and student government. "I have always advised the international students," he reports. During the Iranian crisis, he helped Iranian students who had difficulty getting money out of their country, and who had lost contact with their families. "We had an obligation to them. We still do."

Currently, Bernie is involved in establishing an international house for students on campus. "We should be able to use a school-owned house adjacent to the campus by November," he says. "It is one of the most exciting opportunities we have had and should allow for an easier assimilation to our culture and our way of life for the international population."

At present, there are about 230 international graduate and undergraduate students at WPI. They come from different backgrounds, and have different needs and concerns: English as a second language; orientation to our academic process; culture shock; housing and medical information. Bernie helps the students prepare for any eventuality.

He still heads the club sport program, which now includes 22

various clubs, many with coaches of their own. The crew team participated at the Henley Royal Regatta in England this summer. A few years ago, the WPI club bowling team won the national collegiate championship, and the lacrosse team has recently had a number of successful seasons. The club sport program has come a long way. At present, over 400 participants are enjoying a competitive, healthy, athletic experience, which could lead to a lifetime of recreational sports participation.

Bernie's recent promotion to dean means that he can concentrate on planning and on the more creative areas, while still retaining some association with his former activities. He continues to advise the student government and the officers of all four classes, and he oversees all the activities of the Senior Class.

There have been other recent changes in the Office of Student Affairs (osa). Currently, Bernie reports to Robert Reeves, Vice President for Student Affairs, who joined WPI two years ago. Janet Begin is Assistant Dean of Students, and Glenn DeLuca, Assistant Director of Student Activities. Both report to Bernie. Additionally, Patty Lewis, Coordinator of Residence Operations, also reports to the osa.

As Dean of Students, Bernie deals with some student counseling and a variety of other situations in his campus office, but he doesn't have to be there to know what is going on. Since last year the office has installed a 'beeper' system to be able to keep in constant touch with everyone, to take care of breaking developments and emergencies, no matter where they might be. "Just ask my wife, Gayle, about the new system," he says. "I forgot to tell her I had the beeper at home one weekend, and when it went off, she thought it was the smoke alarm and started to rush the kids out of the house. It's that loud!"

He chuckles. "Looks like the beeper is one Student Affairs innovation that still needs some refining."



Phil Pierce, who came the greatest distance (drove!) to attend his 50th reunion this summer writes: "Two others came from California, **Red Sage** and **Cliff Bergquist**, but I was introduced to spherical trigonometry by 'Happy' Gay, and I believe that 'great circle' distances would prove me correct even though I do live on the east side of our street here."

He says that he and his wife Irma, "enjoyed the 50th golden reunion beyond words—one of life's memorable highlights."

underwriter of commercial property insurance. He joined IRI following his graduation from WPI, and has held a variety of engineering supervisory positions throughout his long career, culminating with his post as engineering personnel administrator in the home office. Recently inducted into the Society of Fire Protection Engineers, Gordon has long been associated with the Honorable Order of the Blue Goose International (an insurance group), which he served as a past Most Loyal Grand Gander (i.e., president). He has been active with the WPI Alumni Association in many capacities, including that of executive committee member, fund-raising committee member, and president of the local alumni chapter. In 1977, he received the Herbert F. Taylor Award "in recognition of distinguished service to WPI." In retirement, Gordon and his wife Ivye will continue to live in Hartford, Conn. Although they have already visited 49 states and much of Canada, Greece, Bermuda, and England, they hope to do more traveling, principally on the North American continent. Gordon plans to remain active with the Masons, ATO, and with WPI alumni activities.

Dana Woodward continues as president of American Shoe Machinery Co. His firm developed the American Tru-Fit Shank System, a machine which automatically cuts the material to the correct length, positions it on the insole to an exact fit, then bonds it and cures it with heat, making it a rigid shank. The system quickly became recognized and accepted by most major shoe manufacturers, one reason being that it cut the cost of the shanking operation. Currently, the company is the U.S. agent for shoe-making equipment produced in Germany, Denmark, Italy, and Mexico.

1938

John Despo is now retired and lives in Westlake, Ohio.

1939

George Yule recently sold the long-time family business, Leominster (Mass.) Granite and Marble Works. Over the years, the firm designed and built a number of monuments in Leominster, including the World War I veterans' monument, the Spanish War veterans' monument, the Johnny Appleseed monument, and the Indian mortar monument. A bell commemorating the Korean War was designed by George.

1917

Russell Callahan writes that he still sings tenor in the church choir. He also serves as music committee chairman and deacon for the church.

1930

Carl Backstrom, long-time chairman of the Citations Committee has stepped down from being top man to a committee member.

"Time for a younger man," he says. Prof. **Ken Scott**, '48 will be the new chairman. As the father steps down, the son steps up. Carl's son, **Gregory**, '70 is now the president of the Worcester County Chapter of the WPI Alumni Association.

Mr. and Mrs. **Harold Williamson** celebrated their fiftieth wedding anniversary on June 28th at a reception planned by their daughter and son-in-law at the Florida Institute of Technology in Melbourne.

1931

Warren Doubleday and **Roger Lonergan**, were not only classmates at WPI, they both became closely associated with the Quabbin Reservoir project in Massachusetts during the Depression. Doubleday, who lost his family home when the town of Dana was flooded to make way for the reservoir, worked as a civil engineer on the project starting in 1933. He was sad about the loss of his home, but in the depth of the Depression, he really needed the job. "I always looked at it from an engineering standpoint. There was no question it was a good place to put a reservoir." For the last two years, Lonergan has served as the MDC supervisor of the reservoir. His involvement in the project began in 1928 with a summer job, and he has worked as an engineer for the MDC ever since. He is also a town clerk for four towns.

1932

Constantine Orfanos' youngest daughter recently graduated from the University of California at Irvine. She received a BA in fine arts.

Leon Skuropat is still located in Sao Paulo, Brazil.

1933

In May, **Alexander Alves** was awarded an honorary doctor of engineering degree during commencement ceremonies at Tri-State University in Angola, Indiana. Born in Brazil, he earned his bachelor's degree in mechanical engineering from Tri-State in 1931, and received his second BSME from WPI in 1933. Alves, who is chairman of the board of Engineered Sinterings and Plastics, Inc., has published a number of technical papers on sintered metals, including magnetic properties of sintered powder and on plastics. He served as secretary and chairman of the American Society of Mechanical Engineers, Waterbury, Conn. section, and has been listed in *Who's Who in New England* and *Who's Who in Engineering*. In 1974, he received the Distinguished Service Award from the Tri-State National Alumni Association.

Bill Slagle writes that he is in over his head in church work. He serves as church clerk and had to prepare reports and statistics for the annual April meeting. Also, he has served as chairman of a committee rewriting the church by-laws and as chairman of the music committee. He is located in Medford, Mass.

1937

In June, **Gordon Crowther** retired after completing nearly 44 years of service with Industrial Risk Insurers, formerly the Factory Insurance Association, a leading international

1940

Herbert Morse writes: "In February GE asked me to consider working at a new satellite plant in Wilmington, N.C. This plant is starting to make components for jet engines that were previously machined in Cincinnati. I had worked with these parts in a similar capacity for over 25 years, and the experience in systems, methods, problem areas and unique operations was needed in this new facility." Currently, he holds the post of senior engineer for quality control in Wilmington. "This is an interesting phase of the business with many challenges and opportunities to apply past experience to a growing area. The move to a totally different climate, farther south and near the ocean, is a noticeable change and is very rewarding." Morse expects to be in North Carolina for two years, and then retire to Cincinnati.

1941

Robert Brautigam continues as technical manager for Durez Plastics Division of CanadianOxy Chemicals, Ltd. in Ft. Erie, Ontario, Canada. The firm is concerned with phenolic molding compounds and resins. Bob, who says he enjoys excellent health, plays golf and tennis, and hopes to take up skiing again. In the summer, he and his family vacation in their rustic cabin at Georgian Bay on Lake Huron. Last year, he had an exciting reunion with his brothers, Mike, '43, and Lawrence, '49, and their families in Frankfurt, Germany.

Stanley Ribb has been named senior vice president at Blackstone Valley Electric Co., where he recently stepped down as president. It is expected that he will retire later this year. Blackstone is a subsidiary of Eastern Utilities Associates. Ribb was president of the utility for the past ten years. A resident of Cumberland, R.I., he is married and the father of two sons.

For career-long excellence in teaching design, Dr. **Charles Smith**, former professor of engineering at the University of Nebraska, has been awarded the first Fred Merryfield Design Award from ASEE. The award is sponsored by CH2M Hill. Smith, whose career in education spans 40 years, is credited with a pioneering program at the University of Detroit that "raised engineering design education to the master's and doctoral levels." A former student said Smith's design courses differed from the traditional ones by his use of unstructured real-world issues. In addition, the majority of his courses enlisted outside clients, who brought not only their problems to the classroom but also their active participation in the design process. The City of Detroit was a client. Smith wrote nearly 90

research papers and 15 ASEE engineering case studies, ranging from "To Pinch or Not to Pinch" to "Problem of the Perverse Pinion." His recently-received award consists of \$1,000, a plaque, and a \$500 stipend for travel to the Annual Conference. In addition, his former department at Nebraska will receive \$500. This fall, he will take up a new post on the faculty of Rose-Hulman Institute of Technology in Terre Haute, Indiana.

1942

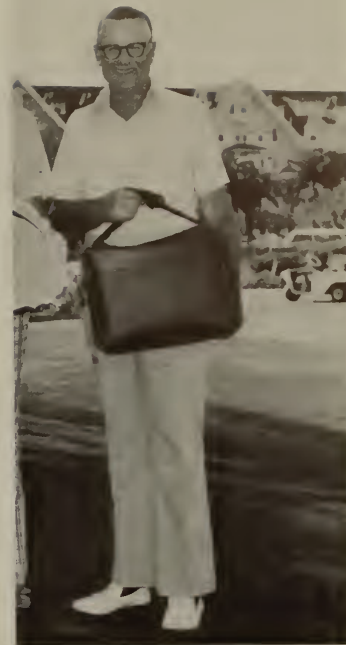
Bob Allen is with the Pump Group at Ingersoll-Rand in Phillipsburg, N.J.

1943

Robert Schedin continues as president and chief executive officer at Fairlawn Hospital, Worcester. Fairlawn is one of three hospitals in Worcester which pioneered same-day surgery. Although the smallest hospital in the city, it has by far the busiest same-day program in the area. Schedin, who promoted the innovative program, has an unlikely background for hospital administration. Prior to joining Fairlawn in 1972, he had designed looms at Crompton & Knowles Corp. for 28 years, rising to director of engineering.

1944

In June, **Earl Harris** was honored by the board of directors of Rodney Hunt Co. following his 25 years of service as president of the firm. The board presented him with a resolution acknowledging his contribution as chief executive officer to the success and growth of the company, his service to the community, and his contribution to the cause of professional management. He joined Rodney Hunt in 1946 and became president in 1956. He attended Dartmouth, MIT, WPI, Babson Institute, Lowell Tech, and the University of West Virginia. During World War II, he served in the U.S. Army with overseas service in the China-Burma-India theater. Currently, he is a director of the Blue Shield of Massachusetts and a member of the Business Advisory Council of the University of Massachusetts. Also, he is a trustee of the Orange Savings Bank. Formerly, he served as director of the American Management Association, director of the Presidents' Association of AMA, and treasurer of the New England Chapter of the Young Presidents' Association.



It's in the bag for him

WPI Trustee **RAY FORKEY**, '40, walked off with some handsome luggage at the Belview Biltmore Hotel in Clearwater, Florida last April. But instead of being arrested, he was applauded!

The story? Ray and his partner, Floridian Dr. George Dickinson, won second prize at the Southern Seniors Golf Association 54 Holes Team Stroke Championship held on the Biltmore golf courses. Their team of two, best ball, gross score was: 70-72-69, for a total of 211. "We finished just one stroke higher than the winners."

Ray, who is chairman of the current WPI Capital Program, has played in this particular tournament before, but this was the first time he took home a prize. This year, the second prize winners were awarded large flight bags.

Previously, Ray has won the Worcester Country Club Golf Club Championship twelve times. Recently, he qualified for the Massachusetts State Amateur Championship, which is slated for mid-July at the Taconic Golf Club in Williamstown, Mass.

The Southern Seniors Golf Association accepts members who are 55 and over. It has a membership of 1,800. The Association sponsors a number of tournaments annually throughout the South. Tournaments are scheduled this year in Southern Pines, North Carolina, Pine Mountain, Georgia, and Orlando, Florida.

1946

Willard Adams continues as general manager of operations, eastern region, of the American Telephone & Telegraph Co., Long Lines, Oakton, Virginia.

Last year, **John Lott Brown** was elected to the board of directors of the Public Broadcasting Service. He is president of the University of South Florida.

George Button II writes that he has switched from wholesale office machines to building and investing in Florida real estate. Located in Boca Raton, he still collects and restores antique automobiles.

John Carpenter, Jr. is a manufacturers' representative in Walloon Lake, Mich. Presently, he represents Wick Homes of Mazomanie, Wis. in North Dakota, South Dakota, Montana, Wyoming, Idaho, Utah, and Colorado. He enjoys world travel, especially in the Orient. Last year he went to China for the third time.

Ken Chafin serves as major project director in the corporate engineering department at Monsanto Company in St. Louis. Recently, he spent 18 months in Florida and six months in Australia.

Henry Chin is vice president at Drexel, Burnham, Lambert in Los Angeles, a member of the New York Stock Exchange. He belongs to the Shrine and is a post commander for the American Legion. Last year, he toured in Scandinavia.

Robert Davis has spent all of his career as a member of a family commercial printing company, Davis-Delaney-Arrow, in New York City. He has been president since 1968. He writes: "Had a marvelous trip on **Auggie Kellerman's** sailing yacht. He's a great captain, but I kept my eye on the shoreline!"

Currently, **Wilton Ericson** serves as principal process engineer at Blaw-Knox Co., Chemical Plants Division, where he started as a process engineer in 1946. The firm is now part of Dravo Engineers and Constructors.

James Evans, Jr., who has been with Bell Telephone Labs since 1949, has been supervisor since 1958. He enjoys amateur radio. He and his wife have four boys and four girls and live in Andover, Mass. "The two years my family and I spent in Iran for GTE building the national microwave system were perhaps the most exciting we have had," writes **Robert Farwell** of Stamford, Conn. At the present time, he is vice president of market development in the Communications Products Group at GTE. He has served on the school committee and participated in many civic and church activities, especially in Lexington, Mass., where the family lived for 28 years.

Leslie Flood holds the post of vice president of Hutton Publishing, which is a small company specializing in annual catalog/directories. He is located in North Kingstown, R.I.

Howard France is president of Wood Industrial Products Company, Conshohocken, Pa., manufacturers of pressure vessels, a post he has held since 1971. Active in community affairs, he is director and past president of the local Chamber of Commerce; past vice chairman and director of the Conshohocken Bicentennial Commission; and past president of the Northampton Township Civic Association. He was appointed to a subcommittee of a committee of the ASME.

Last year, **Donald Gilmore** retired from Rodney Hunt Co., Orange, Mass., after nearly 30 years of service. He is a registered professional engineer in Massachusetts and past master of a Masonic Lodge. "At 50 I became a motorcycle enthusiast." In four years he and Althea toured through 40 states and five Canadian provinces on his R/90 BMW, ultimately chalking up some 50 thousand miles.

Paul Gorman is director and group vice president of engineering and design at Chas. T. Main, Inc., Boston. Besides being a coporator of Wentworth Institute of Technology and of Peoples Savings Bank of Brockton, he is a member of the Executive Club of the Greater Boston Chamber of Commerce.

William Grogan, dean of undergraduate studies at WPI, was recently appointed a member of the Board of Investment at Bay State Savings Bank, Worcester. He has been a trustee since 1973.

Since February of 1979, the Rev. **Prescott Grout** has entered "active retirement" from pastoral ministry. He is a design drafter at Riley Stoker in Worcester. The Grouts live on a 9-acre farm in Dudley, where they raise beef cattle and chickens, keep horses, and tend a garden.

Since 1948, **Walter Hatch** has been with Exxon Research and Engineering Co. Following overseas duty in the 1960's and early '70's, he is currently licensing coordinator in the petroleum department of ER&E in the main engineering offices in Florham Park, N.J. He enjoys skiing.

Robert Hayward says that he has served 20 years as a Presbyterian clergyman and 10 years as an investment advisor and director of several companies. Civic minded, he has been a board member for numerous community and educational institutions.

Gary Hovhanesian, over the years, has served GE in many capacities, including that of design engineer, laboratory supervisor, development engineer, and product planner. At one time he was president and managing director of a housewares manufacturing plant in Singapore. "Planned, built, staffed, and operated from ground up." Back in Bridgeport, he has been involved with overseas support operations, and worked as product quality manager, and quality systems manager. He is a registered professional engineer in Massachusetts, a Mason, and a Sunday School principal.

Family history and genealogy are the major hobbies of **Robert Hull**. He owns an Apple II computer for word processing, and he is now in the process of writing three books and publishing a Hull family newsletter. At Pratt & Whitney and Lockheed he has made a career out of the propulsion engineering end of aircraft and missiles. "I designed, analyzed, and programmed for the propulsion units for two out of three legs of the Triad." Now he is engaged in the preliminary design for Trident II solid rocket motors. He has invented several fuel control systems, some of which are still in use on most commercial planes flying today. Hull's wife, Barbara, is a member of the Sweet Adelines, an international championship barbershop chorus (Mission Valley Chapter), San Jose, Calif.

Foster Jacobs is director of planning and plant at Southeastern Massachusetts University in North Dartmouth. He says that he's still pursuing a life-long interest in philology.

A professional engineer in California, **Allan Johnson** belongs to the Society of Fire Protection Engineers. During his career, he has served as senior vice president and director of Kemper International Insurance Co. and of the American Prot. Insurance Co. Currently, he is located in Libertyville, Ill.

Joe Johnson is in his 35th year with Pratt & Whitney Aircraft/United Technologies, where he holds the post of group supervisor of support equipment engineering. He is involved with solar house designs for a Cape Cod retirement home.

For 18 years, **Wilbur Jones** has been associated with what is now the Federal Energy Regulatory Commission in Washington, D.C. His present post is that of public utilities specialist. He collects sports publications for a hobby.

August Kellermann is vice president of international operations at Conoco Chemicals Company in Stamford, Conn. For past-times he enjoys golf, sailing, swimming, and tennis, as well as dining. "Am master of my own boat."

Since 1967, **John Knibb, Jr.** has been pastor of Hampton (Va.) Christian Church. He still loves to fly in all kinds of aircraft, including Navy torpedo bombers, DC-9's, Cessna 150's, Piper Cherokees, gliders, Boeing 747's, and the Concorde SST. In 1978, he flew north of the Arctic Circle over Baffin Island. He is listed in a number of editions of *Who's Who*.

As a result of the missile and space cut-back, **Frederick Kull** changed jobs and is now administrator of the grade crossing signalization program for the Southern Railway Co. He is a liaison between the railroad and states on the programs in the 13 Southeastern states. Among his hobbies are gardening and travel.

This is **M. Daniel Lacedonia's** 25th year at Hamilton Standard Division/United Technologies, Windsor Locks, Conn. For the last decade, he has been chief of materials control and test. Active in civic affairs, he has been involved with the ambulance service, various town committees, and the Lions Club. He writes: "Frustrated Red Sox fan!"

For 33 years, **Arthur Lagadinos** has been with ISO (Insurance Services Office), Boston, where he is staff supervisor of pricing services. He is on the national board of trustees of the Order of AHEPA, the board of directors of St. Spyridon's Greek Orthodox Church, and he does part-time teaching of fire science courses at Quinsigamond Community College. His wife, Helen, is secretary for the biomedical engineering department at WPI.

Richard Lawton is president and treasurer of Buell Automatics, Inc., an automatic screw machine products company specializing in high-volume work 1/8"-3/4" diameter. Buell currently employs 53 people, with sales approaching \$3 million spread throughout the country to automotive, business machine, appliance, ordnance, and ball bearing firms. Lawton serves as director of the Rochester Automatic Training Center.

Bo Lutts is owner-publisher-editor of "The Cabot Market Letter", a financial newsletter relating to the stock market. Lutts, who is located in Salem, Mass., writes that he is still playing the clarinet, usually in a couple of local traditional jazz bands. He and Nancy have five children.

With the Foxboro Company since 1967, **Kenneth Lyons** is now a systems specialist in the human resource function of EDP. He was involved in the organization of Sigma Phi Epsilon chapters at MIT and BU. Active with the Masons, BSA, and teaching data processing at Chamberlayne Junior College, he also serves as director of the Braintree Historical Society. He served on former Gov. Volpe's (Mass.) Management Engineering Task Force. He is a 10th generation descendant of John Alden, and has become a member of the Mass. Society of Mayflower Descendants and the Alden Kindred of America.

Jim Maloney holds the post of area manager of the marketing department at Geo. J. Meyer Manufacturing in New Jersey. He keeps several of his own horses at his horse farm in Moorestown.

After 25 years with Hughes Aircraft, **Frederick Marvin** has retired, and has started full time with Hughes Helicopters, a completely separate company from the aircraft company. He is doing liaison engineering on the missile firing system of the YA-H-64 2-place attack helicopter, which is due to go into production for the U.S. Army by 1982. He keeps busy with church work, too, rides his bike to work, and jogs several times a week. He has served recently as a WPI class agent.

Pont for 35 years, is now a vice president responsible for the company's worldwide operations in photographic materials, products for the electronics industry, and instruments, mostly for the health care and research fields. He is on the national board of directors of Junior Achievement.

Stanley Morris continues as director of engineering at Columbus Coated Fabrics, a division of Borden Chemical, in Columbus, Ohio. He and Gail have six children and three grandchildren.

Walt Muller has completed 32 years with the Chevrolet Division of General Motors Corporation. During those years he has lived in many areas of the country, including Toledo, Ohio; Massena, N.Y.; and, Detroit, Mich. Currently, he is at the Chevrolet Central Office, where in 1977 he was promoted to regional plant manager. He is responsible for the operation of five plants located in Michigan, Ohio, and Indiana. The plants assemble trucks, manufacture axles, and produce manual and automatic transmissions. Muller and his wife enjoy traveling, especially overseas.

Donald Nichols has retired as associate technical director, Naval Underwater Systems Center, and has moved to Oxford, Me. He is a free-lance consultant in management and engineering, and part-time lecturer at Mohegan Community College, Norwich, Conn. Old house restoration, woodworking, gardening, and running are among his pastimes.

Edmund Oshetsky was recently promoted to senior vice president of operations at Erving Paper Mills, Erving, Mass. He will continue to serve as a member of the executive committee. He joined the firm in 1977 as general manager of the Manufacturing Division. Previously, he had held a variety of posts with Lincoln Pulp & Paper, Boise Cascade, and Scott Paper. In 1978, he was promoted to the new post of vice president of operations and was appointed to the Erving executive committee. The Oshetskys and daughter, Ellen, reside in Greenfield. Erving is a leading manufacturer and converter of paper products, including napkins, towels, printed specialties, health care products, and packaged industrial papers. It maintains operating facilities in eight states.

Norman Padden serves as eastern regional marketing manager for Singer-Kearfott, Little Falls, N.J. He is involved with aircraft navigation systems, communications, and computers.

Julius Palley continues with the family business, Commonwealth Stationers, in Worcester (Fuller Office Furniture in Connecticut). Also, Commonwealth Management acquires old industrial buildings for redevelopment. "Trade association and WPI functions are about my only extras. We have acquired several acres of marsh and riverside areas in Centerville on Cape Cod. Cultivating and restoring this beautiful area has brought us back to days of the good healthy outdoor life and it's a great homing area for our family."

Thomas Passanisi holds the position of principal engineer for Raytheon in Wayland, Mass. For the past 16 years, he has been involved with facilities: reviewing construction plans and specs and monitoring construction. Cabinet-making is one of his hobbies.

Carl Pritchett, Jr. continues as president of his Ford dealership in Albany, Ga. He likes tennis and model ship construction.

Dick Propst is vice president of marketing for Maydwell & Hartzell in Brisbane, Calif. The firm sells electric power equipment to utilities. The Propsts like to travel, but also find their home area 25 miles south of San Francisco "fantastic."

Melvin Rabinovitz holds the position of president of Chelsea Bottle Co., Inc., Waban, Mass. The company distributes plastic and glass containers.

Allan Raymond is now employed as an environmental engineer by the South Carolina Department of Health and Environmental Control. He is singles champ of "B" Club tennis at Coldstream Country Club.

Daniel Rice serves as marketing manager for Advanced Electronic Warfare Programs at Westinghouse. He is located in Columbia, Md., and says he belongs to the Association of Old Crows.

Charlie Richardson was slated to present a talk at the national conference of the Reading Reform Foundation in Houston in August. In January, he had an article published in the "Journal of Learning Disabilities." In 1970, he started his own business as a franchisee of Learning Foundations International. Charlie, who is located in Huntington Station, N.Y., has a patent on a self-bagging attachment for lawnmowers, which accumulates leaves and cuttings directly in a disposable plastic trash bag. ("Still looking for means of manufacturing and marketing.")

Ten years ago, **Donald Soorian** left industry. Currently, he teaches full time at Wentworth Institute of Technology, where he is a full professor. His courses include Control Systems, Transistor Circuits, Applied Field Theory, Linear Circuits, and Active Filter Design. For the past 18 years he has been building a cottage (weekends) in the Buzard's Bay area.

James Sullivan is vice president of Inryco, Inc., Milwaukee, Wisc., a wholly-owned subsidiary of Inland Steel Company. He is a member of the board of directors at Inryco. Also, he is chairman of the Metal Building Manufacturers Association, which he also serves on the executive committee.

E. G. Tamulevich is retired and living in Paxton, Mass. **Irving Versoy** is the owner-president of Faire Harbour, Ltd., a company which he founded. He is located in Scituate, Mass. Among his hobbies are orchid growing, antique restoration, and clock building.

Del Walton, of D. E. Walton Co., is a self-employed manufacturer's representative. This year he visited Africa, again, the perfect locale for one who enjoys photographing wild animals and insects, and studying their characteristics. **M. J. Waclawek** serves as director of engineering at B&M Automotive Products in Chatsworth, Calif. He and Marcella reside in Thousand Oaks.

Jack Wexler is manager of public affairs at ESSO Eastern Inc., Houston, Texas. **Frank Wotton** continues with White-Westinghouse Corp. He belongs to the Wilbraham (Mass.) Tennis Club and the Holyoke Canoe Club. **Thomas Zajac**, chief of materials and structural integrity at Hamilton Standard/UTC, believes that he must have the longest title in the division. The company is involved with propellers and various aircraft components and systems, in space from the lunar program to the current shuttle. This year he expects to see their first 250-ft. diameter all glass filament-wound wind turbine blades generating electricity in Sweden.

1947

Russell Smith attended the annual meeting of the International Electrotechnical Commission in Montreux, Switzerland in June. Russ is the U.S. delegate to the committee on electric traction. He currently is manager of advanced locomotive systems engineering for GE in Erie, Pa. Skiing and sailing are his two avocations. He lives with his wife, Allene, in North East Pa. His daughters, Penny and Tracy, are both married.

1948

Paul Evans was recently elected as new director and chairman for Region I of the American Society of Heating, Refrigeration and Air Conditioning Engineers for a one-year term. (Region I includes New England, New York State, and Northern New Jersey.) A member of the Society since 1970, Evans has served in various offices for the Western Massachusetts Chapter, including president. Nationally, he was chairman for the Research Promotion Committee and a member of the Long Range Planning Committee. A registered professional engineer in Massachusetts, he serves as vice president for Hammill-McCormick Associates, Inc., in Springfield, Mass.

Edward Wainshilbaum is manager of the equipment design department in the RF Systems Lab. at Hughes Aircraft Co., Los Angeles.

1949

Dean Amidon has resigned as commissioner of the Department of Public Works in Massachusetts. He plans to return to his former position as district highway engineer in western Massachusetts near his home town of Monterey. Recently he was elected vice president of the Northeast Association of State Highway and Transportation Officials (NASHTO) for 1982. NASHTO is the regional representative of the American Association of State Highway Transportation Officials. Amidon, a 32-year career employee with the Mass. DPW, received the American Public Works Association Award as one of the country's top ten public works leaders last year.

1950

Carl Davis has retired as a psychologist from Perkins School for the Blind in Watertown, Mass. He writes: "Recent publication - Perkins-Binet Tests of Intelligence for the Blind." The Davises now reside in West Burke, Vermont.

1951

Thomas McComiskey has been promoted to division general manager of the Buffalo Tank Division in Bethlehem Steel Corporation's steel operations department, Bethlehem, Pa. Following his graduation from WPI, he joined the firm as a field engineer in the former fabricated steel construction division. In 1953, he received a military leave of absence to serve in the U.S. Army, from which he was discharged in 1955 as a staff sergeant. After serving as a field engineer for Bethlehem in Pottstown, Pa., McComiskey held various engineering and management positions with the fabricated steel construction division in Chicago, San Francisco, and Los Angeles, as well as in Bethlehem. In 1976, he joined the corporation's Buffalo Tank Division, subsequently holding sales and management positions in Chicago, Towson, Dunellen, N.J., and in Buffalo, N.Y.

1952

Paul O'Neil is presently plant manager for du Pont-Berg Electronics, in New Cumberland, Pa.

1953

George Abdow has opened a new Abdow's Big Boy Restaurant in Westboro, Mass., the twelfth in the chain owned by him and his brother, Ronald. The brothers also own the Ivanhoe Restaurant in Springfield, Mass.

Walter Levine was the author of "New Developments in Spray Nozzles . . . The 038 Story", which appeared in the May-June issue of *Die Casting Engineer*. Presently, he is manager of spray products for Acheson Colloids. Previously, he worked as a research engineer for Worthington Corp. and as project engineer for Edwards Co. before switching to marketing with Dresser Industries, and then to Consolidated Controls. Before joining Acheson in 1979, he moved to Port Huron as engineering manager for Bindicator Co.

1954

W. Richard Byrnes has founded a company called Chemex, Inc., located in Wayne, Pa. The company buys and resells products, primarily in the plastics industries, and offers materials worldwide.

Richard Scott holds the post of senior lead estimator at Mellon-Stuart Co., Pittsburgh, Pa. He previously obtained a state of Rhode Island professional engineer's license.

1955

Since graduation, **Dave Bagley** has been involved in control engineering. In 1971, he joined New England Controls. In addition to specific account responsibilities, he is power systems application specialist for the firm. He is concerned mostly with the Boston area and northern Massachusetts.

Richard Sieron, vice president of R&D at Dual-Lite, Inc., Newton, Conn., wrote "Improve Emergency Light Design With Lumens/Sq. Ft. Method", which appeared in the May issue of *Specifying Engineer*. A member of the Illuminating Engineering Society, Sieron has considerable experience in audio and power engineering and is a frequent lecturer on a variety of lighting subjects. Previously, he was Dual-Lite's chief engineer.

1956

Currently, **Alan Adamson** manages the New York Power Pool planning staff, which plans generation and transmission facilities for the next 15-year period. Before joining NYPP ten years ago, he worked with the Long Island Lighting Co. Besides managing Little League teams, he has been involved with the YMCA Indian Guides.

Joseph Alekshun, Jr. is a graduate student in the School of Engineering and Applied Science at the University of California in Los Angeles. During his career, he has served as a patent attorney for Instrumentation (Draper) Laboratories and as a consultant in environmental areas. In 1978, he returned to electronics, joining Litton Industries in California.

Robert Allen is the president-owner of Robert S. Allen Associates, Inc., Wichita, Kansas. The company does professional design engineering for the refining, chemical, petrochemical industry. He holds several patents and is listed in *Who's Who in Engineering*.

Christian Bahrecke holds the post of president of the R. L. Whipple Co., Inc., Worcester. He was project manager of the AIA award winning projects at Shepherd Knapp School, Boylston, in 1972 and at Mechanics Hall, Worcester in 1979. He specializes in restoration work and in design/build projects. Active in Paxton community affairs, he also has served on United Way and church committees.

David Becker is program manager for the GTE Sylvania Systems Group, Communications Systems Division, in Needham, Mass. With Sylvania, since 1959, he also did some consulting work for four years for Sanders Associates. He has a PhD in solid state physics from MIT. His work has included space cabin design and much simulation. He has served as chairman of the youth committee at his temple and on the local BSA troop committee.

Ernest Bernstein is engineering manager for the United Technologies Power Systems Division in Farmington, Conn. After graduation, he joined UAC and did nuclear applications research for a space vehicle. He obtained a patent for a once through potassium boiler. Later, he was involved with gas turbines in land-based applications. "Flying has really become a thing with me." He received his license a couple of years ago and is now working on his instrument ticket.

Laurence Blomstrom continues as manager of environmental engineering of the General Electric Space Division in Philadelphia. He holds an MSME from the University of Southern California, and enjoys golf, spectator sports, and community affairs.

Howard Brown holds the position of Dean of the School of Business at Ithaca College, Ithaca, N.Y. Previously, he taught and chaired the Management Department at Southeastern Massachusetts University for five years. He is rebuilding a three manual Mason and Hamlin reed organ at home.

John Burns has spent 25 years with Shell U.S.A.: 12 years with Shell Oil Company in marketing and 13 years in Shell Chemical in marketing and sales management. For the past four years, he has been manager of Shell Chemical's Eastern Region in West Orange, N.J. He is active in the Drug, Chemical & Allied Trades Association of New York and the National Paint & Coatings Association.

Clifford Burwick is vice president of automation planning for Bank of America in San Francisco. Earlier, he was with IBM, Space General Corp., and Shell Oil Co. Outside interests are backpacking, running, tennis, investments, and real estate.

William Casey, an employee of the Badger Co. for 18 years, is now assistant to the vice president of European & Middle East Operations in Cambridge. He has managed several projects for engineering, procurement, and construction of petroleum and petrochemical projects. A member of the Concord Band Association, he plays the baritone horn.

Ted Coghlin, Jr., chairman of the 25th reunion committee, was named as a recipient of the Herbert F. Taylor Award in June. (The Class of '56 had the largest attendance for a 25th reunion to date at WPI.) Ted has been with Coghlin's, Inc., Worcester, the family business since graduation, and now serves as president. During the years, he has been president of Shepherd Engineering and Fred Walters Communications Company, both of which are now sold. Long associated with the BSA, he has served as Council president, and has been involved with Boys' Club work. He was president of the Worcester County Alumni and the Poly Club, as well as the Young Businessman's Association. He is the current president of the Worcester Engineering Society, director of the Mechanics Bank of Worcester, and a corporator of the Worcester Science Museum. Among his awards are the Outstanding Young Man Award from the Junior Chamber of Commerce; the Silver Beaver and St. George Medal from the BSA; and the Honor Service Medal from the Boys Club.

"An on-going hobby is our house, which we built in 1968 and are still finishing," writes **Chris Collins**, who resides in Arnold, Md. He is a fellow engineer for Westinghouse Oceanic Division in Annapolis, and was responsible for sonars on the Navy MK 27 target torpedo. Besides coaching soccer, he is currently on the board of directors of the Greater Arnold Recreation Association. He and his family live on Chesapeake Bay and enjoy sailing, crabbing, and crewing in races.

For the past ten years, **James Colton** has been a maintenance mechanic at Phillips Exeter Academy, Exeter, N.H. Previously, he was with the U.S. Army in Korea, and two years in the Peace Corps in India. Among his outside interests are ballet, baroque music, snowshoeing, and motorcycling.

Bernie Danti writes he is "king" of Bernard R. Danti, Inc., Bedford, Mass. The company is involved with product and machinery development. "Still searching for the perfect wave." Earlier, he was with Millipore, Polaroid, and Pneumatic Scale. Son, Greg, 19, is studying mechanical engineering at WPI.

Robert Delahunt continues as corporate vice president at Polaroid Corp., Waltham, Mass. He and his wife, Jean, have two daughters: Caren, 18, and Susie, 14; and a son, Bob, 17.

Robert Diamond is president and owner of Robert Diamond, Inc., an electronic sales company in Bayside, N.Y. The family has a home at Stratton Mountain in Vermont and enjoys skiing and tennis.

Distance skating and photography are among the hobbies of **Henry Dumas, Jr.** He serves as vice president of sales at General Scanning, Inc., Watertown, Mass., where he is responsible for the sale of precision electro-mechanical and electro-optical systems design. He is a full member of Sigma Xi.

After sixteen years with Polaroid, **Gerald Dyer** is now involved in the firm's chemical marketing activity as part of Polaroid's diversification activities. He is programs manager of the Chemicals Division. Previously, he was with National Starch for ten years. Outside interests include tree farming, wood burning stove, and solar energy. His daughter, Cindy, graduated from WPI in biochemistry in 1980.

Robert Edsall writes that he and his wife, Barbara, have two "homemade" children and five adopted children of various racial backgrounds. They live in Perkiomenville, Pa. "on five acres in the woods giving lots of room for our children, four dogs, his cats, and two goats." Currently, he is a supervising engineer engaged in related studies for ballistic missile defense for GE in Philadelphia.

Norman Fischer, a project superintendent for Turner Construction Company, is now building a \$38.5 million hospital in Brooklyn, N.Y. for the firm. He plays and teaches the trumpet and is director of church music ministry when at home in Tennessee.

Robert Foisie holds the position of president at Matik North America, West Hartford, Conn. He formerly was with Technical Tape, Inc., Smyth Manufacturing Co., John Marsh Co., and United Technologies. For a number of years he was associated with the West Hartford Boys Football League.

Arthur Freedberg is executive vice president of Newman Data Services in Wayne, N.J.

For the past four years, **Mike Gordon** has served as director of marketing at The Singer Co.-Kearfott Division, Little Falls, N.J. He says, "This is a high technology industry dealing in guidance, navigation, and control systems for aircraft, space, surface and missile systems. Essentially government contracts."

Charles Gunn has worked for United Illuminating Co., New Haven, Conn. since graduation, except for four years at RPI where he was an instructor and obtained his MSEE. Currently, he is senior test engineer for the electric utility, his duties including revenue metering and testing of equipment. He is a member of the Planning and Zoning Commission in North Branford, which he has served as Town Council member and mayor. Hobbies include furniture making and restoring his '34 Ford sedan.

Richard Hajec writes: "My entire career has been devoted to moving air and gases." He's been involved in designing, building, selling, and planning fans, compressors, and exhausters of all sizes and shapes. He likes golf, skiing, hiking, sailing and plain walking.

Still a senior search specialist for Management Recruiters, Inc., **Arnold Hall** also performs engineering consulting and manages his own yacht brokerage, "Seacure," part time. Earlier in his career, he was with Electric Boat Division, Groton, Conn., where he was technical director in a Navy surface effect ship configuration development program. He helped form Hovermarine Transport Ltd., an international shipbuilding company. He sings bass in a chorus and choir, likes carpentry, and is a member of the Watch Hill Yacht Club.

Allan Hamilton, Jr. has been with Western Electric since 1956. He is now department chief of plant and facilities planning engineering for the company in Richmond, Va. He says of his early career, "After my stint in development, I found that trenches were much more to my liking and I am now responsible for the latest expansion at our Richmond works." During the last eleven years, he has been associated with the manufacture of printed circuitry. He holds a certificate of completion of the half-marathon from the 1980 Richmond Newspapers Marathon.

Charles Healy is active with community affairs and his church council. Since 1978 he has worked in the Philippines, where he is a project manager for Ebasco Overseas Corporation. For many years he was involved with electric power generation and design with the U.S. Army Corps of Engineers. "Moved 11 times to date."

Just before his present assignment, **Robert Heath** was program manager of the large format camera built for NASA-JSC to be carried on the Space Shuttle. One 9" x 18" frame can cover all of Massachusetts, Connecticut, and Rhode Island, and resolve every house! Heath, director of aircraft systems for Itek Optical Systems, Lexington, Mass., is now responsible for both domestic and foreign programs, building aircraft cameras from 6" to 72" focal length for reconnaissance, surveillance, and mapping. He is a numismatist and has published catalogs of Massachusetts and New Hampshire commemorative medals.

Often busy with church work, **Lawrence Horrigan, Jr.** and his wife also enjoy golf.

"The Texas climate permits us to enjoy the sport year 'round." After graduation he went with Ebasco Services in New York, where inside 22 years, he rose to construction manager. He then joined Houston Lighting and Power Company in the same position. Currently, he is general manager of the power plant construction department.

John Hyde is a salesman for Avantek in Santa Clara, Calif., doing sales and marketing for high technology companies. He also sails, teaches, and counsels.

John Jolda is director of engineering at Geo. J. Meyer Mfg. Division in West Boylston, Mass. Before joining Meyer in 1967, he worked at Hamilton Standard in Connecticut for 11 years. He teaches evenings at Central New England College.

William Jordan, Jr. serves Synertek, Santa Clara, Calif., as vice president. Pastimes include skiing and tennis.

Kevin Joyce is a partner in Cushman, Darby, & Cushman in Washington, D.C. He is a patent, trademark, and unfair competition practitioner. Ice hockey, horses, and farming are among his outside interests. The Joyces reside in Davidsonville, Md.

Gardening and raising livestock (hogs, chickens, steer) are pastimes of **William Knoblock**, who has a country home near Bowling Green, Ohio. He is project engineer at Campbell Soup Co., Napoleon. At the present time, he is number 2 man in the engineering department at the largest of the Campbell soup plants, which has 2300 employees.

Hans Koehl serves as trustee of the Connecticut Public Expenditure Council; director of Connecticut Business and Industry Association; and director of Danielson Federal Savings & Loan Association. He is chairman of Spirol International Corporation, Danielson, Conn., where he has been employed since graduating from law school in 1959.

Alan Larsson, who has been 20 years at Raytheon, Waltham, Mass., is now department manager of the airborne department in EEG, Power Tube Division. Wife Dorothy is a member of the technical staff at Mitre. "We divide our time between Sudbury and our vacation home in Moultonboro, N.H." This year, he is commodore of their sailing association.

Last year, **Donald Lathrop** went on a three-week tour of Soviet cities and met with five Soviet Peace Committees. Since his return, he has had extensive speaking engagements. He is professor of philosophy and peace studies at Berkshire Community College, Pittsfield, Mass.

William Lloyd has been with Bethlehem Steel in Johnstown, Pa. since 1956. Today he is mechanical foreman in the coke department. "The flood of 1977 wiped out 80% of our coke operation." The plant is now installing an electric steelmaking facility which will eliminate the coke department, the blast furnaces, and the open hearth department.

Fred Lohrey writes that he is conducting a life-long experiment to see how long someone can play golf without getting any better at it. For 22 years, he has been with IBM near Poughkeepsie, N.Y. and is now advisory engineer. He does circuit and semiconductor logic chip design.

Vilho Lucander, a registered professional engineer, is supervisor of results engineering at New England Power Co., Westboro, Mass. Formerly he taught math in the Worcester Junior College evening division. He is active with the Masons, the Shrine, and town and church affairs.

Louis Marsella holds the post of senior vice president at Guardian Packaging Corp., Newark, Calif. He is concerned with flexible packaging R&D, manufacturing, and general management. In his leisure time, he enjoys flying.

Robert Matchett is president of Fibredyne, Inc., Dover, N.H. The filter cartridges produced by his company are sold to OEM's and stocking distributors for both residential and electroplating applications, usually on a private label basis. New construction is under way to double Fibredyne's capacity. Previously, while with Hammermill Paper, Matchett developed a process (at home) for wet-molding activated carbon filter cartridges and in 1972 incorporated Fibredyne to produce the units. When he finds the time, he likes to golf, fish, and cross-county ski.

"Carpenter's elbow is much worse than tennis elbow," says **Richard McBride**, who is into house renovation and tennis, as well as competitive swimming. With Communications Satellite Corp., Washington, D.C., for 16 years, he is glad that his new assignment as director of project management will keep him more or less desk bound for the near future. "No longer travel all over the world. Thank goodness!"

At present, **John McHugh** is the owner and president of Royal Screw Machine and Waterbury Carbide Tool in Waterbury, Conn. Earlier, he had been a test engineer at Pratt & Whitney Aircraft for five years. He is past president of Smaller Mfgs. Business Association and Exchange Club of Waterbury. He received the Outstanding President's Award for the Exchange Club in 1976.

Joseph Morgan, Jr. serves as senior missile dynamics engineer at Raytheon in Bedford, Mass. Weapons systems experience includes the Sparrow, Hawk, and Sidewinder, missiles and the F-18 fighter aircraft. He heads Pyramid Coins, a part-time Egyptian coins business, which he plans to go into full time after retirement. "The most complete inventory of minor millieimes and piastres this side of the pyramids."

Since 1959, **Henry Nowick** has worked for Monsanto in various assignments in manufacturing and technology. Currently, he is a senior specialist for the firm in Indian Orchard, Mass. He has traveled extensively throughout the world, and entered into some technical negotiations in Russia. At the present time, he is hazardous waste coordinator and the Associated Industries of Massachusetts representative on the Massachusetts Hazardous Waste Facility Safety Siting Council. Recently Nowick studied environmental engineering at Berkeley on a Monsanto technical academic assignment. During the family's year in Fremont, Calif., they visited a number of WPI alumni and enjoyed a variety of side trips.

Joseph Paparella serves as general manager of Latin American Operations for the Foxboro Company, Foxboro, Mass. He joined Foxboro in 1963, and started 12 new overseas operations for the company, traveling over two million miles. His present operation has factories in Mexico, Brazil, and Argentina.

Bruce Paul is director of plant engineering and energy specialist for the USM Machinery Group-Emhart Corp., Beverly, Mass. He has served on the boards of the Beverly Area YMCA and of the Merrimac Valley Textile Museum. In Ipswich, he has been active with the Energy Advisory Commission and the Industrial Development Commission.

William Peterson, an adjunct professor at the College of St. Francis, is also president of William P. Peterson & Associates, Inc., Naperville, Ill. During his career, he has been a "slide rule pushing" engineer; has had a stint in contract research and development; and another in management consulting. For five years he was with the DOE, becoming a regional representative of the secretary, Region V. He was named to the White House speakers program (energy and anti-inflation). In 1979, he returned to his engineering and management consulting practice.

Continuously involved with church activities, **Robert Philhower** has been a ruling Elder in the Presbyterian Church, a Sunday school teacher, and a chairman of several committees. He was director for the Newark Day Nursery and helped to start a day care center in Wilmington. Also, he has received photography awards. A senior specialist engineer for du Pont in Wilmington, Delaware, for the past three years he has been project leader for the Auto-trol Interactive Graphic System.

With Hooker Chemical, Niagara Falls, since 1956, **Halbert Pierce** is now manager of energy conservation. He received the Scoutmaster's Key from the BSA, likes cross-country skiing, and was a former chairman of the Industrial Division of the local United Way.

After spending four years with Standard Oil of Ohio, **Dave Pratt** joined L. H. Waldrip Company, and is still with the firm, although it is now called M.A. Blankenburg & Co. Blankenburg is a manufacturers' representative firm in chemical process equipment covering northern Ohio. Although Pratt runs some 1500 miles a year, he says, "No interest in marathons."

James Prifti is a supervisory mechanical engineer in the Food Systems, Equipment Division at the U. S. Army Natick Labs. in Massachusetts. "We work on improving the methods and equipment used to feed our military troops." He has an MSME from Northeastern University.

Richard Rodin serves as chairman of the science department at Montclair (N.J.) High School. He belongs to the Montclair Society of Engineers and has invented an instructional chemistry game which is marketed nationally. The Rodins have three children.

Richard Rotelli holds the position of department manager for Raytheon in the Missile Systems Division, Bedford, Mass. During his career he has been with Macalaster Scientific Co., Metrologic Instruments, Inc., and a small company in Littleton, Mass. He hopes to write a book in retirement. "I am fascinated with the origins of everyday expressions with obscure beginnings."

Describing himself as a "corporate wanderer" for du Pont, **Anthony Scancelli**, now a plant manager for the firm in South San Francisco, says that he previously was headquartered in Connecticut, Tennessee, Pennsylvania, and New Jersey.

The Rev. **Paul Schoonmaker** writes that sons **Peter, '80** and **Stephen, '84** "have followed their father and grandfather to WPI." Recently, with some help from his sons, he built a hybrid electric car. Two years ago he received the "Rosa O. Hall Award" from the American Baptist Churches. In 1977, his book, *The Prison Connection* (Judson Press) was published. He is pastor at the Royersford Baptist Church in Pennsylvania.

Winslow Spofford holds the post of vice president and treasurer at Wachusett Engineering in Holden, Mass. "Have worked from designing looms to testing flow meters at Alden Labs. Also built houses and have been involved with weldments." He is a registered professional engineer and land surveyor in Massachusetts. Also, he is a licensed firearms dealer and enjoys collecting Civil War vintage guns.

George Strom continues as vice president of operations at Speidel in Providence, R.I., a position he has held for two years. Previously, he was with Johnson & Johnson, Procter & Gamble, and Honolulu Iron Works.

Recently, Dr. **Roger Tancrell** lectured at Harvard Medical School. He is principal scientist at Raytheon Research Division in Waltham, Mass., has been granted several patents, and has published a number of technical papers and textbook chapters. Some of his projects were surface acoustic waves for

radar; medical electronics; and coded apertures for imaging in nuclear medicine. Early in his career, when he was at MIT Lincoln Labs, he worked on the first transistorized computer. Active with the IEEE, he is on the committee planning the annual Ultrasonics Symposium. During his free time, he teaches basic reading to English-speaking adults who have low reading ability. He helped organize and officially incorporate the all-volunteer reading group.

"I'm the only guy I know who has worked for three different companies without changing jobs," writes **Harry Tenney, Jr.**, of the WPI Alumni Executive Committee. Currently, he is director of marketing for the Polymer Materials Division of Georgia-Pacific in Newark, N.J. Earlier he was with XCEL Corp. (acquired by G-P), and Celanese Plastics, which later became XCEL Corp. He has served as chairman of the West Long Branch Zoning Board of Adjustment; as director of the Shore Area YMCA; and past president of the Northern New Jersey Chapter of the WPI Alumni Association.

Edward Wiot serves as coordinator of fuel cycle licensing for NUS Corporation in Rockville, Md. During his career, he has been a consulting nuclear reactor safety engineer specializing in nuclear reactor safety and licensing. Also, he has been involved in other aspects of the nuclear fuel cycle. Among his outside interests are singing with the Oratorio Society of Washington, D.C. and with the Montgomery County chapter of the Barbershop Harmony Society. Wife Lou is a member of the Sweet Adelines.

Thomas Wright continues as senior systems engineer for IBM in Montoursville, Pa. He spent over seven years in management positions with Western Union, "then switched from Morse Code to computer code and have been in systems engineering with IBM ever since."

1957

After 22 years of working as an engineer, **Michael Spiegel** decided to get his PhD in order to teach at a university. He enrolled at Western Connecticut State College and is now at Oregon State University in Corvallis. During his engineering years, he also pursued a sideline of raising, training, and showing horses, so his new direction in school is in animal science and more specifically genetics and reproductive physiology. The Spiegels have three children: Jessica, 9; Zachary, 6; and Caleb, almost 5.

1958

C. Stewart Gentsch is now division president of the Roller Chain Division of Rexnord, Inc., Springfield, Mass. He first joined the company in 1958 as a sales correspondent. He was factory manager of the bearing division in Downers Grove, Ill. from 1971 to 1972, and was promoted to operations manager of the Roller Chain Division in 1972. He became president of the division in 1978. Earlier, he attended the Carnegie Mellon University Program for Executives.

1959

Robert Berg has been elected president and chief executive officer of Wesley Manufacturing Company, Inc., Scottdale, Ga. Earlier, he had senior management positions with Scovill, Inc., American Standard Inc., and Rexnord, Inc. He holds an MBA from the University of Chicago. Wesley is an international marketer and manufacturer of material handling equipment including Pallet Mule, Pallet trucks, and the Crusader electric vehicles.

Frank Cohee holds the position of director of quality assurance and management systems at Eldec Corp., Lynnwood, WA. He has an MBA from Harvard.

Michael Hertzberg, president of Michael A. Hertzberg Consulting Engineers, Inc., Waitsfield, Vt., has been appointed a director of the American Consulting Engineers Council Research and Management Foundation in Washington, D.C. He will also serve as a vice president of the Council, and will oversee research projects of the Foundation. Of particular current interest is a major national study of building regulations. The analysis, which is being conducted for the National Institute of Building Sciences, Washington, D.C., will document the proliferation of federal codes, rules, etc., which affect the design and construction of new and renovated buildings. Hertzberg's Waitsfield firm specializes in mechanical, electrical, alternate energy and energy conservation engineering services. A past president of ACEC/Vermont, his firm received awards for engineering excellence from the state consulting engineering organization in 1975 for the lighting and mechanical engineering design of the Berlin branch of the Howard Bank, and in 1978 for the mechanical engineering design of the domestic hot water generation and distribution systems at the Vermont State Hospital in Waterbury

John Wolfe was recently named senior vice president of North American operations for EG&G Sealol, Inc. In his new position, he will be responsible for all U.S. operating divisions as well as EG&G Sealol Canada. Previously, he was vice president and general manager of the Engineered Products Division. EG&G Sealol, based in Warwick, R.I., manufactures and markets mechanical seals, valves and bellows devices. It has three plants in the U.S. and manufacturing facilities in ten other countries.

1960

The **William Bontas** make their home in Phoenix, Md. Bill is with the Federal Bureau of Air Quality and has recently seen his responsibilities expanded into other environmental areas. One of the Bontas' two children is a budding track star.

Don Cloud of Guilford, Conn. has sold out his first condo development and is developing another.

Donaldson Dow is a senior engineer at AIDE in Richmond, Va. His daughter, Julie, who has finished junior college, was married in June.

Ken Halvorsen serves as a senior supervisor with the Naval Ship Engineering Center. Recently, he was associated with the Cruise missile program. The Halvorsens have five children and a son in medical school.

Ivan Kirsch has completed 17 years at Analogic in Wakefield, Mass. His son, Robert, just graduated from MIT and is going to the UMass Medical School. His middle daughter, Ellen, is a junior at Framingham State. His younger son, Stuart, is a sophomore at Harvard.

Dick Kischell is responsible for radio and TV transmission engineering for Southern New England Telephone.

Pete Lajoie holds the position of national sales manager for Disc Instruments, a firm specializing in optical encoders for the OEM market. He travels a great deal while building a national sales force for the fast growing business. The Lajoies are located in Mission Viejo, Calif.

David Westling serves as a sales representative at National Standard Co. in Santa Fe Springs, Calif.

1961

Hank Alessio continues as supervisor in the New York office of Hayes/Hill, Inc. The firm provides corporate long-range strategy, marketing and new product development, acquisition planning, and executive compensation. "Automotive components have been a 'pet.'"

His various assignments have taken him around the world, and *Forbes*, *Business Week*, and the *Wall Street Journal* have used quotes from several of his speeches. About twice a year Hank and his family get together with several other WPI alums and their families for an informal reunion.

Last year, **Bob Beaudry** was named director of the design office for the Federal Highway Administration, Delmar, N.Y. Leisure time activities include skiing, biking, woodcraft, the theater, and travel.

William Calder III, manager of corporate quality assurance at the Foxboro Company, is the vice president-elect of the Standards and Practices Department of the Instrument Society of America (ISA). His most significant professional involvement has been in design problems associated with the use of Foxboro products in explosive atmospheres. This specialty has brought about a patent, worldwide travel, teaching for the ISA, and representing the USA on several international committees. In 1975, he was selected Young Engineer of the Year at Foxboro. He has two PE licenses. The Calders have four children, and have restored an old New England house.

A year ago, **Joe Calzone** was promoted to manager of advanced engineering at GE in Utica, N.Y. Except for a term in the Army, he has been with GE since 1961. In his spare time, he enjoys skiing, fishing, and racquetball.

Since 1975, **Joseph Carpentiere** has been self-employed as a software consultant. Recently, he formed Decisions, Inc., a consulting firm with two partners and "expanding." Besides their two daughters, Marcella and Christa, the Carpentieres have a Colombian son, Carlos, who joined them as an AFS exchange student in 1974, and who now holds a degree from the University of New Haven. Besides serving as chairman of the Planning & Zone Commission, Carpentiere has taught religious education.

Currently, **Richard Davis** is involved in strategic planning for the Military Products Group and is product marketing manager for the military microprocessors and peripherals at Intel, which has just relocated to the Phoenix, Arizona area. Earlier, as editor for the electronics magazine "Micro Waves", he won a Neal Award, the trade press equivalent of a Pulitzer prize, for his article on Electronic Countermeasures. While serving as executive editor for EW Communications, he received his MBA from Pepperdine University in California.

Edward Desplaines is now employed by C-E Incorporated, a manufacturer of fossil fired power boilers and nuclear reactors. Previously, while chief engineer of the International Boiler Works Co., he designed some unique tubular heating boilers from scratch. Flying, hunting, and fishing are among his pastimes.

After a stint with GE, **Nino Dipilato** joined his present employer, IBM, in 1965. During his IBM career he has had assignments in Germany, Fishkill, N.Y., and Charlotte, N.C.

Currently, **Kenneth Engvall** serves as a selectman in Boylston, Mass. For a number of years, he was on the town finance committee. He is involved with a small civil engineering-land surveying firm doing varied things from straight survey to sanitary design and from site planning to subdivision design.

Robert Fitch holds the post of business systems manager at Collyer Insulated Wire, Lincoln, R.I., where he is developing computerized manufacturing systems. "Oh, yes. I once took a first class 'red-eye' from LA to NY. In the seat in front of me was Paul Newman. We both slept all the way!"

Bill Gill enjoys the California lifestyle and most outdoor activities including camping and hiking. Active with the youth soccer league and the BSA, he also has been president of the local section of the ASCE and chairman of the California State Council of Civil Engineers. He helped co-found Gill & Pulver Engineers Inc., (water development, etc.), which he serves as president.

Martin Gordon heads up the patient monitoring group at Analogic Corp., a firm he joined four years ago. Previously he was with Transition Corp., Digital Equipment Corp., and EG&G. He is located in Wayland, Mass.

Stuart Kazin was recently named general manager of the Burlington Center of Foxboro Analytical in Burlington, Mass. He joins Foxboro from Dynamics Research Corporation in Wilmington, where as general manager of the Precision Measurement Division, he was responsible for marketing, engineering, manufacturing, quality, service, and controller functions. Previously, he was a group leader for the MIT Instrumentation Laboratory of Cambridge, Mass. In 1967, he received his MS in aeronautics and astronautics from MIT. A former lieutenant in the U.S. Army Signal Corps, he is married and the father of two children.

Digital Equipment Corporation, Maynard, Mass., has announced the promotion of **Ward MacKenzie** to vice president of the Technical Volume Group. This new group is comprised of Digital's Technical OEM and Microcomputer Groups. MacKenzie also becomes a member of Digital's Operations Committee. He started at the firm in 1967 as DECSYSTEMS-10 operations manager. He has held a number of posts in Digital's U.S. and European operations, including that of European marketing manager, and later, that of European manufacturing manager. Prior to his recent promotion, he was technical OEM Product Group manager.

1962

Bruce Dudley continues with the Rome Air Development Center, at Griffiss Air Force Base.

John Rupprecht holds the post of president of Sullair of New Mexico in Albuquerque. The company sells industrial, mining, and construction equipment in New Mexico, West Texas, and in Juarez, Mexico.

1963

Stuart Batstone is senior vice president of The Giving Tree in Houston, Texas. He has a new position with a franchise opening Christian bookstores in major malls nationwide. He has an MA and a master's of divinity degree.

Harry Hoyen is currently in the Research Labs at Eastman Kodak, Rochester, N.Y. During the past year, he was invited to deliver a plenary lecture at an international symposium in Varna, Bulgaria, as well as in the capital, Sofia. He has travelled extensively in Europe, having given papers in England, France, Belgium, and Switzerland. In July, he was general chairman of an international symposium in Lake Placid involving over 100 scientists carrying out research in photographic science and light induced effects at semiconductor interfaces. Technically, the meeting was a resounding success, with approximately forty presentations and with representation from over thirteen countries. The social highlight of the meeting was a wine-tasting atop the Olympic ski jump.

John Machonis, Jr. has been promoted to the newly-created position of manager of new polymers R&D for Chemplex Company, Rolling Meadows, Ill. Previously, he was assistant manager. In his new post, he will be responsible for all new polymer research activity for the company and will continue to direct the research efforts for Plexar, a proprietary adhesive resin. He started with Chemplex in 1968 as a senior research engineer. He, his wife, and two children reside in Schaumburg, Ill.

Presently, **Robert Mellor** serves as district superintendent of the North Shore District of the Massachusetts Electric Co.

Charles Menzigan, a planning engineer for Western Electric in North Andover, Mass., is presently on a three-year temporary assignment with AT&T Long Lines in El Segundo, Calif.

1964

Peter Baker serves as an alcohol counselor at Howard Mental Health in Burlington, Vt. He holds an MBA from the University of Cincinnati.

Recently, **William Kaszeta** was elected to the board of directors of the Radiation Division of the American Section of the International Solar Energy Society.

Sterling McFee is employed as manager of packaged products production at Marathon Oil Company, Robinson, Ill.

Jack Ryder holds the post of chief engineer at Maier & Assoc. in North Canton, Ohio.

George Spires works as a senior mechanical engineering consultant at Brown & Root in Houston, Texas. He has an MBA from Northeastern.

Frank Stone is vice president of engineering for Automata in Reston, Va.

1965

► **Married:** **Desha Beamer** and Maureen DeLong on February 28, 1981 in San Francisco, California. **Al DiPietro**, '66 served as best man. Al and his wife Karin flew in from Pennsylvania to attend the wedding.

At the present time, Maj. **David Coombe** is a student at the U.S. Army Command & General Staff College in Ft. Leavenworth, Ks.

U.S. Air Force Major **Gene Dionne** has been reassigned from SAMSO-Space and Missile Systems Operations in Redondo Beach, Calif, to a tour at the Air Force Command and Staff College in Montgomery, Alabama. From there, Gene, his wife, Peg, and their son, Jeremy, will move to his next assignment at the Pentagon.

Dr. Bennett Gordon, Jr. has been promoted to associate professor of mechanical engineering at WPI.

Pat Moran writes that about a dozen WPI alums attended a cookout held in honor of the **Paul Covecs**, '64 return from their recent ten-month sailing adventure. (They sailed in their Morgan 46-ft. ketch from San Francisco to Boston.) The celebration was held at the home of **Bill Shields** in Manomet, Mass. in July. Among those attending besides the Covecs were **Dave McCaffrey**, **Walt Lankau**, **Duke Gale**, **Dick Ryczek**, and **Stan Szymanski**, all of the Class of 1964. Also, from the Class of '65 were Host **Bill Shields**, **Pat Moran**, **Jim Fee**, and **Paul Giusti**. **Malcolm MacGregor** and **Mike Portanora** represented '66. According to Moran, the Shields' house is similar to "an updated Higgins House."

Gerald Morris has been elected vice president and treasurer of the Foxboro Company, having come from a post as assistant vice president and director of corporate planning at Textron, Inc., Providence, R.I. Earlier, he had served as Textron's corporate assistant treasurer. Foxboro's new chief financial officer received his MBA from Harvard in 1970. He belongs to the North American Society for Corporate Planning. The Morrises have two daughters and a son.

Dr. Richard Reynolds, who has his PhD in oceanography from the University of Hawaii, is now an oceanographer for the National Weather Service (NOAA) in Washington, D.C.

Dr. Bruce Yung, who received his PhD in biomedical engineering from the University of Virginia this year, is currently a resident engineer at Armak Co., McCook, Ill.

1966

Ron Hayden continues with New England Controls, which he joined in 1976. Previously, he was an assistant sales manager with Fisher Controls with ten years of control application experience. His specialty is digital systems. His profile appeared in a recent New England Controls promotional brochure.

John Kopchik works as strategic planner and director of United Vintners in San Francisco. He and Diane have two children and live in Walnut Creek.

1967

► **Married:** **Alan W. Couchon** to Paula L. Smith in Milford, Connecticut on May 16, 1981. The bride has a BS degree from Southern Connecticut State College and is a bookkeeper. Her husband serves as a manufacturer's representative.

Joseph Cieplak continues as product manager in the Measurement Systems Division at ACCO Industries, Bridgeport, Conn. This year he received his MA in communications from Fairfield University.

David Collette of South Hadley, Mass. has been selected by District No. 2 Prudential Board as water commissioner. A registered professional engineer, he has worked as a maintenance construction supervisor at Monsanto Co. in Springfield since 1977. He will serve in the post until the next district election in February.

Allen Griswold is product manager for Ocean Research Equipment, Inc., Falmouth, Mass.

Mitchell Koziol holds the position of president at Mitchell Machine Screw Co., Glastonbury, Conn. He and Hannelore have three children and live in Colechester.

Jack Rahaim is now corporate manager of personnel administration at Digital Equipment Corporation in Maynard, Mass. He is responsible for providing quality data methods and support procedures.

Thomas Ricchi serves as a computer applications engineer at GE Ordnance Systems, Pittsfield, Mass.

1968

Robert Bradley serves as vice president of manufacturing at OZ/Gedney Co., Terryville, Conn. The firm is a subsidiary of General Signal

Dr. **Richard Formato** continues as principal engineer in electromagnetics at Data General in Westboro, Mass. In March, he received a U.S. patent on an apparatus and method for measuring the velocity of a moving dielectric (poorly conducting) material. The invention constitutes a means for measuring the velocity of a moving dielectric material from which a flow determination may be made. In May, he was issued another patent on an improved automotive ignition system. The invention is a non-mechanical system whereby the high voltage pulses in a multi-cylinder spark-fired engine are selectively distributed to the individual spark plugs in time with engine operation. Both inventions are being evaluated by industry and are slated to be subjects of upcoming magazine articles. Dr. Formato is also associated with Orion Associates of Shrewsbury, Mass.

Paxson Gifford was recently appointed as manager of trading at Texaco Oil Trading and Supply Company in Harrison, N.Y. He has a master of management degree from Northwestern (Ill.) University. In 1968, he joined Texaco as a process engineer in the U.S. refining department at Port Arthur, Tex. After assignments in Eagle Point, N.J., Lockport, Ill., and in New York City, he received several promotions, and was named a senior coordinator in 1979.

Dr. **Roger Pryor** has been named manager of physical sciences for Pitney Bowes corporate operations. He joined the company in 1976 as senior physicist for its mailing systems division. He went with the advance mailing machine and meter systems department in 1978, and was appointed group manager of that department in 1979. Dr. Pryor, who has had several articles published in technical journals, received his master's and doctorate degrees in physics from Pennsylvania State University. He belongs to the American Physical Society, Sigma Xi, and the New York Academy of Sciences.

Richard Scaia is district manager of the Torrington Co. in Dayton, Ohio.

Did you happen to catch the picture of **Marshall Taylor** on the back cover of the August 3rd issue of *Business Week*? Ryder, the big name in truck rentals, was featured in a Continental Bank ad, and two Ryder executives (including Taylor) were pictured. Marsh holds the post of vice president and treasurer of Ryder System, Inc.

Michael True holds the position of vice president at Maine Building Specialties, a division of Overhead Door Company in Portland, Maine.

Ken Turnbull serves as fire safety engineer at Texaco, Houston, Texas.

Malcolm Wittenberg is an attorney with Limbach, Limbach & Sutton in San Francisco. He holds a Juris Doctor degree from George Washington University. The Wittenbergs and their three children reside in Cortemadera.

1969

Alfred Freeberg is now at the Naval Postgraduate School in Monterey, Calif.

This fall, **Stephen Legomsky** joined the Washington University School of Law faculty as an assistant professor. He teaches courses in torts, criminal law, and restitution, as well as a seminar on immigration law. Since April of 1980, he has served as chief of Division II, Central Legal Staff of the U.S. Court of Appeals for the Ninth District, San Francisco. His responsibilities included general supervision and editorial review of all written work of the legal staff assigned to Division II. He also drafted bench memoranda and proposed opinions and performed varied administrative duties. Previously, he was court law clerk for the U.S. Court of Appeals, Ninth Circuit, from September 1979 until April 1980. In 1977, he received his JD degree from the University of San Diego, graduating first in a class of 237. After graduation, he studied at Oxford University, where he was in residence from 1977 to 1979. He expects to receive his PhD in comparative immigration and comparative administrative law next year. He is an associate in the Society of Actuaries, and was employed earlier by John Hancock Mutual Life Insurance, Boston, and by the Pacific Fidelity Life Insurance Company, Los Angeles.

Michael Nowak is now analytical group leader for Sinclair & Valentine in West St. Paul, Minn.

Dr. **Mahendra Patel**, P.E., was recently elected to the office of treasurer by the Engineering Societies of New England. He is a mechanical engineer in the Engineering, Planning and Research Department at Boston Edison Company, where he has been associated with engineering, design, construction and management of projects in fossil fueled power plants since 1969. Also, he has been involved with studies in air pollution control, environmental regulations, and fuels. Active with the Boston section of the ASME, he currently serves as chairman of honors and awards in ASME's Region 1.

Robert Perkins works as a senior systems programmer at Guy F. Atkinson in South San Francisco, Calif.

1970

Dr. **Maria Allo** is assistant professor of surgery at the University of Colorado Health Sciences Center in Denver. She received her MD from the University of Michigan Medical School.

David Brown has been elected vice president of engineering at Rodney Hunt Co., Orange, Mass. He joined the company in 1971 as a project engineer in the Water Control Equipment Division. In 1977, he became chief product engineer and in 1978 was promoted to manager of Water Control Equipment Engineering. Last year, he was appointed director of engineering with overall responsibilities for Rodney Hunt's application engineering, quality assurance, field service and product engineering. He is also a member of the company's executive group. Currently, he is completing work for his MS in engineering management at WPI. The Browns, who have a son and daughter, live in Holden.

John Galvin was recently promoted to senior systems consultant within the systems organization at State Mutual in Worcester. He became associated with the firm as an actuarial assistant in 1970, and was named systems analyst in 1972. In 1976, he was promoted to senior systems analyst, and in 1978, was named systems consultant. He has an MBA from Clark University.

William Hillner is now senior project engineer at Exxon Co., U.S.A. in Houston, Texas.

Kalvin Ngoon is a senior systems analyst at Syntex, Inc., Palo Alto, Calif.

John Landahl holds the post of project manager, NATO Project Section, Corps of Engineers, Europe Division. Located in West Germany, he is presently working as a civilian employee managing the design of various facilities for NATO forces in Europe. He and Nancy have two children.

Scott McCandless is a partner in HMM Associates, Waltham, Mass. He has a master's in urban affairs from BU.

Dr. **Richard San Antonio** is now an internist and cardiology fellow for the U.S. Army at Brooke Army Medical Center, Fort Sam Houston, Texas. He and Pamela have two children.

Stephen Sergio, a U.S. Army captain stationed in West Germany, was married on April 11th. He has an MS in chemistry from the University of Delaware and an MBA from Florida Institute of Technology.

Dr. **Noel Totti III** is a pulmonary disease fellow at Barnes Hospital in St. Louis, Missouri. He writes: "Finally out of the Air Force. Have become board certified in internal medicine." The Tottis have two children and reside in St. Louis.

Currently, **Donald Usher** holds the post of regional representative at Babcock & Wilcox in Houston, Texas. To date, He and Annie have two children.

Steve Watson serves as a controller for DEC in Geneva, Switzerland. He received his MBA from Harvard.

Currently, **Robert Wright** is employed at Central Labs in Worcester.

... **Peter C. Conti** to Carol Latta on June 27, 1981 in Fairfax, Virginia. The bride, a dental hygienist, graduated from the University of Vermont School of Dental Hygiene in Burlington. Her husband is a geo-technical engineer for Stone & Webster Engineering Co., Cherry Hill, N.J. ... **John F. Stasaitis** and Ann M. Brown in Shrewsbury, Massachusetts on May 30, 1981. Mrs. Stasaitis, who works at the University of Massachusetts Medical Center, Worcester, graduated from Providence College. The bridegroom is with Stone & Webster, Boston.

Peter Bonaccorsi is employed with the planning and engineering division of Fairfax Co. Water Authority in suburban Washington, D.C. A professional engineer, he also has a master's degree from George Washington University.

Formerly with Digital Equipment Corp., **Ron Bohlin** recently joined the management consulting firm of McKinsey & Company. He now works in McKinsey's Stamford, Conn. office, and spends a lot of time in the firm's New York City office.

Thomas Ferguson serves as a senior formulations engineer at Eli Lilly & Co., Greenfield, Indiana. This year he received his PhD from Iowa State University.

Bruce Foster is a development engineer with GE Ordnance Systems, Pittsfield, Mass.

Greg Stamper continues as a pilot with United Air Services. He is located in Charlottesville, Va.

John Weigle is a medical student at the School of Medicine, University of Pennsylvania, Philadelphia. He holds a PhD in biochemistry from the University, and expects to receive his MD next May.

Michael Zack holds the position of management consultant at Touche Ross & Co., Boston. He has an MBA from Northwestern.

1971

► **Married:** **Daniel E. Demers** to Judy A. Ouellette on June 6, 1981 in Marion, Massachusetts. The bride, a home economics teacher at the Greater New Bedford Regional Vocational Technical High School, graduated from Framingham State College. Her husband is employed by the Aircraft Engine Group at GE in Lynn.

► **Born:** to Mary and **David A. True** a son, Joshua David, on November 18, 1980. In June, True was named as chief chemist at Narragansett Electric Co., Providence, R.I. Previously, he was chief chemical technologist for New England Power Co., Brayton Point Station.

J. Lee Cristy works as a quality engineer at Litton-Amecom in College Park, Md. He has been elected recording secretary by the Order of the Sons of Italy in Laurel.

Dr. **George Gardner** holds the post of clinical automation officer at Walter Reed Army Medical Center in Washington, D.C. In 1979, he received his PhD from WPI, after receiving his MA from Assumption College.

Michael Gitlen serves as a senior auditor at Kaman Corporation in Bloomfield, Conn.

Charles Harrison continues as a methods and procedures analyst at Union Camp Corporation in Wayne, N.J.

Capt. and Mrs. **Chris Johnson** are now stationed on the Presidio in San Francisco, Calif. Chris is the chief of quality assurance at Letterman Army Institute of Research.

1972

► **Born:** to Mr. and Mrs. **Neil C. Herring** a daughter, Kate, on Valentine's Day, 1981. Last year, Herring was elected vice president of finance at Path Lab., Inc., Portsmouth, N.H.

John Burke is a hydraulic engineer for the U.S. Bureau of Reclamation in Boulder City, Nevada.

Robert Dorf continues as a logistics plans officer with the U.S. Army. He is located with the HQ Atlantic Command in Norfolk, Va. He and Deborah, who reside in Virginia Beach, have two children.

Bill Kamb still works for Turner Construction in Cleveland.

1973

► **Married:** **Stephen P. Cole** and Susan J. Geist recently in Roslindale, Massachusetts. Mrs. Cole graduated from Northeastern-Tufts Dental Assisting Program and is a dental office manager in West Roxbury. The bridegroom was an employee of Hartford Hospital.

1974

Born: to **Gretchen Lapidus Lobo** and **Ricardo Lobo** a son, Rodrigo Javier, on April 22, 1981. The Lobos still work for the Metropolitan University in Mexico City.

Alden Bianchi has resigned his position as an associate in the Washington, D.C. law firm of Rivkin, Sherman & Levy to open a practice of his own in Worcester. Presently, he is located at 390 Main St., Suite 659.

Gary Carver is a member of the research staff at Western Electric, Princeton, N.J. Last year, he received his PhD in optical sciences from the University of Arizona.

During the past few months, **Steve Dacri** has appeared with the Mills Brothers in Denver, with Tony Orlando at Caesars Palace, Atlantic City, N.J., and on the Mike Douglas TV show. In October and November he will entertain at the Magic Castle in Hollywood, Calif.

The White House has named **William Delphos** vice president of operations and marketing of the Overseas Private Investment Corporation (OPIC). As part of this newly-created position, Bill will be responsible for the operations of the insurance and finance departments, marketing, and operations strategic planning. OPIC is the self-sustaining government agency that provides political risk insurance and finance services to encourage U.S. private investment in more than 90 developing nations. During the past two years, the Corporation has issued \$1.929 billion in insurance and made commitments for project financing totalling over \$244 million. In fiscal 1980, OPIC's net income was \$65.8 million. Prior to joining OPIC, Bill held a number of key management positions with Gould Inc. of Chicago, most recently that of managing director-international for the Industrial Products Group.

Charlie Dodd has been promoted from manufacturing engineer V to the position of senior manufacturing engineer at Hitchiner. He joined Hitchiner in 1977 after having been employed with Connecticut Investment Casting Company.

Donald Gross, who is stationed at Homestead AFB, Florida, is a captain in the Air Force.

Robert Hodgson holds the post of marketing specialist at Wang Laboratories in Lowell, Mass. He has an MBA from Amos Tuck School, Dartmouth College.

David Lapre serves as manager of product design and development at American Can Co., Greenwich, Conn.

Dr. **Mark Mahoney** is an emergency room physician at Parkwood Hospital in New Bedford, Mass. He holds an MD from the University of Connecticut. He and Kathryn have one child and reside in Mattapoisett.

William McBride, a project engineer in instrumentation for the Engineering Division of VECO, Inc., Anchorage, Alaska, has just spent ten months working at Prudhoe Bay on contract to ARCO-North Slope Projects Quality Assurance Group: Functional Checkout Group. He spent the summer building a cabin (alternative energy-technology dwelling) in Oregon. In September, he was slated to spend a week back East.

Harvey Neilson, who received his MBA from BU this year, is presently with IBM Corp., Burlington, Vt.

Stephen Rubin continues as president of Computer Control Systems, Inc. in Norton, Mass.

Michael Tanca is now a coal gasification process development unit project engineer for Combustion Engineering of Windsor, Conn.

Dr. **Stephen Thibodeau** has been selected by the science committee of the American Association for Clinical Chemistry to share the 1981 Young Investigator Award for his research involving breast cancer therapy. He was cited for his development of a hormone receptor assay that will aid physicians in predicting the success of a mode of therapy for breast cancer patients. He was recently a

postdoctoral fellow in the clinical chemistry training program at the Mayo Clinic. Along with others at the clinic, he developed a new test which is a modification of several existing hormone receptor assays. In the new test, the concentration of both the estrogen and progesterone receptors are measured simultaneously and used to establish the hormone-dependency of the tumor. The Young Investigator Award, sponsored by Boehringer Mannheim Diagnostics, Inc., consists of a scroll and honorarium. Currently, Dr. Thibodeau is associated with Children's Hospital, Denver, Colorado.

Mark Wendell works for Dell Mfg. Co., Farmington, Conn. He has an MSEE from WPI. The Wendells reside in Avon.

1975

► **Married:** **Geoffrey R. Chester** to Lauren L. Adkins on May 16, 1981 in Rowayton, Conn. The bride holds a BA from Fairfield University and an MA in demography from Georgetown Graduate School. Currently, she is with the Population, Health, and Nutrition Department at the World Bank in Washington, D.C. Her husband works for the National Air and Space Museum at the Smithsonian Institution. . . . **James K. Garvey** and Lynelle M. Kolwicz in Danbury, Connecticut on April 25, 1981. Mrs. Garvey graduated from Danbury High School and is a secretary at Consolidated Control Corp., Danbury. The groom serves as an engineer and group supervisor for Perkin-Elmer Corp., Optical Technology Division, also located in Danbury.

. . . . **Walter H. Wiegert, Jr.** to Regina R. Peretti on June 13, 1981 in West Springfield, Massachusetts. The bride has a BS in biology degree from Westfield State College. She is with the Old Saybrook Press, Saybrook, Conn. Her husband is a metallurgist for United Nuclear Corp., Norwich. He has an MS degree in metallurgy from WPI.

► **Born:** to Santa and **Norton Bonaparte, Jr.** a son, Norton Nathaniel III, on May 23, 1981. Bonaparte serves as director of program development with the American Society for Public Administration in Washington, D.C.

Marty Burgwinkle is with Turner Construction, Cleveland, Ohio.

On June 22, **Mark Drown** joined Coordinated Systems, Inc., a consulting engineering firm in West Hartford, Conn.

Peter Hatgelakas is a geologist-geophysicist with Peoples Natural Gas of Pittsburgh. Currently, he is drilling gas wells in Pennsylvania.

Gordon Henley serves as a system engineer at Intermetrics, Inc., Cambridge, Mass. He and Carol Ann live in Sudbury.

Leo Letendre is a senior research chemist at Monsanto Agricultural Products Co., St. Louis, Mo. This year, he received his PhD in chemistry from Harvard.

Frank Sundermeyer is a design engineer at Siemens Medical Systems, Cheshire, Conn.

Jeffrey Yu holds the position of general manager for King Machinery, Inc., Compton, Calif.

1976

► **Married:** **Lloyd A. Boyden III** and Patricia L. Gancarz on July 18, 1981 in Holden, Massachusetts. The bride, a library clerk, attended the University of Massachusetts. Her husband works for the Newport News Shipbuilding, Atomic Power Division. . . . **Bruce G. Haffty** and Theresa M. Malloy on June 14, 1981 in Worcester. The bride, a registered nurse, graduated from St. Vincent Hospital School of Nursing. The bridegroom is a medical student at Yale University, New Haven, Conn.

► **Born:** to Ellen and **Michael Menesale** twin daughters, Sarah Ann and Ann Marie, on March 1, 1981. Menesale, who has an MBA from the University of New Haven, is employed as a wire rope engineer at U.S. Steel Corp., Trenton, N.J. . . . to Kathleen and **William Ruoff** a son, Bryan Milard, on June 2, 1981.

Charles Bohling works as a senior analyst at Weathercaster, Salt Lake City, Utah.

Susan Valinski Bryan is a process engineer for Uniroyal Chemical in Naugatuck, Conn. The Bryans have one child and live in Middlefield.

Continuing with Turner Construction, **John Dewine** is now with the firm in Charleston, West Virginia, where he holds the post of project superintendent.

Stephan Divoll serves as a product specialist at Texas Instruments in Attleboro, Mass.

John Hamilton continues with Raymond International Builders in Saudi Arabia. He is a project manager for the cement mortar lining of steel pipes used for the Riyadh water transportation system. The twin pipe line will extend from the port city of Jubail and carry desalinated sea water to the capital city of Riyadh 471 KM away.

Kevin Hastings was recently promoted to engineer at Northeast Utilities (NU) in Hartford, Conn. He joined NU in 1979 as an assistant engineer and was named associate engineer in 1980. Currently, he is studying for his MS degree in management at the Hartford Graduate Center.

Sulekh Jain holds the position of technical director at Beaumont Well Works Co., Houston, Texas.

Peter Krupinsky, a graduate of Loyola Law School, is a public defender for Los Angeles County in California.

M. J. McGuire is a marketing consultant at GE in Bridgeport, Conn.

Kathleen Morse now holds the position of principal software engineer at Digital Equipment Corp., Nashua, N.H. "Just bought a house. Finally got a sports car—an Alfa Romeo. Have traveled to Australia and Europe for work."

Charles Moulter works as a quality control engineer in system testing at GE in Pittsfield, Mass.

Delmar Salomon heads R&D at Esquim, S.A., Cuernavaca, Mexico.

Peter Tordo is a senior loss prevention representative for Liberty Mutual Insurance Co., Norwich, Conn.

Andrea Tyson has been named market manager of professional services for the Carlson Group, Inc., an international engineering, architectural and construction management firm headquartered in Cochrane, Mass. Her responsibilities include development, management, and promotion of the professional services market of the various Carlson companies. A registered landscape artist, she received her BS from UMass and her MSCE from WPI. She has lectured for the ASCE, WPI, and for the Center for Professional Advancement in East Brunswick, N.J. Also, she has been a visiting critic and lecturer at Harvard University, Radcliffe Institute. At Carlson, she has been involved in all projects, including major national and international industrial, commercial, and medical facilities.

1977

► **Married: Daniel A. Funk** and Jill Sampson of Cincinnati, Ohio last November. In April, they traveled to Switzerland, where Dan studied under a surgeon who specializes in fracture fixation with implantable devices. In June, he returned to this country to receive his medical doctor degree from the University of Cincinnati. In July, he started his residency in orthopedic surgery at the Mayo Clinic.

... **Kim M. Mohanty** and Carolyn C. Meinecke on July 25, 1981 in Stillwater, Minnesota. The bride, a teaching assistant, is studying for her MS degree as an oboist at the State University at Stony Brook, N.Y. She received her BA degree in music in 1978. Her husband is a scientific computer programmer on the Isabelle Project at Brookhaven National Laboratory. He plans to study for his doctorate in physics. ... **Linda S. Weiss** and Paul B. Makowski in Fairfax, Virginia on July 25, 1981. The bride received her MSCE from Virginia Polytechnic Institute and State University this year. The groom has a BSCE from Northeastern and works for the Illinois Institute of Natural Resources, State Water Survey Division, Champaign, Ill.

Currently, **Joan Adamaitis** broadcasts news beginning at 5 a.m. for radio station WHEB, Portsmouth, N.H. Formerly, she

worked for a Worcester radio station and taught high school in the Worcester area. (She holds teaching certificates in English, French, Spanish, and Russian.) Widely traveled, she was once a governess for a Massachusetts couple who taught at the Anglo-American School in Leningrad.

Raymond Baker is a chemical engineer for utilities at Corning Glass Works, Corning, N.Y.

Mark Breton works as an estimator at Gilbane Building in Clinton, N.J.

Richard Clapp has taken a permanent transfer from du Pont's Engineering Services Division-field engineering section to the Engineering Services Division-consultant section in Nashville. He is responsible for supplying materials engineering assistance to du Pont plants in Louisville, Ky., Montague, Mich., and Belle, West Virginia. "Phi Kappa Theta grads are about everywhere." The plant manager at Montague is a WPI Kap. **Dan Kennefick**, '79 is an engineer at Louisville and **Bob Yule**, '80 is an engineer at Belle.

Thomas Cloft works for Sundstrand Fluid Handling in Arvada, Co. In May, he received his MSME from RPI. He and Penny reside in Denver.

Asta Dabrila serves as a pipe support designer at Stone & Webster, Boston.

Chuck Johnson has just graduated from Cornell University Graduate School of Business, where he received his MBA. Currently, he is employed as a product specialist at Texas Instruments in Attleboro, Mass.

Henry LeBlanc is currently on leave of absence from his job with Mobil Chemical, and is now working in the promotions-PR department of the Summer Repertory Theatre in Santa Rosa, Calif., about an hour from San Francisco. As a promotions assistant, he's been doing a lot of fund raising, group sales promotions, and TV interviews. Active in theater at WPI, since graduation he has acted in numerous community theaters and dinner theaters on both coasts. "Fortunately for me, Mobil was kind enough to release me from my responsibilities for the summer so I could try something new here at SRT." He says that the company of 31 actors, aged 17 to 24, will each perform in three of six shows this season for over 50,000 people. Shows include "West Side Story," "The Crucible," and "Chicago." He writes that Santa Rosa is in the heart of the wine tasting country, and that he's become a familiar face on the wine-tasting circuit.

James Lunney is a field engineer for GE Ordnance Systems, assigned to Holy Loch in Scotland.

Scott Shurr holds a new post as systems analyst with the business systems group of Atex, Inc., Bedford, Mass.

Scott Sieburth works as a research assistant at Stanford. He holds an MA from Harvard.

1978

► **Married: Rodney C. Dill** and Sally Ann Stredny in Nashua, New Hampshire on June 6, 1981. The groom serves as a field engineer for GE Ordnance Systems and is currently located at Portsmouth Naval Shipyard. ...

Karen E. Hayes and Willie F. Althammer in Fairhaven, Massachusetts on July 18, 1981. Mrs. Althammer is an engineering systems analyst. The bridegroom, an aerospace engineer, graduated from the University of Maryland. ... **Harold L. Jacobs** to Susan Stratton-Crooke in Scarsdale, New York on July 12, 1981. The bride, a graduate of Katharine Gibbs School, is a legal secretary. Her husband is with the family business, A. Jacobs Industries, in Westchester and New York City. ... **Douglas R. Parsons** to Karen E. Lucey on May 9, 1981 in Enfield, Connecticut. The bride graduated from Thompson School of Nursing, Brattleboro, Vt., and is employed by Choate Memorial Hospital, Woburn, Mass. The bridegroom serves as a programmer-analyst for the EDP Corporation, Needham, Mass.

Robert Brown is employed as a project engineer at Harris Corp. in Dover, N.H.

Ralph Chapman is a programming consultant at Baha'i World Centre, Haifa, Israel.

Currently, **Andy Corman** works for Turner Construction in Columbus, Ohio.

George Fredette holds the post of district engineer for Halliburton in Cortland, Ohio.

Frank Leahy, who has his master's degree in operations research from the University of California, Berkeley, is now designing a new planning system to coordinate production, inventory and marketing at Intel Corp., where he is a senior planner.

Paul Lefebvre is a mechanical engineer at the Naval Underwater Systems Center in Newport, R.I.

Dimitrios Promponas holds the post of senior computer analyst at Prime Computer, Inc., Natick, Mass.

Stephen Robichaud is manager of printer production at Data Printer Corp., Malden, Mass. The Robichauds live in Gardner.

Barry Rogers is with the Austin Company in Cleveland, Ohio.

Reginald Roome II is a structural engineer at LeMessurier Assoc., Cambridge, Mass. This year he received his MS from WPI.

Currently, **Margaret Staruk** holds the position of senior systems analyst at State Mutual in Worcester. She and her husband, Harry, have two children and reside in Holden.

Brian Timura has completed his second year at Tufts Medical School in Boston, and has begun his rotations as a clerk at Boston area hospitals. Among the various clerkships are: surgery, New England Medical Hospital; psychiatry, Veterans' Administration Hospital; and medical, Newton-Wellesley Hospital.

1979

► **Married: Keith C. Bonn** and Emily N. Stroh in Chappaqua, New York on May 30, 1981. The bride graduated from State University at Delhi. . . . **Jeffrey Bouyea** and Debra G. Calaf on May 23, 1981 in Springfield, Massachusetts. The groom serves as a project manager for Wackworth Properties in Houston, Texas. . . . **Arthur A. Foutsitzis** and Stavroula Pappas on March 8, 1981 in Worcester. The bride graduated from Worcester State College and was a foreign language teacher in the North Middlesex community schools, Townsend, Mass. Her husband, who holds a master's degree from WPI, is employed as a development engineer by Universal Oil Products, Process Division, Chicago, Ill. . . . **Robert E. Guigli** and Charlene M. Tagliamonte on June 7, 1981 in Wellesley Hills, Massachusetts. Mrs. Guigli graduated from Boston College. The groom is employed by Ernest Guigli and Sons, excavating contractors, in Wellesley.

► **Married: David E. Largesse** and **Judy Bagdis**, '77, in Grafton, Massachusetts on April 11, 1981. The bride is an electrical engineer at Polaroid in Cambridge, Mass. The bridegroom holds the post of New England district manager of Balston, Inc., Lexington.

. . . . **Peter Simonson** to Lynne S. Barriere on June 6, 1981 in Sterling, Massachusetts. Mrs. Simonson, formerly a pasteup artist for Achorn Graphics, Worcester, graduated from Anna Maria College. Her husband is an electrical engineer for Sanders Associates, Nashua, N.H. . . . **Edward C. Tidman III** to Cheryl Ann Bagdonovich on August 8, 1981 in Worcester. The bride graduated from Assumption College and is personnel coordinator at Medical Personnel Pool. The groom, a group-insurance underwriter at State Mutual and editor of the Worcester Airport Newsletter, is studying for his MBA at Babson College, Wellesley. . . . **Hans Van De Berg** to Carrie L. Davis on August 8, 1981 in Newington, Connecticut. Mrs. Van De Berg graduated from Briarwood College. Her husband is employed by Combustion Engineering, Power Systems, Windsor. . . . **Robert Wroblewski** and Karen Ann Adamski in Ludlow, Massachusetts on June 20, 1981. Mrs. Wroblewski graduated from Notre Dame High School and works as a receptionist for the Credit Bureau of Western Massachusetts. The groom is employed as an electrical engineer for Honeywell, Inc., Lexington.

Diane Curren Bird, who visited the mechanical engineering department at WPI on June 30th, reports that she is still with Westinghouse in the manufacturing engineering division working on reactor cooling pumps. She is the lead engineer for controlled linkage seals. She and her husband, an Episcopal minister, are both planning additional graduate study at Duquesne University starting this fall.

Richard Bonci works as a process engineer at Burlington Industries in Clarksville, Virginia. He and Karen have two children.

Gail D'Amico has been accepted at Tufts University in the School of Veterinary Medicine, where she will pursue a degree in large animal medicine and research. Currently, she is a doctoral student in pharmacology at Mount Sinai School of Medicine in New York City.

Thomas Dinan is a research assistant at the University of Illinois in Urbana.

Dan Grossman is now a software engineer in the network products group at Codex Corp., Manfield, Mass. He lives in Attleboro.

Steve Kapurch has begun his fourth assignment in the third and final year of the Navy Logistics Engineering Program. The last year will be spent at the Fleet Weapons Engineering Directorate, Pacific Missile Test Center at Point Mugu (Calif.) Naval Air Station. "Point Mugu may be best known as the Naval Air Station which President Reagan flies to for his western vacations in Santa Barbara." Earlier this year, Steve was stationed at the Naval Technical Representative Office at Inter State Electronics Corporation in Anaheim, with assignments including a review of engineering changes on the FBM submarine (Polaris, Poseidon, Trident) subsystems. Previously, he was assigned to the Naval Plant Representative Office in Burbank at the Lockheed Aircraft Corporation and at the Fleet Analysis Center in Corona, where he began his engineering intern program.

David Mangini works as a staff assistant at Southern New England Telephone in New Haven, Conn.

Michael McDonald is employed as a nuclear engineer II at Combustion Engineering. He resides in Palmer, Mass.

Jeff Michaels is now a process engineer at Borden Chemicals in Leominster, Mass.

Having received his MBA from Babson College last year, **David Smith** continues as a manufacturing operations analyst at GenRad, Inc., Bolton, Mass.

Marine second lieutenant **Gregory Van Houten** has reported for duty with the 2nd Amphibian Tractor Battalion, Marine Corps Base, Camp Lejeune, N.C. He joined the Marine Corps in 1978.

1980

► **Married: Timothy A. Andrews** to Valerie J. Cummings in Dighton, Massachusetts on June 21, 1981. The bride is a clinical psychologist with McLean Hospital and Mystic Valley Mental Health Center. She graduated from Dartmouth and Indiana University of Pennsylvania. Currently, she is doing advanced doctoral work at Harvard. The groom, who also graduated from Dartmouth, has an MS from WPI. He is doing graduate work at

Sloan School of Management at MIT. He is employed by Honeywell Information Systems, Billerica, where he holds the post of senior programmer. . . . **Robert F. Berlo** and Eve L. Martin on June 6, 1981 in Weymouth, Massachusetts. Mrs. Berlo graduated from Salve Regina College and is an RN at Quincy City Hospital. Her husband works as a sales engineer at Hinds & Coon Company of Boston.

► **Married: Timothy M. D'Arcy** and Patricia Ann Leemann in Somers, Connecticut on June 6, 1981. Mrs. D'Arcy graduated from the University of Connecticut School of Nursing and is employed by Hartford Visiting Nurse, Hartford. The groom holds the post of territory manager for Parker Hannifin Corp., Cleveland, Ohio. . . . **Peter J. Folta** and Kathleen M. Kennedy on June 26, 1981 in Massachusetts. Mrs. Folta attended Holyoke Community College and is a manager for Burger King in Springfield. The groom is a rate engineer at Commonwealth Energy.

. . . . **Anthony E. Jannetta** and Catherine A. Jeffords on June 6, 1981 in New London, Connecticut. The bride graduated from the University of Connecticut School of Pharmacy in Storrs. Her husband is with Harris RF Communications in Rochester, N.Y. . . .

Robert J. Pearson to Jamie E. Giguere on May 16, 1981 in Worcester. The bride is a student at Assumption College. The bridegroom is a chemical engineer for Pfizer, Inc., Groton, Conn. . . . **Mark S. Tino** to Pamela Higgins in South Easton, Massachusetts. Mrs. Tino attended Aquinas Junior College. The bridegroom is a systems consultant for Arthur Andersen & Company.

Michael Aghajanian is associated with manufacturing management at GE in Chicago.

Theresa Metcalf Catanach continues as a financial analyst at Norton Co.

Raymond Cronin serves as a sales engineer and technical accounts representative at Megatest in Whitehall, Pa. He is opening a new district office for the firm in Pennsylvania.

Thomas Egan is employed as an engineering staff member at Rocketdyne Division of Rockwell International in Canoga Park, Calif. Also, he is president of High End Boardsailing, Sailboard Sales & Lessons.

David Gura works as a field logging engineer for Schlumberger of Corpus Christi, Texas.

Daniel Itse is an associate engineer at Riley Stoker in Worcester.

Pat Keough serves as a staff biochemical engineer at Merck Chemical, Danville, Pa.

Garth Kucinkas is employed as an applications engineer at the Lee Co., Westbrook, Conn.

John Letaumeau, who has received his MS degree from USC, is now a member of the technical staff at Bell Labs in Piscataway, N.J.

Donald May holds the post of field engineer for Raymond International Builders of New Jersey.

Fred Mirabelle continues as a design engineer for Harris Corp., Dover, N.H. "Recent business move from Harris/Westerly, R.I. to Harris/Dover. Division split."

Marguerite O'Keefe serves as an industrial territorial sales engineer for Westinghouse Electric Corp., Hillside, N.J. She is located in Roslindale, Mass.

Mark Pankoski is a programmer-analyst for the American Society of Civil Engineers in New York City.

Touradj Pourrahimi is with Macrodata Corp., Woodland Hills, Calif.

Angelo Scangas works as a maintenance supervisor for National Starch & Chemical in Plainfield, N.J.

Philip Suomu is a telecommunications section chief at AVCO, Wilmington, Mass.

William Taber works as a process engineer at Fairchild in South Portland, Me. He and Margaret reside in Yarmouth.

John Tasse is employed as a reactor performance engineer at Knolls Atomic Power Labs in Schenectady.

John Zahara works as a system engineer at Bunker Ramo, Trumbull, Conn.

civil engineer for Los Angeles (Calif.) County. . . . **Francis G. Polito** to Paula L. Bisson in Worcester on June 20, 1981. Mrs. Polito graduated from Assumption College, and through New York University, spent her junior year at the Sorbonne in Paris. The bridegroom is a teaching assistant enrolled in the MS/PhD program at Cornell University.

Raymond Aubert has joined the Torrington (Conn.) Company, where he is a bearing engineer.

Currently, **Daniel Beliveau** is a second lieutenant in the U.S. Army Infantry. From March through May, he attended the Ranger course given at Ft. Benning, Ga. In May, he was stationed at Ft. Stewart, also in Georgia.

David Briggs is with International Data Sciences, Lincoln, R.I. . . . **Richard Buckley** works for Harris Corporation-RF Comm. Division in Rochester, N.Y.

Radian Corporation, Durham, N.C. has employed **Suzanne Call** as a chemical engineer.

Currently, **Paul Chetham** is studying for his MD at the University of Massachusetts Medical School, Worcester.

Thomas Clark has begun work for Bell Telephone Laboratories, Naperville, Ill.

Katherine Coghlan serves as a second lieutenant in the U.S. Air Force.

Bonnie Cook is with the Air Force at the Pentagon in Washington, D.C.

Thomas Cotton has been serving as a teaching assistant in the WPI electrical engineering department.

Eleanor Cromwick has been employed by Turner Construction, Boston.

Scott Crossman holds the post of applications engineer at Fafnir Bearing, New Britain, Conn.

Robert Daley, Jr. works for Brown & Sharpe Mfg. Co., North Kingstown, R.I.

Richard Darcy works for Eastman Kodak Co. He is located in Pittsford, N.Y.

Daretia Davis, who currently resides in Houston, Texas, works for Exxon Production & Research.

Laurence Dean is an associate engineer for Westinghouse Power Generation Group in Lester, Pa.

Norman Delisle was recently named as a software research engineer at Tektronix, Inc., Beaverton, Oregon. He holds an MSCS from WPI.

Michael DiCostanzo is a graduate student at WPI.

Currently located in Dallas, Texas, **John Eagan, Jr.** has been employed by Texas Instruments, Inc.

Beverly Elloian works as a civil engineer at Bechtel Northern Corporation., Gaithersburg, Md.

Robert Endres has been hired as an electrical engineer by du Pont in Ingleside, Texas.

Lisa Fearn is employed by Varian/Extrion Division, Gloucester, Mass.

At the present time, **Patricia Ficociello** serves as a process engineer at Corning Medical & Scientific. She is headquartered in East Walpole, Mass.

The U.S. Department of Defense, Washington, D.C. employs **Paul Filosa** as a mathematician.

Mark FitzMaurice has been named an electrical design engineer at Texas Instruments in Dallas, Texas.

Walter Flanagan III is a structural engineer at Camp Dresser & McKee, Boston.

William Fletcher is now with Hewlett-Packard. He is located in Lexington, Mass.

Digital Equipment Corp., Maynard, Mass., has employed **Catherine Girouard** as a quality control engineer.

Mary Goodrow works for GE in Schenectady, N.Y.

Anestis Halkidis has joined Digital Equipment Corp., Maynard, Mass.

A. Kent Harnois is currently a maintainability engineer at DEC in Marlboro, Mass.

John Harris holds the post of development engineer at American Hoechst Corp., Leominster, Mass.

Robert Hawkins, who is located in Shreveport, La., works for Schlumberger Well Services.

John Healy works for Anaconda Metal Hose, Waterbury, Conn.

Dick Hennessy is currently employed by Brown & Sharpe Mfg. Co. in North Kingstown, R.I. He is in the management training program in the Manufacturing Engineering Department.

Lee Hevey, a mechanical engineer for Corning Glass Works, resides in Painted Post, N.Y.

Peter Hicks has been named as manufacturing engineer for the Connector Systems Division of Texas Instruments in Mansfield, Mass.

Leonard Hinds is a product quality engineer at Eastman Kodak.

Susan Hoffma works for Badger America, Inc., in Cambridge, Mass.

Joseph Horvath is now with Hughes Aircraft Company's Ground System Group, located in Fullerton, Calif. A member of the technical staff, he has a programming assignment with the System Development program. The 11,000-man Hughes Fullerton facility specializes in defense programs for the U.S. military.

Litton Data Systems has named **Dennis Houle** as a design engineer in Van Nuys, Calif.

David Ireland is a member of the technical staff at Bell Labs in North Andover, Mass.

David Jacobs has been with the department of physics at WPI, serving as a research assistant.

Deborah Johnson is a graduate teaching assistant at the University of Michigan, Ann Arbor.

Donna Johnston is a design engineer for du Pont, Wilmington, Delaware.

Roger Keilig has been accepted at Carnegie-Mellon University in Pittsburgh, where he will pursue his MS in geo-technical engineering.

1981

► **Married:** **Ruth Adams** to Manuel Teixeira in Norton, Massachusetts on June 20, 1981. The bride is a structural engineer for Stone & Webster, Boston. Her husband graduated from Norton High School and is employed in the shipping department of the Foxboro Company. . . . **Scott T. Cloyd** and Rose Mary Jackson on August 22, 1981. The bride, a graduate of Southern Illinois University, is a high school business education teacher. The groom is an associate engineer with the Water Reactor Division of Westinghouse Electric Corporation, Pittsburgh, Pa. . . . **Steven Dupont** and Andrea Nelson in Mattapoisett, Massachusetts on July 5, 1981. Mrs. Dupont graduated from Becker and attended South-eastern Massachusetts University. She is a physical therapist assistant.

► **Married:** **David E. Green** and Roberta M. Lepak in Massachusetts on June 27, 1981. The bride, a graduate of Mount Holyoke College, is a graduate student in psychology at the University of Massachusetts, Amherst. The groom is with S. R. Green and Sons, Holyoke. . . . **Leon J. Laviolette** and Pamela Lynch on June 12, 1981 in Thorndike, Massachusetts. Mrs. Laviolette graduated from Palmer High School. Her husband is a contact engineer with Exxon Corp. in Baytown, Texas. . . . **Bruce W. MacLeod** and Lynne Goldworthy on July 11, 1981 in South Portland, Maine. The bride graduated from Portland High School. The bridegroom is a

William Kiczuk has joined the Equipment Group at Texas Instruments in Dallas.

Honeywell Information Systems has named **Deborah Kinne** as a member of the Advanced Engineering Program in Billerica, Mass.

Brian Klinka works for Westinghouse in Philadelphia.

Robert Kuklinski is a student actuary for Sunlife of Canada, Wellesley Hills, Mass. His wife, **Anne Haselton Kuklinski**, '80, works for Chas. T. Main, Boston.

David LaPotin, who has received his MSEE from WPI, is a design engineer with GTE Laboratories, Waltham, Mass. He graduated with a BSEE from Temple University, Philadelphia.

Glenn Lawton serves as an associate development engineer at Honeywell-Electro Optics Operations, Lexington, Mass.

Stephen Leslie has joined Travelers Insurance, Hartford.

Mark Malenbaum is a second lieutenant in the U.S. Air Force.

Jim McCall is employed as a professional research engineer by Chevron in California.

Richard Molongoski serves as environmental engineer in Boston at Camp Dresser & McKee, Inc.

Bernard Mongilio has been named systems analyst at State Mutual, Worcester.

Peter Nemiroff holds the position of director of research and development at The Nemiroff Corporation, New York City. He belongs to the New York Academy of Sciences, the American Association for the Advancement of Science, and the Sons of the American Revolution.

Scott Nisula has accepted a post as professional research engineer at Chevron Research Co., Richmond, Calif.

Douglas Norton is with the International Systems Corp. at GTE in Waltham, Mass., where he is an associate systems applications engineer.

Jay Norwood has joined Chevron. He is located in California.

Dave Patrick, who works for Texas Instruments, resides in Dallas.

Raymond Perigard has been named as a chemical engineer at Union Carbide Corp., Tarrytown (N.Y.) Technical Center.

Automation Inc., Burlington, Mass., has employed **Gregory Phipps** as an applications engineer.

Marylou Place is with Exxon Research and Engineering Co., Florham Park, N.J.

Michael Pugh works as an associate engineer for NBI in Boulder, Colorado.

Roland Roberge is a field engineer at GE. **Kurt Ross** continues at WPI, where he is going to graduate school.

Fred Rucker has accepted the post of operations supervisor at AT&T Long Lines in Manchester, N.H.

Richard Rykosky has joined Gatz Terminals as a project engineer. The firm is located in Chicago.

Jeffrey Smith is associated with operations engineering at Dresser Atlas Industries, Houston, Texas.

Greg Stanford is attending Carnegie-Mellon University, Pittsburgh.

James Steele continues at WPI, where he is studying for his master's degree in mechanical engineering.

Brian Stoffers works for Honeywell/Small Systems and Terminal Division, Billerica, Mass.

Combustion Engineering has employed **Peter Tiziani** as an engineer I. The company is located in Windsor, Conn.

Jeff Trask is a professional research engineer at Chevron Research Co. (Standard Oil) in Richmond, Calif. He lives in Rodeo.

Jeffrey Wade serves as a product manager at Adage, Inc., Billerica, Mass.

Andre Walker has been named a development engineer at UOP, Des Plaines, Ill.

Mati Weiderpass serves as a second lieutenant in the U.S. Army.

Thomas Woodbury has joined Fluor Engineers & Constructors, Irvine, Calif.

Dennis Wysocki is now a project engineer at Clairol in Stamford, Conn.

NATURAL SCIENCE PROGRAM

► **Born:** to Edwina and **Michael E. Lewandowski**, '74 a son, Brian Michael, on July 12, 1981. The Lewandowskis, who live in Somerset, Mass., have another son, Scott, 3.

Charles Ferris, '74 has been appointed the new headmaster and manager of the high and middle schools in Shrewsbury, Mass. He will be responsible for overseeing the transition from the current junior high and high school system to one comprising middle and high schools. Formerly guidance department chairman at Shrewsbury Senior High School, he helped coordinate the self-help for achieving personal excellence and the sex education life in the family programs at the high school. Also, he served as chairman of the staff development and drug abuse committees and wrote the "Counselor's Appointment and Activity Guide." He received degrees from Clark University and has attended Worcester State College. He is enrolled in an educational leadership and administration program at Worcester State.

Richard Stevens, '81, continues as a science teacher at East Jr. High School, Andover, Mass.

SCHOOL OF INDUSTRIAL MANAGEMENT

Frank Ashe, '68, recently received the President's Award as sales specialist of the year for American Optical's safety products business. He serves as manager of special accounts, and came to AO in 1945. In 1946, he joined the Safety Products Division. He has held his current post since 1972. He is a member of the American Society of Safety Engineers, the American Industrial Hygiene Association, and the Veterans of Safety.

On July 1st, **Samuel Sotir**, '72, opened his own business, The Office Center, a company offering office space and business services in Auburn, Mass. The center provides such administrative services as secretarial help, mini-computer operations, telephone answering, mail service, and Telex transmission. It also rents office space, including reception and conference rooms, with furniture and equipment being available. The company caters to consultants, regional sales persons, researchers, and job hunters who need part-time office space and help, and to businesses which need additional office space to accommodate peak work loads. Sotir is also founder and president of The Phoenix Corp. of Auburn, a financial management consulting company. He lectures on financial management at Assumption College.



Ronald E. Greene, '17, died in Royal Oak, Michigan on April 26, 1981.

A native of Stow, Mass., he was born on March 1, 1893. He graduated as an electrical engineer from WPI in 1917. Following graduation, he served as an ensign in the U.S. Navy during World War I.

For seven years, he worked for GE in Schenectady, N.Y. In 1926, he joined the Detroit Edison Co., and remained with the firm until his retirement as assistant manager of construction in 1958.

Mr. Greene belonged to Tau Beta Pi, Theta Chi, the AIEE, and the Engineering Society of Detroit, as well as to the Economic Club of Detroit and the American Legion.

James Apostolou, '18, of Pittsburgh, Pennsylvania, a long-time employee of Westinghouse, died on February 19, 1981 at the age of 88.

He was born on Dec. 28, 1892 in Kavalla, Greece. In 1918 he received his BSEE from WPI. During his career, he was with Western Electric and Westinghouse Electric in East Pittsburgh, Pa., and Buffalo, N.Y. He had served as a general electrical engineer, application engineer, and sales engineer in various locations. In 1958, he retired from Westinghouse.

Howard L. Brooks, '19, a former chairman of the board of Ferro Enameling Co., Oakland, California, died on May 3, 1981.

He majored in chemistry at WPI, and later became a member of the Class of 1919. Early in his career, he was with Lewis Shepard Co., manufacturing engineers in Boston, Mass. In 1918 he served as a seaman second class in a special detail of chemical engineering [chemical warfare].

Mr. Brooks, who also studied at MIT, was a member of Phi Gamma Delta. He was born on Aug. 9, 1896 in West Springfield, Mass.

Joseph J. Morrow, '25, a retired vice president of Pitney-Bowes, Inc., died in Atlanta, Georgia on June 21, 1981. He was 78 years old.

During his 25 years with Pitney-Bowes, he served as director of personnel relations, was elected vice president for personnel relations in 1958, and then promoted to vice president for administration in 1963. As an administrator, he helped the firm extend fair employment opportunities to blacks, and as an Urban League board member, he made nationwide speeches on the subject of implementing a program to integrate blacks in industry. In 1968, he retired from Pitney-Bowes.

Civic-minded, he was officially associated with the National Conference of Christians and Jews, the Connecticut Equal Employment Opportunity Council, and the Business Equipment Manufacturers' Association. The late President Johnson appointed him to serve on the National Citizens' Committee for Community Relations. In 1958, he was named Citizen of the Year in Stamford, Conn.

Mr. Morrow was born on March 15, 1903 in Greenwich, Conn., and later became a student at WPI and MIT. At one time he operated his own building contracting firm. He belonged to ATO.

Arthur S. Chavoor, '28, died in Cambridge, Massachusetts on May 27, 1981 following a long illness.

A native of Syria, he was born on Aug. 16, 1904. He enrolled as a civil engineering student at WPI. For 41 years he was with the Metropolitan District Commission in Boston, which he served as associate civil engineer and assistant director of engineering in the Sewerage Division. He helped design the Deer Island pumping station, and retired as chief engineer of the division.

Mr. Chavoor was a professional civil engineer and land surveyor in Massachusetts. He was active with the Society of Massachusetts State Engineers, the Professional Engineers Association, and the Boston Society of Civil Engineers, as well as the Engineering Societies of New England.

Arthur W. Olcott, '28, retired vice president of the Property Owners' Service Corp., died in Damariscotta, Maine on July 12, 1981. He was 76 years old.

After studying civil engineering at WPI, he joined the New England Power Co. for two years. From 1930 to 1965 he was employed by the Highway Department of the State of Connecticut, where for three years before his retirement, he served as director of the Bureau of Rights of Way.

During his retirement, he was a consultant for real estate appraisal in Connecticut and became vice president of the Property Owners Service Corp. of Farmington, retiring again in 1976. He was chairman of the board of trustees of the Central Baptist Church, Hartford, Conn., and a member of SAE. He enjoyed making stained glass lamps as a hobby.

A Hartford native, he was born on June 4, 1905. At one time, he was consultant for the beautification program for highways inspired by Lady Bird Johnson.

Dr. James H. Williams, '29, a developer of sulfa drugs, died at his home in Ridgewood, New Jersey on June 11, 1981 following a long illness.

He was born on Jan. 1, 1908 in Manchester, England, and came to the U.S. in 1921. In 1929, he graduated from WPI with his BS in chemistry, and in 1933, he received his PhD in organic chemistry from New York University. He was a member of Tau Beta Pi, Sigma Xi, and Lambda Chi Alpha.

Early in his career, he was employed by the Patent Division of Allied Chemical Corp. In 1937, he joined the American Cyanamid Co. research laboratories in Stamford, Conn. In 1945, he was transferred to the Lederle Laboratories Division of American Cyanamid in Pearl River, N.Y., where he was administrative director of research. In 1948, he was named director of research of Lederle Laboratories, including the pharmaceutical and medicinal research. He retired in 1973.

Dr. Williams participated in and contributed to the development of sulfa drugs, folic acid, and Aureomycin, among many other life-saving products. He is credited with having named the drug, Aureomycin.

In 1945, he was chosen as one of 200 top U.S. scientists by the Joint Chiefs of Staff to study conditions in the chemical and pharmaceutical industries in Europe immediately following World War II. For this service, he was awarded a Certificate of Appreciation by the U.S. Army in recognition of his accomplishments as a technical observer.

In 1958, Dr. Williams was awarded a Certificate of Appreciation for his assistance with the American program for the Brussels Universal and International Exhibition held that year in Belgium. The award, presented by the U.S. Commissioner General of the Exhibit, particularly cited him for his arrangement, organization, and direction of the displays and background material featuring achievements on behalf of the U.S. pharmaceutical industry.

He was a life fellow in the New York Academy of Sciences, a fellow of the American Institute of Chemists, a fellow in the American Association for the Advancement of Sciences, and a 50-year member of the American Chemical Society.

Dr. **Herman W. Dorn**, '33, of Champaign, Illinois passed away on June 11, 1981.

He was born on Sept. 14, 1911 in New York City. After studying chemistry at WPI, he later received his AB, MA, and PhD from Clark University. He was a post-doctorate fellow in biochemical engineering at the State University of Iowa in 1943-44.

During his career, he was associated with International Minerals & Chemical Corp., Owens-Illinois Glass Co., Irwin, Neisler & Co., Picture Craft Co., and the U.S. Army Chemical Research & Development Labs. Also, he was employed by Lanpar Company and Parmae Labs, Mills Pharmaceuticals, Physicians' Medical Laboratory, Inc., and Glencoe Research. For a number of years, he was president of his own company, Dorn & Co., St. Louis, Mo. (food and drug consultants).

A registered, professional chemical engineer, Dr. Dorn was a fellow of the American Association for the Advancement of Science, the American Institute of Chemists, and the New York Academy of Sciences. He was also listed in a number of Who's Who publications. He had served as president of the Frozen Food Institute of New York City and belonged to numerous professional societies.

Edmund M. Fenner, '38, who officially retired from Johns-Manville in January, died in Denver, Colorado on April 4, 1981, following a long illness.

With the company since 1940, he retired as director of the Department of Environmental Control. In 1949, after four years' service with the Navy, where he rose to Lt. Commander, he was promoted to chief of JM's Research Mechanical Section. In 1962, he became project manager in the Plant Engineering Department, a post he held until his final appointment.

Mr. Fenner was a registered professional engineer in New Jersey. He was a member of Theta Chi, and was born on Jan. 4, 1916 in Orange, N.J. In 1938, he graduated as a mechanical engineer from WPI.

Robert H. Field, '38, president of Field Concrete Pipe Co., Inc. and a civic leader, died unexpectedly on July 26, 1981 at his home in Brooklyn, Connecticut. He was 66.

Born in Brooklyn on July 1, 1915, he became a member of the Class of 1938. During his lifetime, he was with Wickwire Spencer Steel, and the American Thermos Bottle Company, prior to founding Field Concrete Pipe Co., Inc., Wauregan, Conn., about 25 years ago. The company also has plants in Rhode Island and New Hampshire.

He was a former director and president of the American Concrete Pipe Association, and chairman of the American Society of Testing Metals. Previously, he was president and director of Day Kimball Hospital in Putnam, and chairman of its building and planning committees. He founded the Mortlake Fire Company. Active with the Boy Scouts, he also had served on the Brooklyn Board of Finance.

Mr. Field belonged to PSK. He had been a member of the President's Advisory Council at WPI and had been involved in several WPI fund raising programs.

Morey L. Hodgman, '50, died in Westwood, New Jersey on March 23, 1981.

His employers included Garden Turn, Long Island, N.Y.; Chance-Vought, Dallas, Texas; and Bendix Aviation Corp., Teterboro, N.J. He belonged to SPE. During World War II, he served as a pilot with the U.S. Army Air Force.

A native of Richmond Hill, N.Y., he was born on June 27, 1920. In 1950, he graduated as a mechanical engineer from WPI.

J. R. Normand Casaubon, '55, a retired electrical engineer for the New England Telephone Co., died July 2, 1981 at his home in Wellesley, Massachusetts at the age of 49.

He was born on Jan. 11, 1932 in Southbridge, Mass. In 1955 he received his BSEE from WPI. He had been employed by Bell Telephone Co. of New Jersey, AT&T, and New England Telephone. His posts included that of business research analyst and assistant engineering manager.

George E. Hammond, '64, passed away in Plymouth, Massachusetts on July 18, 1980.

In 1964, he graduated with his BS in physics from WPI. He received his MS degree from Northeastern University in 1967. He was born on April 13, 1942 in Worcester.



remember
reunion
june 4-6
1982

WPI winter sports schedule

BASKETBALL

Dec. 2	Wesleyan
Dec. 4(*)	City tournament
Dec. 4-5(*)	Nichols, Clark, Worcester State
Dec. 10(*)	Thomas
Dec. 12(*)	Bowdoin
Dec. 15	Amherst
Dec. 19(*)	St. Joseph's
Jan. 9	Springfield
Jan. 12	Babson
Jan. 15	Middlebury
Jan. 16	Norwich
Jan. 21(*)	Connecticut College
Jan. 23(*)	Bates
Jan. 28(*)	Brandeis
Jan. 30(*)	Lowell
Feb. 2	Trinity
Feb. 5(*)	Coast Guard
Feb. 6(*)	Colby
Feb. 10(*)	Williams
Feb. 13	Tufts
Feb. 18	MIT
Feb. 20(*)	Suffolk
Feb. 23(*)	Nichols
Feb. 27	Clark

TRACK

Dec. 2	Tufts
Dec. 6	MIT
Feb. 10	Worcester State, Holy Cross

SWIMMING

Dec. 1	Babson
Dec. 4(*)	Holy Cross
Dec. 9(*)	Boston College
Dec. 11	Clark
Jan. 23	Lowell
Jan. 30	Coast Guard
Feb. 4(*)	Trinity
Feb. 6	Southeastern Massachusetts
Feb. 11	Brandeis
Feb. 13(*)	Tufts
Feb. 20(*)	Keene State

WRESTLING

Dec. 2(*)	Bowdoin
Dec. 8(*)	Boston College
Dec. 12(*)	Harvard, New Hampshire, Mass Maritime
Dec. 16	Brown
Jan. 16	Williams, RPI
Jan. 20	Amherst, Union
Jan. 25	Western New England
Jan. 30(*)	Lowell
Feb. 3	MIT
Feb. 6	Wesleyan, Hartford
Feb. 9(*)	Coast Guard
Feb. 16	Trinity
Feb. 18	NECCWA tournament
Feb. 25	NCAA Division III tournament

WOMEN'S BASKETBALL

Dec. 1(*)	Framingham State
Dec. 4	City tournament
Dec. 5	Clark, Holy Cross, Worcester State
Dec. 7	Merrimack
Dec. 10(*)	Connecticut College
Dec. 12(*)	Emmanuel
Dec. 14	Western New England
Jan. 10	Fitchburg State
Jan. 21	Gordon
Jan. 23(*)	MIT
Jan. 25	Coast Guard
Jan. 27(*)	Anna Maria
Jan. 29	Trinity
Feb. 1(*)	Suffolk
Feb. 2(*)	Wheaton
Feb. 5	North Adams
Feb. 6	RPI
Feb. 10	Brandeis
Feb. 12(*)	Babson
Feb. 16	Amherst
Feb. 18(*)	Nichols
Feb. 22(*)	Clark
Feb. 25	Curry
Feb. 27	MAIAW tournament

*Alumni
Basketball
Night
Saturday
February 6*



(*) indicates a home game. For more information on times and places, please contact the WPI Department of Physical Education and Athletics, (617) 793-5243.