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The Rensselaer Fund
SUPPORT FOR EVERYDAY HEROES
2  
**PRESIDENT'S VIEW**  
Roland W. Schmitt reflects on five remarkable years.

3  
**LETTERS**

4  
**RENSSELAER CHALLENGES THE GREAT EASTERN FRONTIER**  
How faculty and alumni are helping to create a new world order.

8  
**WHAT'S THE GOOD NEWS?**  
Rensselaer meets the media and makes friends for science.

11  
**NEW TRACK AND FIELD KICK-OFF**

12  
**KALEIDOSCOPE**

18  
**THE BUDGET CHALLENGE**  
Rensselaer faces leaner years with optimism and careful focus.

22  
**SCALING THE HEIGHTS**  
Architect Jim Bradburn '66 goes to great heights for disadvantaged kids.

28  
**ALUMNI NEWS**

32  
**CLASS NOTES**

46  
**CLUB CALENDAR**

48  
**IN MEMORIAM**  
*The 1992 Report of Gifts*

49  
**SPECIAL INSERT**  
On the cover: Jim Bradburn and climbing buddy ford the Las Vacas River on Ecuador's Mt. Aconcagua.

**RENSSELAER**  
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Five Years of Steady Progress

With this issue you may be learning for the first time of my plans to retire from Rensselaer. Next summer, as I hand over the reins of this prestigious university to my successor, I will have completed over five years as president. Having told the board I would be here for three to five years, my staying on so long symbolizes how thoroughly I have enjoyed this position.

I will vigorously lead this institution throughout the coming academic year, a critical time for this university. We will be challenged to continue and build upon our successes. We have an ambitious agenda, one which I believe can be achieved. The next phase of growth can then begin, but that will require a commitment of several years, one which must be made by Rensselaer’s next leader.

As I look back on my inaugural address of 1988, I recall outlining three challenges facing Rensselaer.

The first was demographic. Due to the declining numbers of college-age students and the waning interest in science and engineering, Rensselaer applications had been going down an average of ten percent a year for five years. We implemented marketing and recruiting actions that have turned that phenomenon around. This fall, we can boast 100 more freshmen than we had planned. The second challenge was the tug between research and teaching. We had been growing stronger as a research institution but attention to the classroom experience had drifted. In my inauguration, I announced the formation of the Center for Innovation in Undergraduate Education to help us move to the forefront in innovative learning techniques. We are now becoming as entrepreneurial in education as we have been and continue to be in research.

Our third challenge was a financial threat. In the late 1970s and early 80s, Rensselaer enjoyed the boom time for higher education. The population was growing, tuitions were increasing, state and federal support of colleges and universities was at an all-time high, there was a boom in research funding, and borrowing power was unlimited. The late 80s were a rude awakening as all of these phenomena literally thrust into reverse. But Rensselaer moved more expeditiously than most universities to make tough budgetary decisions and implement new financial strategies that enabled us to strengthen our long term financial picture.

We have made the most of our adversities by using them as opportunities to aggressively and creatively redefine ourselves.

The entire university participated in writing the Strategic Initiatives Plan, which outlines what kind of university we want to be—a bold, yet nurturing place that welcomes all cultures and helps all community members succeed.

In this process, the campus community chose what areas we want to emphasize: energy and environment; materials, manufacturing and design, and interactive learning.

At the spring 1992 Board of Trustees meeting we drew the financial road map to our destination. Now, the President & Provost’s Budget and Program Panel is using that map as a guide in making recommendations for reducing and re-allocating expenditures to strengthen our financial and academic position, address deferred maintenance challenges, and invest in strategic initiatives.

Think of all our strengths: cutting-edge research; nation-leading centers; innovative pedagogical initiatives, futuristic degree programs, and new partnerships with industry and government. Rensselaer has seen tremendous advancement over the last half-decade and I am proud to have been at the helm during such an exciting time. I feel confident planning my retirement knowing we are well on our way to the preeminence we established as our goal.

I thank you for the role you, the alumni, have played in building a better Rensselaer. Thanks to your generosity, we are seeing the fruits of our ambitious New Century Campaign. New scholarships. Renovated buildings. Endowed faculty chairs. Important new programs. Cutting-edge facilities and equipment. A new alumni house to accommodate dramatically increased alumni involvement. And high hopes: For a Center for Interactive Learning. For a new track and athletic field. For the wherewithal to rehabilitate our century-old campus.

We still have over $25 million more to raise, but I am sure that with your help we can close this campaign successfully a year ahead of schedule, meeting our extraordinary $200 million challenge in time for my retirement July 1.

I intend to work hard over the next ten months to assure that I end my tenure on a high note, knowing that together we have advanced Rensselaer in quality and stature.

Appropriately, the theme of the Rensselaer Fund this year is “Everyday Heroes.” Never have I met so many—among our faculty, alumni, students and staff. The people of Rensselaer are incredibly committed to creating a world-class university and an unsurpassed educational experience for our students. It is a thrill to work with and know so many talented individuals.

I look forward to speaking with many of you as I complete my mission as President. I invite your views on what can and should be done. And I ask you to invest in us at this critical point in our 168-year history. Invest your interest, your time, and even your dollars, to help us realize our ambitious dreams.
Nothing Special about AIDS

Having read the letter from Anthony Potts Jr. in the June '92 issue, I want to add my voice to whatever positive response there has been to the article on Dr. Neal Rzepkowski [March '92].

Mr. Potts asks, “What is so special about suffering from AIDS?” Sadly, it is not all that special; millions of Americans are infected with HIV. Among those millions are Rensselaer alumni and students and their loved ones. Dr. Rzepkowski is neither the first nor last of this group.

However, his infection and the way our society reacts to it have made him a public figure. That is what makes his story noteworthy. And if anyone is questioning whether it is appropriate for Rensselaer magazine, I ask: What could be more appropriate than an article about an alumnus who has become a public figure?

... Although it was great to see through the June '92 article on multiculturalism that Rensselaer is finally addressing the needs of its diverse student body, one group will continue to be excluded at Rensselaer: lesbians and gays.

Discrimination based on sexual orientation is legal in New York. Gay and lesbian students are excluded from programs such as ROTC simply because of their orientation. Employers recruiting at Rensselaer are free to discriminate against gays and lesbians, although organizations that discriminate in other ways would probably not be welcome on campus.

In the article, Jacqueline Peterson is quoted as saying, “At a minimum, our aim is for every member of our community to feel comfortable being in the same room with every other member.” If she thinks she can accomplish this without addressing Rensselaer’s gay and lesbian students, she is sadly mistaken.

John M. Whiteside ’87
Jamaica Plain, Mass.

Dr. Neal Rzepkowski, through the article “AIDS: Facing the Fear” [March '92], states that what we really need to talk about is “...all the unprotected sex.” Is the question really all the unprotected sex or just all the sex?

Perhaps Dr. Rzepkowski should consult the British Medical Journal which reported the failure rate of condoms due to slippage and breakage to be 26 percent. Condoms fail 15.7 percent of the time in preventing pregnancy among married couples. Not one out of 800 sexologists at recent conference would trust a condom to protect them during intercourse with a known HIV-infected person.

The 100 percent guarantee way not to contract AIDS through sexual activity is to engage only in monogamous heterosexual intercourse within the confines of marriage!

Jeffery G. Whitefeld ’86
Northbrook, Ill.

Keeping Our Balance

“The Swinging Scientist” [June ’92] was really spectacular. Even my wife, Mary, was impressed! Thanks for such a positive view.

Your June issue had a marvelous balance, going from my “fun” (and frivolous) endeavor [in baseball] to Faiia’s really serious effort to serve mankind [“Balancing Logic and Compassion”] and a faint bit of political correctness.

John White ’62
Livermore, Calif.

Unforgotten Women

I was interested in the article “The First 50 Years of Women at Rensselaer” in the March '92 issue. I do feel sorry for the gal who had to use the ladies room in the railroad station.

On the list of women at RPI—omitted are:
Miss Huntley (called behind her back Ma Huntley). Served splendid food three times a day at the dining hall—at reasonable rates. All of us appreciated her despite meals correlated to the days of the week.
Mary Leona Burke, registrar. We paid our tuition to her. A breath of female air in an all-male environment.

Harriet Peck, librarian. Most helpful finding data for reports and theses. A professional if ever there was one. Could be same echelon as professors and definitely a notch above instructors.

Marie de Pierpont, professor of modern languages and literature. Wife of Arthur de Pierpont, emeritus professor of modern languages.

Was glad to see reference to Pop Graham, RPI swim coach and father of Lois Graham ’46. Pop kicked me off the RPI swim team—told me my feet were too small. Wish I could tell him I earned gold medals in Tucson and Green Valley senior olympics.

James Greenwood ’31
Green Valley, Ariz.

“Hey! That’s Us,” Says Class of January 1950

The June '92 issue woke some old memories. I haven’t seen our class graduation picture since 1950. Unfortunately you identified it as the Class of ’51—shame on you.

Notwithstanding the little faux pas, I enjoy each issue immensely and eagerly look forward to the next.

Haven’t been back to RPI since 1970, but wife Carolyn and I will be on hand for certain in 2000 for the 50th reunion. Nothing earthly will keep me away. June 10th, 2000 will be my 50th wedding anniversary also. It promises to be a big year.

Calvin C. Smith ’50
Santa Maria, Calif.

We received several letters about the photograph on the inside covers of the June ’92 issue. As all of them noted, it was actually a picture of the families and members of the Class of January 1950 (not ’51), the last class to graduate mid-year. Thanks for setting us straight.

To our readers: Rensselaer wants to hear from you. However, in order to provide space for as many letters as possible, we often must edit them for length.
With the collapse of the Soviet Empire, a new world order has tumbled into existence. Now it's going to take everything the former communist bloc has, and just about everything the West can offer, to turn things around. Boris Yeltsin and other leaders of the formerly communist nations have raised a cry for capital, for expertise, for a chance. At Rensselaer, that cry was heard before the barbed wire started to get rusty.

There are literally dozens of Rensselaer people involved in efforts to put some real meaning into the phrase "new world order." From hosting eastern academics and officials on campus to cutting innovative business deals to offering brain power and know-how, Rensselaer's faculty and alumni are having an effect on small corners all over the former Soviet Union.

Some of these efforts involve just a few individuals; others are more ambitious. As various as they are, however, the undertakings share a common spirit — a sense of seed planting, of getting started. "Just think of the potential!" seems to be the slogan that motivates people on both sides of the former divide.

Among the most impressive of these new east-west initiatives is one being undertaken by Management Professor Pier Abetti and his partners to hatch fledgling high-tech companies in Ukraine.

It's not surprising that Eastern Europe, with its fantastic need to develop its economy, proved an irresistible challenge for Abetti. In the fall of 1990, the United Nations asked the CENTV to prepare a joint proposal with their Center on Transnational Corporations for a "Feasibility Study of a Technological Business Incubator at Kiev Polytechnic Institute." In his research, Abetti found that Ukraine was the republic best endowed with the necessary educational, natural, and human resources to support a technological business incubator. The plan, Abetti says, was widely circulated, but not funded.

**A Desire to Help**

Abetti, fortunately, kept the idea alive. On a February morning in 1991 he met Rensselaer Trustee Warren Bruggeman at the Lally Management Center on campus. With characteristic enthusiasm, Abetti told Bruggeman about his idea for the incubator. Since retiring as a manager of GE's worldwide nuclear operations, Bruggeman had been giving time and counsel to young Rensselaer entrepreneurs. He and his wife, Pauline, also had a special family interest in promoting prosperity in Ukraine.

Pauline Bruggeman's father, John Urban, came to the U.S. from Ukraine as a teenager before the 1917 Russian Revolution. In America, he found opportunities for a rich life that he knew the Soviet system could never offer. He always dreamed of seeing an independent and prosperous Ukraine in his lifetime. When Urban died in 1987 at age 95, perestroika was in turmoil and Ukraine was still Soviet. But his dream was destined to live on.

As luck would have it, Professor Victor Ivanenko, an international expert on cybernetics, from Kiev Polytechnic Institute (KPI), came to Rensselaer to lecture in the spring. During his visit, Abetti and the Bruggemans met with Ivanenko to explore the idea of the Kiev Incubator.
“Professor Ivanenko was enthusiastic,” Abetti says. “He told us, ‘This is exactly what we need. Don’t send us fish but teach us to fish so we can become self-supporting.’”

With a gift of $40,000, the Bruggemans, who are active Rensselaer supporters and local philanthropists, created the Pauline Bruggeman Fund for Entrepreneurship. The fund supports the sharing of knowledge between Rensselaer personnel and their Ukrainian colleagues. The goal of the gift: create a business incubator on the Rensselaer model at KPI.

IN UKRAINE

In early June 1991, Abetti was aboard an Aeroflot flight to Kiev. With him was Mark Kapij ’90 whose parents came from Ukraine. Kapij had taken Abetti’s well-known Technological Entrepreneurship course and is a principal of CamSys, a Rensselaer incubator company that makes an automated system for testing metal strain. With his experience as an entrepreneur and his ability to act as an interpreter, he was an ideal companion for Abetti.

“With everything I knew about the lives of Ukrainians, I wasn’t sure they were ready for this,” says Kapij, who had never before visited Ukraine. “They were so far from understanding anything about entrepreneurship. They don’t really develop things there. They buy and sell.”

From the moment their plane touched down in Kiev, Abetti and Kapij encountered examples of the old ways and low expectations they would have to overcome. “I had to use my Swiss Army knife to get Pier’s seat buckle undone,” Kapij says. In the airport terminal, Kapij found about half of his luggage — not one piece of Abetti’s had made it to their destination. At the hotel, they discovered the currency chasm: a room cost U.S. $130 but dinner for four with caviar, payable in rubles, cost the equivalent of 50 cents.

As Abetti and Kapij negotiated with Ivanenko, the incubator’s interim director, they saw he was taken aback by “the boy’s” responsible role in the project.

“Ivanenko is of the older generation of officials who don’t quite know what to make of young entrepreneurs,” Kapij says. Before long, however, the two developed an excellent relationship. Ivanenko even invited the young entrepreneur to stay at his house during the last few days of their Kiev visit, Kapij reports.

According to Abetti, “young-thinking” entrepreneurship was a tough concept to explain to the older Ukrainian officials whose high-level support was critical. So was the idea that Rensselaer was in it not for the money, but for the opportunity to build on its reputation and expertise in teaching entrepreneurship.

Perhaps the toughest concept of all for the officials to grasp was that they and their nation would reap the harvest of a plan sponsored by a foreign university.
Professor Emeritus Alexej Wynyczuk [left] helped reorganize the Czech Academy of Science's Economics Institute.

Kiev Polytechnic Institute

SMOOTHING THE WAY

The fears of the Ukrainians involved in the project were further allayed by their visit to Rensselaer in April 1992. President Roland Schmitt met with the Ukrainian education minister, the former president of KPI, Petro Talanchuk, and the new KPI President, Michael Zgurowski.

Schmitt explained that Rensselaer wanted no controlling interest in the start-up companies. Mark Rice '71, director of the Rensselaer Incubator Center, added more-detailed assurances. Still, Bruggeman says he sensed that Talanchuk did not quite grasp the fundamental reason why he should come on board.

"Finally," Bruggeman says, "I told him forcefully, 'If you don't do this, your brightest young talents will leave Ukraine.' Our message hit home at last. Talanchuk gave us thumbs up."

"THIS IS EXACTLY WHAT WE NEED. DON'T SEND US FISH, BUT TEACH US TO FISH SO WE CAN BECOME SELF-SUPPORTING."

With the agreements drawn up and KPI preparing a new building to house the incubator, Abetti asked Kapij to return to Kiev in June. Kapij went back to Ukraine with President Zgurowski and selected three future entrepreneur-tenants and three Ukrainian administrators to come to Rensselaer this August for a two-week crash course in entrepreneurial management.

Finding the entrepreneurs was not too difficult, Kapij says. With the full support of Zgurowski and of Talanchuk, the incubator has been promoted on campus and potential entrepreneurs have been coming forward. "Their system discouraged people with ideas, so there are a lot of people who have been sitting on ideas, waiting for a time when there was something they could do with them," he says. Finding administrators was more difficult. "No one had the kind of experience you need," Kapij says.

As Rensselaer magazine went to press, plans were well under way for the Ukrainians' visit. After their two-week course, three of them were scheduled to spend an additional week at the Rensselaer Incubator and Rensselaer Technology Park, learning about entrepreneurship from such rising-star companies as the software success story, MapInfo.

MapInfo is a computer mapping company that was planned by students in Abetti's Technological Entrepreneurship course. The company, now headquartered in downtown Troy, employs 100 people and has seen 50 to 100 percent growth each year since its inception in 1986.

MapInfo's co-founder, Andy Dressel '84, was recruited by Warren Bruggeman, a member of the MapInfo board of trustees, to spend two years in Kiev as the new incubator's assistant director. Now that MapInfo "is well beyond the start-up stage," Dressel says he misses the higher degree of entrepreneurship a small company demands. He goes on to say, "With its well-educated population, experienced work force, and good infrastructure, Ukraine is one
area where there is a real opportunity for one person to do the most good."

Dressel will be working closely with the yet-to-be-named director of the incubator and the KPI team to get the new incubator off the ground within the next six to twelve months. His ambitious goals are to plan the space, organize the people who will run the incubator, get the support services running, and get a few companies in the door.

As if that’s not enough, Dressel, whose main expertise is in software, also would like to get involved with, or perhaps even start up, a software company, probably within the KPI incubator.

For Rensselaer, the KPI incubator project is a new opportunity for the Institute’s entrepreneurship experts to expand their skills in field training and teaching of business incubation. For the Bruggemans, it’s an opportunity to further John Urban’s once improbable dream of national self-determination. “I’m pleased to be doing this in memory of my father,” Pauline Bruggeman says.

Kapij, like the other participants, feels that the project holds out real hope for positive change in Ukraine. “I look around at some of the other projects that are springing up in Eastern Europe, and I wonder what actual impact they will make on people’s lives,” he says. “I think this one could make a significant difference. I think we’ll be hearing some of those important success stories in the near future.”

Rensselaer People Look Eastward

- Rensselaer’s first dean of engineering, Professor Emeritus V. Lawrence Parsegian, led a group to the former Soviet republic of Armenia last April to help establish a Rensselaer-style program in environmental engineering at the State Engineering University and to help restore Lake Sevan, a national treasure now polluted by unrestricted industrial use. A native Armenian who has devoted the last 20 years to cataloging the region’s archeological heritage, Parsegian personally committed $20,000 for the April trip. The group included Nicholas Clesceri, professor of civil and environmental engineering, Charles Boylen, director of the Fresh Water Institute, and Jack Kooyoomjian (B.S. ’67, Ph.D. ’74) of the Environmental Protection Agency. They mapped out bachelor’s and master’s programs in environmental engineering and assisted Armenian educators in creating new educational materials in the Armenian language.

- Rensselaer Trustee and Patroon Sanford “Sandy” McCormick is awaiting word on his bid for a role in a proposed methane gas production-sharing agreement with the Polish government. McCormick attracted the attention of Polish officials with his successes in methane production. In 1990 his company, MetFuel, a gas-drilling subsidiary of McCormick Resources, ranked number two in the U.S. in drilling footage.

- Joseph Steinman (M.S. ’64) founded a management-consulting firm in Switzerland in July 1990. Since then his special expertise—determining how state-owned companies can compete in a free-market economy—has been in great demand, particularly in Czechoslovakia. His company, Valcon, S.A., is the only small firm (among such giants as Price Waterhouse and Coopers & Lybrand) to be officially recognized by the Ministry of Privatization in Prague.

- Alexej Wynnyczuk, professor emeritus and retired chair of the department of economics, abandoned a law career to flee Prague in 1949. He returned in May to help reorganize the Czech Academy of Science’s Economics Institute.

- After 40 years of communism, the Institute was incapable of serving the new republic. “We told them to abolish the Institute entirely and start a purely research institute, sponsored by the Czech Academy but not controlled by the government,” he says.

- In 1991 Israel Slutsky ’33, born of Ukrainian and Lithuanian parents, traveled to the former Soviet Union with People to People International, an organization of citizen-ambassadors whose stated mission was to determine the people’s most pressing needs. The unspoken task, says Slutsky, was to keep the people from becoming disillusioned with democracy.

- Assistant Professor of Economics James Stodder, who has been to Russia three times, most recently in 1990, warns in his articles that the answer to Russia’s economic problems is not multibillion-dollar loans that will probably get caught up in a new central bureaucracy.

- Ukrainian-born businessman Alexander Basil left Ukraine as a child and became president of a U.S. specialty wire-making firm. Despite frustrated attempts to do business with the U.S.S.R. in the early 60s, he feels that the Russian people, whom he admires greatly, will eventually pull through.

- The Russians face what the American colonists did just before and after our own Revolutionary War,” says Basil. “First comes independence, then comes order and pulling together for the common good. Russia, too, will fight through to stability.”
Imagine being a struggling Ph.D. candidate, working long hours in the lab in virtual obscurity one day, and the next thing you know a CNN reporter and film crew are pounding on your door ready to put you on national TV.

It happened to Michael Ali of the New York State Center for Advanced Technology (CAT) in Automation and Robotics when the media got hold of his "anthrobot" hand. As a result of an article in The New York Times Education Section, Ali, co-inventor of the fully-functional, anatomically correct robotic hand, was featured on CNN "Science News." In addition, he appeared in The Chronicle of Higher Education and a picture of the hand ran in Popular Science.

"All the interviews and such certainly took a lot of time. I was constantly posing for photos and making time for reporters," Ali admits. "Now I have to get back to work because if I don't start doing all the things I said I'm going to do, the only thing I'll be doing is flipping burgers at McDonald's!"

Not that Ali hasn't appreciated the attention. Fully aware of the power of the media, he's proud that his research and the Institute are receiving the publicity. And he's proved that he's more than willing to share the spotlight.

According to CNN reporter Al Hinman, Ali was originally supposed to be the focus for the story. Hinman explains how the plan changed. Since co-inventor and NASA engineer Chuck Engler had never before seen the robot hand actually work, Ali suggested that CNN film Chuck watching his invention function for the first time.

The broadcast had all the elements of great TV—people, drama, suspense. Hinman describes the scene: "We saw people reacting spontaneously. Students nervously biting their nails, hoping the machine wouldn't screw up. And then everybody applauding when the hand performed beautifully."

It was Ali who made the story a success Hinman says. "He was there to make sure everything worked, that everyone was comfortable with each other, that we had everything we needed. And then he quietly, gracefully stepped out of picture, letting the others take the glory. He returned only at the end to fill in a few details." By not grabbing the spotlight for himself, Ali allowed the story to tell itself, and that made it even better—especially for TV, according to Hinman.

Anyone who saw that segment, which aired in April, couldn't help but be impressed with the quality of engineering technology being developed at Rensselaer. That's why President Roland Schmitt has placed a high priority on gaining national exposure for the Institute.

Schmitt says, "Media exposure for Rensselaer has intangible payoffs—in terms of enhanced image, reputation, and prestige—and tangible payoffs—in terms of increased research contracts, grants, gifts, and top-notch students and faculty."

In fact, national coverage is an important priority for any institution of higher learning. Publicity helps a school to differentiate itself from competitors and attract support from parents, students, alumni, corporations, legislators, foundations, and other constituents.

Frank Dobisky, president of Dobisky Associates, a New Hampshire-based media relations firm specializing in higher education, spoke on the importance of media...
coverage at a recent conference sponsored by Penn State. He said, "National publicity provides an independent, third-party endorsement of the quality of your school. Newspaper, radio, television, and magazine coverage reinforce the fact that your school really is a special place."

A Powerful Ally

Many Rensselaer scientists, researchers, and academics agree. They know the media can be a powerful ally that increases public awareness of Rensselaer's contributions to science and technology. But at the same time, faculty don't want to see their work trivialized. Nor do they want to take a ribbing from colleagues about being a media sensation—as often happens in academic circles.

William Marbach of Business Week is sensitive to academics' reservations about talking to the media. He says that in his experience, although most scientists may not like it, they are usually willing to explain their work to a broader audience.

To reach a broader audience, science and technology articles must be carried in the mainstream media. A good example appeared recently when Don Oldenburg of the Washington Post featured in his column Rensselaer Professor Michael Wogalter's research on the effects of warning labels. Oldenburg, who usually covers what he calls "cultural trends," helped to spread Rensselaer's reputation and accomplishments far beyond our standard audience of scientists and engineers.

And yet, despite all the successful media placements, it's understandable that some scientists are not completely comfortable dealing with the media. After all, each medium presents its own promises—and its own pitfalls. Television is immediate, engaging, and dramatic—but people fear the camera. Print offers the opportunity for analysis, explanation, and logical development—but people fear being misrepresented.

James Crivello, professor of chemistry, has mixed feelings about his experience with both print and television. First the Associated Press wire service publicized his process for using ultraviolet light to turn common plant oils into plastic coatings. Then he appeared on CNN "Science News" and in the popular press. Delighted with the publicity and recognition Rensselaer is getting, he is still not convinced that talking to the media is always a good thing for researchers to do. He found himself spending a great deal of time with reporters and photographers. In the process, labs were tied up and the disruptions made it difficult to carry on research. And some of the calls he's gotten in response to the news coverage, especially those from venture capitalists, are the result of misunderstandings.

"I got calls and faxes from as far away as Europe, Australia, and even Asia," Crivello reports. He says that the coverage, for the most part, has been accurate. "But a news article is a news article, not a technical article. And it's really hard for people to grasp the truth about the research by reading certain news stories," explains Crivello.

He says he decided to work with the media for two very important reasons. "I wanted to highlight my sponsors, the Department of Energy and Rensselaer, and I wanted to heighten the public's awareness of this area of chemistry." Then, perhaps revealing his basic motivation, he says, "It is imperative that our young people realize that the solutions to our environmental problems have to come out of chemistry."

Crivello's widespread media attention did yield an unexpected opportunity for potential new funding. He was asked to submit a pre-proposal to the New York State Energy Research and Development Authority and invited to testify before the New York State Environmental Commission which will consider his proposal. "It's still early," says Crivello, "but the proposal may very well result in new funding."
Making Friends

One person who has no reservations about speaking to the press is Robert Baron, Rensselaer's chairman of management policy and organization. He has attracted media attention a number of times since the '70s when he was studying the effect of TV violence on children. Recently his research on how fragrance affects human productivity was covered by CNN, the Associated Press, Mirabella magazine, USA Today, The Wall Street Journal, and others.

An old hand at dealing with the media, he says it takes practice to get comfortable with reporters. "The key is to step outside your special area of expertise and explain what you are doing and why, in the kind of language any ordinary, educated person would use."

A psychologist and former program director at the National Science Foundation, Baron believes that in spite of the difficulties and inconveniences of dealing with the media, it is vital that scientists do so in order "to make friends in the support of science and technology." Science is not automatically justified in the eyes of most people, he says.

"Taxpayers read about the $2 billion National Science Foundation budget and the alleged misuse of grants by research universities. They wonder what's happening to their money. Scientists must communicate effectively with the media. Why should the public support people who work behind closed doors and won't talk about what they're doing?"

"Besides," he asks, "if you truly believe in your own research, why wouldn't you want to tell the world about it?"

Tim Hayes, professor of physics, is very enthusiastic about generating publicity for Rensselaer. His research, involving an X-ray focusing device originally developed by Russian scientists, was recently covered in Science News. The article caught the attention of a major fiber optics company that offered to supply capillaries and optical devices, made to Hayes's specifications. He says the arrangement was made with the understanding that it could lead to a joint development agreement.

"Publicity," says Hayes, "is good for the Institute, no question about it!"

Physics Professor Paul Stoler, whose work on a nuclear particle detector was featured in a cover story of Science News in July believes that national publicity also has a strong, positive internal effect. "When we read about Rensselaer research in a national publication, all of us on campus can't help but be encouraged and proud of the recognition."

Administrators, too, are learning to turn the power of the media to the Institute's advantage. Vicki Lynn, director of the Career Development Center, is a tireless promoter of Rensselaer graduates. She attracted nationwide attention earlier this year when Elizabeth Fowler of The New York Times featured Rensselaer's Careerathon and Jobathon in her syndicated column. The Careerathon was a one-day event featuring booths and presentations teaching Rensselaer students a full range of job-hunting skills. These included how to introduce oneself, tie a Windsor knot, dress for success, and even use the right dinner fork. The Jobathon was a full-scale phonathon aimed at finding jobs for Rensselaer graduates by contacting Rensselaer alumni and friends.

The New York Times exposure led to Lynn's being quoted in Forbes, Cosmopolitan, and Glamour magazines, to mention a few. She has also been a guest on a number of local radio talk shows as well as on Monitor Radio and National Public Radio.

Lynn says, "The effectiveness of the Career Development Center has increased along with our visibility. All the exposure has helped to position Rensselaer as a leader in college placement."

The recognition has in turn increased Rensselaer's power to improve career opportunities for graduates. Lynn believes her recent invitation to speak to over 200 NASA engineers about Rensselaer's placement programs was a direct result of the Institute's high profile in the media. She also says that the placement office frequently receives calls from employers who say they have read or seen reports about Rensselaer and would like to post openings with her office. Lynn tells of one graduate who was offered a job after being featured in an article in The New York Times.

Publicity also helps to attract increased numbers of high quality applicants. According to Dean of Admissions Conrad Sharrow, "Applications have increased from students living in areas where publicity about Rensselaer supports the efforts of admissions officers."

Getting the Word Out

Some people may wonder how people like Michael Ali, Michael Wogalter, Jim Crivello, Bob Baron, Tim Hayes, Paul Stoler, and Vicki Lynn were discovered by the media. The fact is the media didn't "discover" these people at all—they were informed about them. Rensselaer keeps reporters up to date on campus news and research developments through personal contact and a monthly newsletter, or tip sheet, sent out to over 1,000 media contacts.

According to Matthew Maguire, director of news services, supplying the media with news and information about Rensselaer helps reporters become better reporters. He says all reporters need a large "stable" of reliable sources, and Rensselaer provides a wide variety of experts on everything from engineering, architecture, and psychology to science, the environment, and manufacturing.

Media Specialist Bruce Adams says, "Our job is to link up reporters with the researchers who can help them with their particular stories and to interest reporters in covering stories we think would be of national importance."

Many reporters say they appreciate this service. "Relationships matter," says Ivars Petersen of Science News. "Good working relationships with academics and university news personnel can be of critical importance to a reporter who is, after all, trying to convey very complicated and technical information to the public."

While reporters and CNN film crews don't come knocking on our door every day, we do, however, have a growing presence in the national media. President Schmitt sees it this way, "Rensselaer has tremendous potential to educate the public and earn support for science and technology. We have a responsibility to work toward fulfilling that potential."
CAMPAIGN BEGINS FOR
ATHLETIC FIELD AND TRACK
AT RENSELSEAER

ATHLETIC FIELD AND TRACK CAMPAIGN ALUMNI VOLUNTEERS:

David Diltz '38 (Decade Leader), Dick Anderson '49 (Decade Leader),
Harry Neugold '52 (Decade Leader), Pete Wayner '56 (Decade
Leader), Peter Androski '72 (Decade Leader), Nancy
Balagueur '78, Fred Best '58, Fred Berkeley '58, Jack Bluestein '57,
Glenn Brown '54, Harvey Braun '46, Dave Glenn '67,
Wayner '56 (Decade Leader), Nancy Balagueur '78, Fred Best
Brunell '48, Mark Hales '58, Charles Hoffmann '60, John
Magadini '55, George McBride '55, Brian McManus '51, Brian
Geltzeiler '71, Bill Pollock '51, Bill Phares '51, William Pollock '51, and
Justin Winkin '45.

RENSSELAER'S ATHLETIC DEPARTMENT sponsors the Hall of Fame and Olympia Banquet each year to honor student athletes and induct alumni into Rensselaer's Athletic Hall of Fame. This year, the banquet also served another important function: to kick off a major campaign to build a new, lighted, synthetic-surface field and track at Rensselaer.

The guest of honor at the dinner was coaching legend Ned Harkness. Harkness, who coached at Rensselaer from 1945 until 1963, founded Rensselaer's lacrosse and hockey programs and coached teams that won national championships for the Institute in both sports. He has also been a coach at Cornell and Union as well as for the National Hockey League Detroit Red Wings. Harkness is president and chief executive officer of the New York Olympic Regional Development Authority, which manages the 1980 Olympic Facilities in Lake Placid.

In his speech, Harkness gave his enthusiastic support to the field and track project. In turn, Rensselaer's alumni have thrown their enthusiastic support behind Harkness. To recognize his unprecedented impact on Rensselaer athletics, a group of alumni volunteers is working to raise $1.2 million to name the new facility for Harkness. A total of $2.4 million must be raised by June 1993 to make the new field and track a reality.

"Ned was a very inspirational leader at Rensselaer," says Stanley I. Landgraf '46, former acting president of Rensselaer and chairman of the campaign for a new athletic field and track. "He is very well known and respected not just by athletes, but by the school and our community," Landgraf says. "The thing about Ned is that he has a history of being successful. He's clearly a leader and clearly a winner."

WHY A NEW FIELD AND TRACK?
The need for a new outdoor sports facility at Rensselaer has been growing for some time. "Our facilities deficit has been worsening slowly over the last 30 years or so," says Lee Wilcox '60, vice president for student affairs. "Since 1960, Rensselaer has increased its enrollment by about 1,500 students and has added eight varsity sports for women, who now make up 20 percent of the student body." Meanwhile, Wilcox adds, campus construction has chipped away at Rensselaer's green spaces, and there's no room for expansion.

"There just aren't enough grass fields available for the students at Rensselaer," says Landgraf. "Our grass fields are overused. For many years we've recognized the need to put in a synthetic field, which can be used as heavily as a turf field," he says. "The other important thing is that from an intercollegiate standpoint, our limited facilities keep us from being able to compete effectively."

Wilcox offers the example of the track team, which has not been able to host an outdoor track meet in more than 10 years because Rensselaer's outdoor track does not meet competitive standards.

"The dearth of outdoor sporting facilities at Rensselaer is an everyday headache for the more than 70 percent of Rensselaer's students who participate in the school's vast intramural program," says Wilcox. "It's also a problem for varsity lacrosse, soccer, field hockey, and track athletes. The new facility will also play an important role in attracting students to Rensselaer," Wilcox says.

The complex will be built on the site of the current Varsity Field, adjacent to the Houston Field House. The plan is to build the facility in two phases. The first phase will comprise the essentials of the project: the field, the track, and the lights. It will cost $2.4 million to realize. The second phase, expected to cost $2.2 million, will include expanded bleachers, locker rooms, offices, a press box, and landscaping. According to Landgraf, during Rensselaer's New Century Campaign, which began in 1989 and will close in 1993, the focus will be on financing the first phase of the project and on raising an endowment for maintenance of the field surface.
Roland W. Schmitt has announced that he will retire as Rensselaer's president, effective July 1 of next year.

Schmitt has led Rensselaer since March of 1988. At the time of his appointment as the university's 16th president, he said he intended to hold the position only three to five years. "The fact that my time here will exceed five years is a demonstration of how much I have enjoyed this opportunity," Schmitt said.

In announcing his retirement, Schmitt listed several major goals to complete his tenure at Rensselaer:

- Successfully completing the New Century Campaign of $200 million by July 1, 1993—one year ahead of schedule.
- Implementing a comprehensive financial strategy to assure a solid foundation for Rensselaer's future goals.
- Further strengthening Rensselaer's fine start toward achieving preeminence in its strategic initiatives.
- Continuing the initiatives to improve Rensselaer's renown and its ability to attract students—and to provide them with a "user-friendly" campus.
- Supporting the strong growth of alumni involvement in campus activities.
- Assuring a smooth search and transition, to lay a foundation for the success of the next president.

"As we achieve these goals, we are coming to a natural culmination of our agenda. We must now begin the transition to the next era," Schmitt said.

"I have tried to recognize the emerging challenges to higher education and to position Rensselaer as a leader in meeting them. The faculty, staff, and students have responded superbly. The school is fortunate to have a community that is equipped to solve the problems of the future much more innovatively and responsively than most U.S. institutions of higher education. It has been a privilege to work with them and to turn over to my successor a school that is ready for the next decade of progress."

During Schmitt's tenure with Rensselaer, a variety of new initiatives were begun, such as the Center for Innovation in Undergraduate Education endowed by Harlan and Lois Anderson, the Center for Entrepreneurship of New Technological Ventures, the program of Computers in Calculus and computers across the curriculum, and the new Freshman Studies and pre-engineering programs.

Several key centers, some already national models, have also been established or significantly expanded with the help of federal, state, and corporate dollars. Among these are the Center for Advanced Technology in Automation and Robotics, the Northeast Manufacturing Technology Center, and the Lighting Research Center. Also, in the past five years, the Rensselaer Incubator Center and the Rensselaer Technology Park have grown in both size and importance while making enormous contributions to the economy of the Capital District.

Rensselaer has made major advances in both research and pedagogy as evidenced by strong growth in research and graduate education, the interactive learning initiatives, learning and writing centers, and an explosion of pre-college technology-based programs. Also, new degree programs have been added, including the Master of Fine Arts and the management and technology MBA.

"The fact that my time here will exceed five years is a demonstration of how much I have enjoyed this opportunity."
procedures to address them while at the same time realizing our ambitious goals.”

Schmitt said that Rensselaer’s road map to a destination of international preeminence has been drawn in three stages: First, the completion of the Strategic Initiatives report, which established areas of future emphasis; second, devising financial goals for budget reductions, reallocations, and investments; and third, the ongoing campus budget and program panel deliberations leading to specific recommendations for meeting those goals.

Claire Schmitt, author and respected naturalist, has also been dedicated to Rensselaer and active on campus. Her interests in botany and natural history have led to a favorite annual activity: students volunteering to plant hundreds of bulbs to beautify the campus. These actions have elicited positive comments from the campus community, parents, and visitors.

The search for Schmitt’s successor is now under way. The board of trustees has appointed Trustee Harlan Anderson to chair a search committee, which will include trustees and representatives from the administration, faculty, staff, and community.

It is hoped that the search and deliberation process will be wrapped up by the spring. “We intend to have a new president in place in time for the 1993-94 academic year,” Anderson said.

Even in retirement, Schmitt promises to remain an influence on Rensselaer. “I am committed to Rensselaer for life,” he said. “And I will be active in many ways on this campus for many years to come.” In fact, Schmitt was already closely involved with Rensselaer for seven years as a member of the board of trustees before he was named president.

He is former senior vice president for science and technology for GE as well as a member of GE’s Corporate Executive Council. From 1978 to 1986, Schmitt directed GE R&D Center in Schenectady, one of the world’s largest and most diversified industrial laboratories.

A native of Seguin, Texas, Schmitt received his undergraduate degrees in physics and mathematics and his master’s degree from the University of Texas, and his Ph.D. in physics from Rice University. He joined GE in 1951.

He is currently a member and past chairman of the National Science Board, the policy-making body of the National Science Foundation. He is chairman of the Council on Research and Technology, a public policy advocacy group; chairman of the National Research Council’s Panel on the Future Design and Implementation of U.S. National Security Export Controls; a member of the executive committee of the Council on Competitiveness; a member the U.S. Department of Commerce’s Advisory Commission on Patent Law Reform; and chairman of the U.S. Office of Technology’s advisory panel, American Industry and the Environment: Issues for Trade and Competitiveness.

He is a member of the National Academy of Engineering, a member of the Royal Swedish Academy of Engineering Sciences, an associate of the Engineering Academy of Japan, and a director of the General Signal Corporation. He is past president and former member of the Board of Directors of the Industrial Research Institute.

He is also a fellow of the American Academy of Arts and Sciences, the American Physical Society, the Institute of Electrical and Electronics Engineers, and the American Association for the Advancement of Science. He has served on numerous boards and is the recipient of various awards and honors.

He holds honorary doctoral degrees from Lehigh University, Worcester Polytechnic Institute, Union College, the University of Pennsylvania, the University of South Carolina, and the Université de Technologie de Compiegne in France.

Schmitt is a vocal and respected national statesman in Washington on legislative and policy issues related to federal spending on research and development, technology, competitiveness, and higher education.

Rensselaer’s board of trustees announced at its May 16 meeting that Albert Lawrence was elected as its newest member.

Lawrence is the founder and majority stockholder of the Lawrence Group of insurance companies and its subsidiaries, headquartered in Albany, Schenectady, and New York City.

He earned a bachelor’s degree in engineering at Cornell University and later graduated from the advanced management program at Rensselaer. He is a member of the board of overseers for Rensselaer’s School of Management.

Lawrence’s commitment to Rensselaer goes back to a management course he took in 1975 that changed his whole way of looking at his fledgling business. To ensure that other managers could benefit from programs like the one he took, Lawrence made a five-year pledge of $1 million in 1989 to the New Century Campaign to fund Rensselaer’s executive programs in the School of Management. Renamed the Albert W. Lawrence Office of Executive Programs in his honor, the program provides others with the same skills, knowledge, and insights Lawrence gained at Rensselaer early in his career.
DEVELOPING AN INEXHAUSTIBLE LUBRICANT

The effectiveness of a new graphite-like lubricant is being tested in Lauer's laboratory. The test device injects carbon-rich ethylene gas onto ceramic ball bearings driven by a shaft.

Illustration: Rensselaer Instrumentation & Media Services

A perpetual-motion machine? Not really, but James Lauer, professor of mechanical engineering, has proposed a concept for an innovative engine that is lubricated by its own exhaust.

Lauer's research aims at developing lubricating systems for high-temperature engines of the future. Constructed of lightweight ceramic materials and operated at over 600 degrees Celsius without the need for a water cooling system, these engines save energy and burn fuel efficiently. The problem is that solid lubricants that can withstand such heat are difficult to replenish and apply.

Lauer's solution is to inject carbon-laden engine exhaust back into the engine's bearings and the friction spaces. The carbon is deposited on the hot engine parts and acts as a lubricant.

A prototype of a bearing lubricated this way is being tested at Rensselaer. It shows low amounts of wear at high temperatures. The lubrication principle has been performed in an actual diesel engine, and results show that the concept is proven to work over a limited period of time.

"The concept would probably not be practical for automobile engines where continuous stopping and starting increases wear and limits effectiveness," says Lauer. "We are working primarily with the aircraft industry," where frequent stopping and starting is not an issue. Another possible application would be in buses or trucks that run more continuously.

Lauer's work has been cited in Business Week and The New York Times. In October, Lauer will receive the Award for Innovative Research from the American Society of Mechanical Engineers for this proposal.

ROEBLING DESCENDANT NAMED TO LUCE CHAIR FOR WOMEN IN TECHNOLOGY

This summer Antoinette Maniatty '87 joined the Rensselaer faculty as the Clare Boothe Luce Professor of Mechanical Engineering. Maniatty, 27, is one of four women scientists and engineers nationwide to be awarded a Luce professorship. Her primary area of interest is computational solid mechanics as applied to metal forming.

Maniatty graduated from Rensselaer with highest honors in 1987, earning a bachelor's degree in mechanical engineering. She obtained master's degrees in mechanical engineering from both the University of Minnesota in 1988 and from Cornell in 1990. She received a Ph.D. from Cornell in 1991. During the 1991-92 school year, she was a visiting lecturer in mechanical engineering at the University of Natal in Durban, South Africa.

Maniatty says she is committed to encouraging women to pursue and complete engineering degrees. "Women studying engineering face special diffi-
Antoinette Maniatty ’87

Maniatty’s ties to Rensselaer extend beyond her days as an undergraduate at the Institute. Her father, George Maniatty ’59, is a Rensselaer graduate, and her brother Bill is currently a graduate student at Rensselaer in computer science. She is a descendant of John Roebling, designer of the Brooklyn Bridge and his son Washington, a Rensselaer graduate, who completed the bridge.

The Clare Boothe Luce Fund was established by Clare Boothe Luce (1903–1987) “to encourage women to enter, study, graduate, and teach” in science and engineering. The five-year, $490,000 award to Rensselaer includes salary support for Maniatty, who will hold the rank of assistant professor, as well as $50,000 for graduate fellowship support and $50,000 for computer equipment. The recipients of the graduate fellowship support will be young women working under Maniatty’s tutelage.

SUSAN COZZENS, director of graduate programs for science and technology and associate professor of sociology, is recipient of the Early Career Award, funded and presented by the faculty of Rensselaer. The award honors productivity in both teaching and research.

WILLIAM GILL, Russell Sage professor of chemical engineering and chairman of the Isermann Department of Chemical Engineering, received the annual Lectureship Award of the chemical engineering division of the American Society for Engineering Education (ASEE) for his leadership in research and teaching. As this year’s recipient, he presented a plenary lecture at the ASEE summer school at Montana State University.

WALTER KRONER ’57, director of the Center for Architectural Research and professor of architecture, received this year’s Jerome Fischbach Faculty Travel Grant. The grant is funded by Jerome Fischbach ’38 to express appreciation for the many contributions faculty have made to the education and motivation of alumni and former students. Kroner attended the “Construction Beyond 2000” conference in Espoo, Finland, where he was keynote speaker.

JAMES MEINOL, senior vice president for academic affairs and provost, has been elected a fellow of the American Academy of Arts and Sciences. He was honored for his work in integrated electronics, medical electronics, and academic administration.

JOHNATHAN NEWELL ’65, professor of biomedical engineering, received the William H. Wiley Distinguished Faculty Award. It was established by Edward P. Hamilton ’07 in memory of William H. Wiley, to honor those who have won the respect of the faculty through excellence in teaching, research, and interest in the totality of the educational process.

SANDRA NIERZWICKI-BAUER, associate professor of biology, has been appointed chair of the department of biology. A molecular biologist, Nierzwicki-Bauer has earned international respect for her research on the development of molecular probes to study deep subsurface microbes.

GENE SIMONS ’57 and ROBERT GRAVES, professors of decision sciences and engineering systems, have been elected fellows of the Institute of Industrial Engineers.

CURTIS GREEN, associate professor of German, is the winner of the 1992 David M. Darrin Counseling Award. The award was established by David M. Darrin ’40 to recognize a faculty member who has made an unusual contribution in the counseling of students. The selection is made by Phalanx, the student honorary society.

ROLAND SCHMITT, president of Rensselaer, received the Institute of Electrical and Electronics Engineers’ Founders Medal for his leadership in addressing competitiveness and his contributions to the transfer of electronics technology.

JORGE HADDOCK ’79, associate professor of decision sciences and engineering systems, received the Martin Luther King, Jr. Award at the Minority Student Awards Banquet “in recognition of outstanding service and continuous contributions to the advancement of the minority-student engineering efforts at Rensselaer.”

LEE OSTRANDER, executive officer of the biomedical engineering department, was named a founding member of the American Institute of Medical and Biological Engineering at its recent inaugural event in Washington, D.C. He was cited “for contributions to biomedical engineering through leadership in the academic process and in professional organizations.”

MARILOYN MOODY, head of technical and instructional services of the Rensselaer Libraries, was featured on the cover of Library Journal. The issue included her article on government documents as an important information resource.

JAY GOULD, Louis Ellsworth Laflin emeritus professor of English, received the President’s Award of the International Society for Technical Communication. He was honored “for establishing technical communication as an academic discipline; for encouraging a bond among academics, businesses, and the professions; and especially for being a mentor.”
**NATIONAL WIN FOR BRIDGE TEAM**

On commencement afternoon while their classmates were celebrating, seniors Andrew Skolnick and Brady Richter, flew to Memphis with teammates Scott Bieber and Ron Sperber to win the United States College Bridge Championships sponsored by the American College Union-Institute. They defeated teams from the University of Maryland, Caltech, the University of Kentucky, and Auburn.

One pivotal hand in the final between Rensselaer and Maryland was highlighted by Alan Truscott in his bridge column in The New York Times. Rensselaer (in the North-South position) contracted and made four hearts. But in duplicate play at a different table, with Rensselaer in the East-West position, a strong defense by Sperber resulted in the Maryland team’s going down one, a gain of 10 international match points (imps) for Rensselaer.

**WATER EXPERT NAMED KODAK PROFESSOR**

James Edzwald joined Rensselaer’s department of civil and environmental engineering this summer as the Institute’s first Kodak Professor of Environmental Engineering. Previously professor of civil engineering at the University of Missouri and program coordinator and graduate program director in environmental engineering, Edzwald has extensive professional experience and involvement in water-supply and drinking-water research.

Edzwald has held teaching positions at the University of Missouri and Clarkson University.

He is a member of nine professional societies, a fellow of the American Society of Civil Engineers (ASCE), a diplomate of the American Academy of Environmental Engineers, and a registered professional engineer in the State of New York. Edzwald is the recipient of several significant honors, including the 1984 Walter L. Huber Civil Engineering Prize of the ASCE, the 1984 Pergamon Publications Medal of the International Association on Water Pollution and Control, and the 1988 Samuel Arnold Greely Award of the ASCE.

The Kodak Endowed Chair in Environmental Engineering is part of a 10-year $1.5 million gift made to Rensselaer by the Eastman Kodak Co. last year.

**HOW TO ENGINEER A GREAT GIFT**

Ralph Gallinger Class of ’30, was a civil engineer who, according to the 1930 Transit, had “the strong will to do things right and well.” Upon graduation, he believed that his “first rate education at Rensselaer” had prepared him to do great things. And great things are exactly what he accomplished, including among many others, directing the construction of the navigation locks of the St. Lawrence Seaway, the international face lift of Niagara Falls, and overseeing the multimillion dollar beach restoration project at Presque Isle, Pennsylvania.

A continuous supporter of Rensselaer throughout his life, Gallinger always felt his Rensselaer education was the root of his success. When he died in 1991, his wife, Virginia, continued his tradition of support by becoming the first person to participate in Rensselaer’s new gift annuity program. Mrs. Gallinger says, “I feel wonderful to be able to give back to the Institute something according to the Ralph’s name. He would have been so proud.”

Mrs. Gallinger chose gift annuities as a way to honor her husband because they provide her with a guaranteed monthly income, and other advantages including charitable income tax deductions.

If you are interested in how a Rensselaer gift annuity could help you secure a guaranteed monthly income for life at percentage rates between 7% and 8.5% plus charitable income tax deductions, possible estate tax advantages, and favorable capital gains treatment for appreciated securities, please call Ruth Killoran in the Development Office at 518-276-8309.
NEW COURSE COMBINES CHEMISTRY AND MATERIALS ENGINEERING

Why are bridges built of metal instead of glass? A chemist would tell you that metals can dissipate stress better because of their atomic structure. An engineer would explain why metal makes a better conductor than glass. Basic principles of thermodynamics, kinetics, and solid state are discussed next, with students learning, for example, why metals are electrical conductors and malleable whereas most ceramics are insulators and brittle.

The course has evolved over its four years as a pilot project. During 1990-91 the course was taught to 170 students; during the past academic year it was offered to 490 (approximately half of the freshman class). This year it will be taught to all 700 freshmen engineering majors.

The pilot course was supported by a four-year, $100,000 grant from the GE Foundation. In addition, Rensselaer matched a $68,000 National Science Foundation award for equipment for the laboratory.

Don’t Miss Your Color Map of Rensselaer

Watch your mailbox for your Annual Fund Packet containing a full-color campus map (so you can see how much progress we’ve made) and a list of gift matching corporations (so you can increase your gift and help us continue to make progress).
In May the President and Provost's Budget and Program Panel (BAPP) confronted the campus with sobering news: Six years from now, if business continues as usual, Rensselaer will have accumulated a $10.4 million budget deficit. If we add to that our need to confront the problem of deferred maintenance, to invest in new educational initiatives, and to improve productivity, the anticipated cumulative shortfall will be a whopping $58 million by fiscal year 1998.

To attack the problem, Rensselaer President Roland Schmitt formed the 14-member panel in February of this year and charged it "with one of the most urgent tasks confronting us." The panel's job is to lead a campus-wide examination of all the Institute's programs and budgets and to recommend ways to head off the anticipated deficit. When they begin to be applied in the 1993-94 fiscal year, the panel's recommendations will mean real changes—financial and programmatic—across the university.

The budget panel's work is a natural outgrowth of two years of intense strategic planning, Provost James Meindl explains. Meindl, who serves as chair of the BAPP, also led the President and Provost's Panel on Strategic Initiatives (PSI). The PSI's final report, issued in September 1991, articulated Rensselaer's vision for the future and set an ambitious agenda for the next decade.

Briefly stated, that vision calls for Rensselaer to focus its intellectual and financial energy on achieving international preeminence in three "carefully selected education and research initiatives." These three initiatives are interactive learning; manufacturing, materials, and design; and environment and energy. Equally important, the PSI report calls for the creation of a new campus culture that will nurture individual success, teamwork, and an institutional perspective.

Meindl stresses the need to apply strategic vision to the current budget challenge. "We've always needed to allocate resources carefully," he says, "but now more than ever, we have to..."
think strategically. A policy of across-the-board cuts may bring the budget into equilibrium, but it will not benefit the university as a whole. Some people claim that our budgeting process has been "territorial and self-serving" in the past. Rensselaer can't afford that kind of thinking. The only way we will be able to achieve preeminence is by working together, pooling our resources, and deciding how to allocate our time and money to benefit the Institute as a whole."

With the PSI's vision of Rensselaer's future in one hand and calculators in the other, members of the Budget and Program Panel met with campus leaders through the summer to draft initial recommendations for a plan that would, in effect, ensure that we put our money where our mouths are.

In order to understand the panel's challenge, it is important to put Rensselaer's predicament in a larger context.

**The Big Picture**

What the academic world has realized for some time has recently become big news in the popular media: America's colleges and universities are in grave financial trouble. Across the country colleges—public as well as private—are experiencing wholesale layoffs and drastic budget cuts. Classes are growing larger than ever and entire programs are being eliminated. According to the College Board's annual tuition survey, state schools found it necessary to raise their tuitions by an average of 12 percent in the 1991-92 academic year, the largest increase since 1982.

Although academic leaders were beginning to face a shrinking pool of potential students and decreasing government support in the 1980s, it is now generally accepted that that decade was a golden one for American higher education. Budgets grew an average of 10 percent a year while inflation remained about half that. Nationwide, colleges and universities expanded their educational programs, built impressive new laboratories, installed sophisticated computing networks. And still they saw balanced budgets and even surpluses.

During that time Rensselaer built the George M. Low Center for Industrial Innovation and the Rensselaer Technology Park, renovated the J Building to house the new Incubator Center for emerging high-tech companies, installed a new mainframe computer and campus computing network, renovated the quadrangle dorms, and expanded the bookstore. The School of Humanities and Social Sciences added the department of Science and Technology Studies, new engineering research centers emerged, and interdisciplinary programs in such areas as environmental studies and manufacturing were developed in the schools of engineering, science, and management.

One might assume that poor management is to blame for the current crisis. However, Brown University's Senior Vice President for Financial Administration Thomas P. Glynn wrote in the spring issue of *Brandeis Review* that the nation's colleges and universities are suffering across the board. They could not all have been managed poorly. "After all," he wrote, "university endowments did grow an average of 13 percent per year over a 10-year period; that is hardly mismanagement...[I]t is fair to say that university officials have done a credible job at campus after campus considering the suddenness of the adjustment they have had to make."

Rensselaer's Vice President for Finance Paul Lawler agrees.

Between fiscal years 1980 and 1981 Rensselaer's revenues rose almost 16 percent. But only 10 years later, between fiscal years 1990 and 1991, revenues grew just over 5 percent. And Rensselaer's financial position is actually much stronger than that at many of the nation's private institutions.

Although it's easy to think of acadia as being somehow above the fray, untouched by the day-to-day pressures of the "real" world, nothing could be farther from the truth. Research universities like Rensselaer get most of their revenues from four major sources: tuition and student fees; income from investments; federal, state, and corporate research grants; and private and corporate gifts. The number of potential students and the strength of the national economy have a dramatic effect on all of these revenue sources and thus on the university's financial well being.

**The Demographic Challenge**

Ninety percent of our undergraduates come to Rensselaer straight from high schools in the Northeast. Nationwide, the number of young people reaching college age has been steadily dropping since 1980. Between 1986 and 1995 the number of high school graduates will decline 3.5 percent. Far more important to Rensselaer, during those same years, the number of students graduating from high schools in the Northeast will shrink by 16 percent.

Compounding the demographic problem is the fact that fewer and fewer of this diminishing number of high school graduates are interested in science and engineering—Rensselaer's best-known curricula. In 1982, more than a quarter (26.5 percent) of the nation's high school seniors were interested in becoming engineers and scientists. By 1990 that number had dropped to 19 percent, and the decline is expected to continue.

**The National Economy**

The recession has had a marked impact on American higher education. In May the *Chronicle of Higher Education* reported that last year was only the second time in 12 years that the annual increase in donations to colleges and universities fell below the rate of inflation.

A June 10 article in the *Chronicle* reported that the Pell Grant program had a $1.4-billion deficit "because of unexpected demand for grants... The Bush Administration has been reluctant to blame the recession for the increased demand," the article goes on, "but college officials say more people have enrolled in college or job-training courses because they cannot find work...[and] more students have become eligible for aid because their parents are unemployed."

In June, at 7.8 percent, the national unemployment rate grew to the highest point since October 1983. In New York, the June jobless rate rose to 9.2 percent and prompted Samuel M. Ehrenhalt, regional commissioner of the federal Bureau of Labor Statistics, to say that the jump from 7.9 percent in May shows that the recession is far from over in New York, where the downturn "hit harder and is lasting.
longer" than elsewhere in the country.

**Sticker Shock**
A good part of the increased need for financial aid is the dramatic rise in the cost of a college education. Tuitions everywhere climbed rapidly during the 1980s. Now the cost of a private university education has risen beyond the reach of many families.

Rensselaer's tuition is no exception. In 1975 undergraduate tuition was $3,400. By 1986 it had climbed to $10,780 and this fall it reached $15,900. When adjusted for inflation, this means that a Rensselaer education now costs about twice what it did in 1975, while family income has remained constant. As a result, Rensselaer's tuition, which equaled 27 percent of the national average family income in 1986, is now at 40 percent.

It is important to note that despite their dramatic climb, tuition dollars still supply less than half the money needed to finance a four-year education. And it's still a good buy. At roughly $100 a day, a student's tuition and fees buy a lot more at Rensselaer than the same $100 would purchase at a good hotel.

**Financial Aid**
Most schools have attempted to ease the financial pressure on their students with larger and larger financial aid packages. But eroding government support, particularly for financial aid, has meant that universities, from their own resources, must provide more and more of the money for these aid packages.

In 1980-81 Rensselaer put $4 million of its own resources into student financial aid; ten years later we provided $13.5 million to needy students. So even though more and more money has been coming in with tuition increases, an even bigger proportion has been going back out in financial aid. With almost three quarters of our undergraduates needing aid of some sort, the financial challenge to Rensselaer is very real.

**The Not So Rich Uncle**
Throughout the 1970s, federal aid for undergraduates at the nation's private institutions rose dramatically and peaked in 1980 at about $2.5 billion. In inflation-adjusted terms it has not reached that level since.

New York state's fiscal woes offer Rensselaer little hope of relief from that source. The state budget for 1992-93 continues a trend of decreasing support for higher education.

Kenneth Gertz, Rensselaer's director of government relations, says that the state's anticipated $5 billion deficit has made "this a particularly tough budget for independent institutions and their students." Bundy Aid, state funding for independent colleges and universities, is being cut for the third time in three years; this year schools will see a reduction of nearly 46 percent.

To Rensselaer the cut will mean a reduction of $733,000. In addition, Gertz says, Rensselaer students will lose about $130,000 from the state's Tuition Assistance Program and another $110,000 in state reimbursements to schools participating in the federal work study program, for a total of nearly $1 million in lost state funding.

**The Cost of Doing Business**
A 1950 McGraw-Hill catalog lists a popular materials chemistry text for engineering students at $5.00. Today's equivalent sells for $63.00. Library costs are skyrocketing. Computers, absolutely essential to a technological education, become obsolete almost as soon as they reach the marketplace.

The cost of day-to-day operations also continues to mount faster than revenues. Among Rensselaer's biggest worries are the spiraling cost of employee benefits, an aging campus infrastructure that needs an estimated $130-million facelift, the high cost of overhead for research programs, and the rising price of utilities.

**What Does All This Mean?**
"Like other industries, higher education is beginning to experience a 'shake-out,'" Cambridge Associates, Inc., an independent financial consulting firm for non-profit organizations, wrote in October 1991. The firm's prediction is sobering. "Caught between declining rates of revenue growth and increasing rates of expense growth, private higher education will likely experience a period in which the weakest institutions will be forced to merge or close."

To be counted among the survivors, "schools are being forced to rethink their missions, decide what they can do best and—in a form of academic triage—abandon certain fields of learning to others," John Elson wrote in Time magazine's April "College Crunch" issue.

**Going To BAPP For Rensselaer**
Triage is a term first used by battlefield medical crews who found that by prioritizing emergency care and concentrating their effort where it mattered most, they could improve the survival rate of the wounded. Elson's use of the term in his Time article is not inappropriate.

Rensselaer's BAPP and their counterparts at schools across the country are indeed engaged in "academic triage." But, chairman Meindl is quick to point out, the panel's work is more positive than that—its goal is far more than mere survival. "In its search to reduce expenditures," he says, "the BAPP is discovering new opportunities to substantially improve our academic and administrative operations."

The Institute will preserve and enhance core programs in engineering and other disciplines in which Rensselaer's record is distinguished, the BAPP's initial report explains, but "There are no sacred cows," Meindl says. No activities will be considered off limits.
“Fortunately,” says Schmitt, “we have a strategic plan to guide us as we make these hard decisions.” Meindl is highly optimistic. “The urgency of saving costs is compelling the BAPP to think creatively,” he says. “The result will be a Rensselaer that is stronger than it would have been if there had been no need for the BAPP.”

**APPROACH**

After three open meetings in May to explain the report and solicit campus suggestions, the panel moved behind closed doors to gather information and hear recommendations from deans, vice presidents, and student and faculty representatives. Campus leaders, including President Schmitt, were asked to evaluate their own programs and budgets. Although across-the-board cuts are not being considered at this time, questions like “What would you eliminate if you had to cut 15 percent from your budgets?” are helping those leaders and the panel establish institutional priorities.

The panel has said it will consider consolidating, merging, and realigning courses, academic departments, research centers, and even whole schools. It will consider enhancing revenue-generating activities and allocating funds to other strategically vital, but not financially self-sustaining programs. It will look into consolidating and restructuring administrative departments and divisions to eliminate redundancy and improve efficiency, and it will consider eliminating nonessential services. In short, everything is on the table.

The panel is applying three major criteria for assessing academic departments, centers, and academic activities: strategic relevance, current program quality and depth, and cost-effectiveness. Administrative operations are coming under even closer scrutiny, with the emphasis on restructuring, cutting costs, improving efficiency, and redirecting resources to strategically important programs.

The panel is expected to make its preliminary recommendations known in September. It will then solicit campus feedback, hold more open meetings, and meet again with top campus leaders to review the feedback, hear suggestions, and assess the impact of the recommendations. In November the panel’s final report will be submitted to President Schmitt.

Students have responded by forming their own panel. Led by Grand Marshal Bill Wheeler ’94 and President of the Union Pat Tirino ’94, the Student BAPP is providing a forum for students to have “a direct impact on the decisions of the BAPP,” Tirino explains. “While BAPP is primarily focused on overall quality for the Institute, Student BAPP is focusing on the quality of student life,” he says.

Professor Kenneth Connor, a member of the BAPP and chair of the Faculty Council, says that although faculty morale is an issue, “there is a remarkable level of dedication and a sense that our problems can be solved and that we can do it right.”

**IS THERE A BRIGHT SIDE?**

Absolutely! Here are just a few examples of the good news.

* According to dozens of sources, colleges and universities in this country are still the envy of the world and international students are flocking to the U.S. in record numbers. When asked to name the world’s top 10 universities, Asian scholars picked six schools in the United States.
* In spite of the fact that dozens of institutions—including some of the most prestigious in the country—announced large deficits, Rensselaer balanced the 1991-92 budget.
* Research for government and private sponsors is strong and growing. In spite of its deficit, New York State did not forget Rensselaer in its 1993 budget. It will provide $4.5 million to build a new Center for Polymer Synthesis. The Center for Advanced Technology in Automation and Robotics will be eligible for $1 million; funding will also continue for projects in the Northeast Manufacturing Technology Center, the SEMATECH Center of Excellence, and the Lighting Research Center.
* We’re holding down tuition increases. Among the 12 schools with which we traditionally compare ourselves, RPI dropped from the fifth most expensive in 1986 to ninth most expensive in 1991. This year we raised tuition just 5 percent; the national average at private institutions was 7 percent.
* Recruitment is strong despite the demographic challenge. Applications were up 7 percent this year and in July, deposits to hold a place in next year’s freshman class were running 12 percent ahead of last year. Strong marketing and admissions efforts outside the Northeast are bringing in students from farther afield and several important transfer agreements are boosting the number of students entering from other colleges.
* Administrative costs, expressed as a percentage of direct education and research, continue to decline. New efforts like an ambitious project to replace existing processes with state-of-the-art computer technology are expected to streamline business operations and reduce costs. Purchasing and accounts payable went “on-line” in July; the Union bookstore, the libraries, budget development, grant accounting, human resources, and payroll will be added to the system gradually.
* Rensselaer’s New Century Campaign is well on the way to meeting the goal of $200 million, proving once again the generosity and loyalty of our donors. The Rensselaer Fund had its best year ever and matching gifts from corporations rose to almost a million dollars—also the best ever. [See the Report of Gifts at the back of this magazine for details.]
* Educational innovations like our acclaimed computers across the curriculum initiative and the new “Management and Technology” M.B.A. program, are just two examples of Rensselaer’s continuing leadership role in American higher education.
JIM BRADBURN '66 DESIGNS
HIS OWN CHALLENGES...

SCALING
THE
HEIGHTS

BY KIM SCHENCK

The office of Denver architect Jim Bradburn '66 is neat and elegantly spare. A few personal items sit near the window—a hinged wooden snake from Ecuador, high school photographs of his two attractive daughters and pictures of some of the world's tallest mountains. Next to his Macintosh computer there's a hand-written index card that reads, "Did you do it right?"

Near the door there is an artist's conception of Peak Kommunizma, the tallest mountain in the former Soviet Union. It is made of torn construction paper and reflects a sense of form and color that might be envied by the great abstract painters of the 1950s. Remarkable, considering the artist was
Bradburn on the side of Peak Kommunizma, the tallest mountain in the former Soviet Union.
a young child and a resident of the Colorado Christian Home for abused and neglected children.

The picture was a gift of appreciation. Bradburn and some of his friends attempted to conquer Peak Kommunizma in the summer of 1991, partly as a personal challenge and partly to raise funds for Denver's Colorado Christian Home. Formerly an orphanage, the Home is now a national leader in the treatment of young victims of abuse and their families.

The Peak Kommunizma expedition was the third "Klimb for Kids" in the last seven years. Altogether, Klimb for Kids has raised more than $230,000 to benefit abused and neglected children. In each expedition, the climbers have paid their own way, and donors have made gifts to become "honorary expedition members." The Peak Kommunizma effort raised more than $30,000 for the Colorado Christian Home, which seeks to raise about $1 million a year from private sources. Even though the climbers never reached the 24,700 foot summit, the climb was still a success—but more on that later.

MEET JIM BRADBURN

If you were on campus during the early '60s, you may remember Bradburn. He was a conspicuous figure, tall and lanky. He didn't drink. He didn't join a fraternity. Freshman year he wore braces. He was also a swimmer. A great swimmer. In fact, in his years of competitive swimming at Rensselaer he rewrote the Institute's record books and became a NCAA national champion in the breast stroke.

When you're climbing a mountain, you have that question, 'why am I doing this?' constantly with you...you feel terrible, you're exhausted, you can't get any air...so you've got to be mentally saying all the time, 'It's O.K., I'm alright, I can do this, everything is under control..."
designer, and he said, 'I need some help in putting these things together.' He asked a mutual friend of ours, a structural engineer, where he could get some help, that's how we got together."

That was in 1980. In the years since then C.W. Fentress J.H. Bradburn and Associates has earned a reputation for innovative design and very high quality work. Design is essentially Fentress's bailiwick. Quality control and technological know-how are Bradburn's department. Their complementary skills have carried them far; most recently they won a competition to design the new Clark County government center in Las Vegas, Nevada, beating out half a dozen east and west coast architectural heavyweights.

The biggest project in their careers to date, however, is the Landside Terminal Complex at Denver's massive new airport. Bradburn is the architect of record on the terminal building, a majestic yet fanciful structure topped by white fabric stretched into tent-like peaks. The building is meant to reflect the Colorado landscape and capture the Colorado light, Bradburn explains. At night it will be lit to emit a soft glow.

Rensselaer's dean of architecture, Don Watson, calls the design imaginative and technically bold. He adds that Bradburn typifies what architectural education at Rensselaer is all about: "He's got a deep commitment to technical and design excellence." Fentress calls him "an architect with the heart of an engineer."

With such important and attention-grabbing projects on his resume, it defeats reason that so little glamour surrounds Bradburn. He is no celebrity and does not seek the spotlight. "When I first met him, I had no idea he was such a successful business person. He's a very humble individual," says Kirk Weaver, a friend and the originator of K1imb for Kids. "Unless you encounter him in a business setting, you don't know how successful he is," Weaver adds. Clearly Bradburn, a true son of Rensselaer, is more interested in getting a job done right than in talking about it. Do friends and neighbors ask him about the public projects he's involved with that have attracted so much attention in the press? He shrugs. "Not really. They aren't really very aware of it." Gayle Bradburn tells of dropping by her husband's office one day with a neighbor. Their friend was genuinely surprised to learn how large and extensive Bradburn's practice is.

**THE MENTAL PART**

What made Bradburn a great architect also made him a great swimmer (he still competes in the master's program for athletes beyond college age) and also pulls him up mountains. He doesn't consider himself "athletic." "I'm not terribly coordinated,"
He says, "To me, the ideal athlete is not me." What he is good at is "the mental part."

His wife thinks maybe it has something to do with his upbringing. "Jim's sort of old school. He's the kind of person who, when he does a job, he does it right," says Gayle Bradburn, a Russell Sage graduate.

"He came from a family where he was required to accomplish things," she says. "If he had to cut the grass, he had to do it right and it had to be done completely, and the tools put away, and he wasn't necessarily paid. I think that ethic has carried him through his life."

In fact, Bradburn says what he loves about mountain climbing is having such a narrow focus—getting from point A to point B and forgetting about everything else. He freely admits that, in many ways, mountains are not nice places to be. He recalls an expedition up Mt. McKinley and creeping out of his tent one morning to check the thermometer. The lowest possible reading was 48 below zero, and that's where the mercury was huddled.

"When you're climbing a mountain, you have that question 'why am I doing this?' constantly with you," he says. "You're sick, you feel terrible, you're exhausted, you can't get any air. It's up up up, it's unrelenting. The weather comes in, and you get stuck in a tent and you're nauseated because you can't eat anything. There's nothing to do and the wind is just pounding on the outside of your tent like it's going to rip you away, and so you've got to be mentally saying all the time, 'It's O.K., I'm all right, I can do this, everything's under control, there's no problem.' You constantly have to work yourself mentally against the conditions. That's probably what I like most about it."

**KLIMBING FOR KIDS**

It was during that cold 1985 ascent of 20,352-foot Mount McKinley that the idea for "Klimb for Kids" was born. On the trip, Bradburn met Kirk Weaver, now director of planned giving for the Colorado Christian Home. Weaver was then a fundraiser for the Epworth Children's Home in Saint Louis. The two men were making their way along a ridge high up on the frigid mountain when they saw a lone climber making his descent.

As the frostbitten man passed, Bradburn and Weaver saw three words written on his pack, 'Stop World Hunger.'

"Kirk and I said, that's an odd thing for someone to be wearing up here at 16,000 feet," says Bradburn. "And that's when the idea started to develop in Kirk's mind that if that guy could be broadcasting some kind of purpose in life, why couldn't we make our mountain climbing trips into something worthwhile?"

Since then, Weaver, Bradburn, and Brush, Colorado contractor Stan Olson have been the core team for Klimb for Kids. The first expedition was to 23,000-foot Mount Aconcagua in South America. In 1987 the trio traveled to Ecuador to scale the world's highest active volcano, 19,800 foot Cotopaxi, and a taller, inactive volcano, 20,700 foot Chimborazo.

The most recent Klimb for Kids effort, to climb Peak Kommunizma, the highest mountain in the late U.S.S.R., provided Bradburn with, perhaps, the greatest challenge—and the greatest disappointment—of his long mountain climbing career.

In addition to the fundraising efforts, which fell to Bradburn and Weaver, the climbers made all the arrangements for travel and supplies themselves. Not surprisingly, getting to the southeastern corner of the former Soviet Union, just weeks before the coup in August 1991, was a challenge that could be compared to actually climbing the mountain.

"The concept of customer service has not come to the Soviet Union," Bradburn says with a laugh. "Planes leave when they want to and people sort of gather and run to get on." Perseverance, and a little help from Soviet Intersport, a now-defunct government agency designed to promote tourism, got the climbers to Peak Kommunizma, but no amount of good luck or good will could help the climbers with what they encountered when they reached 21,000 feet.

At that juncture, Bradburn and the rest of the team came to a pitch where they expected to negotiate a dangerous stretch of mountainside using fixed ropes maintained by the Soviet climbing federation.

"We found that the rope at this particular 7,000-foot pitch was real questionable," says Bradburn, the disappointment still registering in his voice nearly a year after the decision to turn back had been reached.

With his lifelong emphasis on finishing a job right, it's not surprising that Bradburn wanted to go on or that he did his best to convince the rest of the team to find an alternative way to accomplish the goal. In the
end, however, following the advice of the expedition’s technical expert, Stan Olson, he agreed to turn back. “We didn’t have enough information about the climb.” he says. “If we had known the poor quality of the ropes, we could have brought our own ropes and other equipment. It was crazy.”

Bradburn says the experience put him in mind of a conversation he’d had a few months before the Peak Kommuruzma expedition with Sir Edmund Hilary, the first man to climb Mount Everest. “I went to a speech he [Hilary] gave and afterward I told him what we were planning. He said we should watch out for those guys. I don’t remember what his exact words were, but he said that Peak Kommunizma has killed a lot of people and that the Soviets are more cavalier than we are. When I saw those ropes, I knew what he was talking about.”

Indeed, the Soviets proved willing to trust the ropes that the Klimb for Kids team regarded so suspiciously. A week after Bradburn and company had returned to the base camp, a team of Soviet climbers, led by Oleg Borisionok, a Master of Sport in the Soviet Union and a “snow leopard” (someone who has climbed all four 7,000-meter peaks in the Soviet Union) generously agreed to carry the Klimb for Kids flag to the Summit. The Soviet group’s attempt proved successful, and on July 28, 1991, the flag topped the mountain.

Bradburn would rather have delivered it in person, but despite his love for mountain climbing, he’s no death dodger. The decision to turn back was tough, he says, but it was right.

WHAT’S NEXT?
Not long after he returned from the Peak Kommunizma expedition, Bradburn began experiencing pain in his hip. “It got worse and worse ‘til I found I couldn’t stand or walk,” he says. One day, he found himself completely incapacitated by the pain. The culprit was a swollen disc in his lower back. He attributes the injury not to his mountain climbing exertions, but to weightlifting — squats, to be specific. “I don’t recommend them to anybody,” he says. Emergency back surgery was the first step in his healing process. The prognosis is for a complete recovery.

In the meanwhile, for the first time in his life, Bradburn has had to slow down a bit. “He has never had any physical problems, and it’s been hard for him. It has given him a chance to reassess some things,” says Gayle Bradburn. “But it certainly doesn’t have him down and out.” Bradburn hopes Klimb for Kids will continue although it probably won’t be by the original team.

There are some new considerations now.

Weaver and Olson have young families. Bradburn’s injury also might be telling him something. The search is on for other climbers willing to operate as the original group did, planning every detail, paying their own expenses, and providing all the contributions to charity.

Bradburn is a member of the Board of Trustees at the Colorado Christian Home, so he’s certain to stay involved with the kids there, whatever comes next. Indeed, service is becoming an increasingly important part of Bradburn’s life. He’s taken on volunteer duties for the United Way and a number of other nonprofit organizations, including Rensselaer. These activities will surely present him with a new set of the challenges he seems to crave.

“I’m probably not the first one to come up with this, but the way I look at it, there are three stages in life,” he says, “learning, gathering, and giving. I look at my life now as in transition between gathering and giving. Our kids are gone, they’re on their own. It’s just Gayle and me and the dogs and cats. That’s one of the reasons why Klimb for Kids was so appealing; it combined two of the things that are really important to me—climbing mountains and giving something back.”
Reunion '92 welcomed back to campus alumni seeking old friends from the teens through the '80s—and hosted a fair number of family reunions, too.

More than 1,250 people, including 750 alumni, returned to Rensselaer May 14-17 to take part in Reunion '92 festivities. Among them, several families marked generational RPI relations.

Forrest Wright '62 celebrated his 30th reunion along with his father, J. Milton Wright '27, who came for his 55th. They both in turn were on-hand to witness the graduation of Forrest's son, Walter '92.

"Perhaps we have a new event now, with three generations celebrating their 'five-year reunions' at the same time," said Forrest.

Raymond Moore '17, celebrating his 75th, was the oldest alumnus at reunion. He was joined by his son, Raymond Moore Jr. '48, and grandson Steven Moore '77, celebrating his 15th. Raymond Jr.'s brother, Shedrick, who transferred after a year at Rensselaer, also joined the family.

The Class of '52 broke attendance records, with 122 classmates, 20 percent of the class, returning. Not surprisingly, they took the honors for Best Participation in the annual Parade of Classes. They also organized a reunion of former Glee Glub singers; 10 classmates rehearsed and presented several Rensselaer songs at their class dinner.

"We were flooded with compliments," said Jack Eggleston '52 modestly.

Other parade honors went to the Class of '57 for Best Overall Appearance; their red-and-white umbrellas held the rain at bay. The Class of '72 earned the Best Float award; their theme was American Pie, and their float, a pink cardboard Chevy. Their bribe, a huge pie, was bested, however, by the Class of '47, awarded Best Bribe for serving the parade judges champagne in style. The Class of '87 was recognized as Best Up-and-Coming.

While most reunion classes culminated their activities in class banquets,
the 50 Year Club honored the 50th reunion class, the Class of '42, by formally inducting them into the club.

Throughout the weekend, alumni could attend a variety of academic panel discussions and department open houses, tour new facilities, and track down old haunts.

A special panel of alumnae from each decade since the 1940s assembled at the Folsom Library Archives to discuss their experiences as women on campus. The Archives mounted an exhibit marking 50 years of women at Rensselaer.

### ALUMNI MEET AND DISCUSS WOMEN STUDENTS

Nancy Fitzroy '49, Lois Graham '46, and chemistry Professor Sonja Krause '54 met in front of a Folsom Library Archives exhibit on the history of women students at Rensselaer during Reunion '92, May 16.

Graham and Krause took part in an alumnae panel discussion about the experiences of women students at Rensselaer. Other panel participants were Mary Rathbun Kolb '46, Gertrude Thun '68, Roberta Kanks '73, Janet Rutledge '83, Michelle White '93, and Rose Dill '67, who served as moderator. This year is the 50th anniversary of the year women students first matriculated at Rensselaer.

Doris and Clint Beavin '57 had "a great time" at their third reunion in the last 15 years.

The Class of '82 gathered at a new campus venue, the Clubhouse Pub in the Rensselaer Union.

Dick Anderson '37, Al Swasey '37, and Jack Lipman '37 celebrated their 55th sporting jackets and hats from reunions past.
RAA SALUTES DEDICATED ALUMNI

The Rensselaer Alumni Association honored outstanding alumni at its sixth annual awards dinner, held on campus May 15 during Reunion '92.

The theme of the dinner was gold and silver, commemorating the 50th anniversary of the Albert Fox Demers Medal and the 25th anniversary of the Distinguished Service Award.

President Roland Schmitt, who opened the ceremony, said, "Tonight I want to thank all of you, immensely and deeply, for all the work you have done."

Schmitt presented the Distinguished Service Award to Hugh Archer '37. The award recognizes service to Rensselaer, to a profession, the nation, or to humanity.

"Indeed, the record of Hugh Archer encompasses all of these," said Schmitt.

Archer was cited for his professional enterprise, in which he built a firm that now employs 100, for his community service, in which he rose to the presidency of Rotary International, and for his service to Rensselaer. Archer has been active in his class, the Rensselaer Club of Detroit, and the Rensselaer Council, and this year he became a member of the Stephen Van Rensselaer Society of Patroons.

"You enlarge our sense of what one individual can accomplish," said Schmitt. "We are proud to recognize you with the RAA's highest honor."

In his remarks, Archer said he wanted to thank an unnamed alumnus who, through an alumni scholarship, made it possible for him to attend Rensselaer.

"I've tried through the years to pay that person back by my actions as an alumnus of Rensselaer."

Archer said that a part of the spiritual makeup of the university is its graduates. "They are the soul of the university. The RAA helps to keep that soul bright and shining. I'm so proud to be honored by my fellow alumni."

The Albert Fox Demers Medal honors selected alumni for their outstanding efforts on behalf of the alumni body of the Institute. This year Demers Medals were awarded to Stephen Gaudioso '67, Rensselaer Trustee Mary Good, David Haviland '64, and W. Robert McIntosh '60.

The Alumni Key award recognizes outstanding service to Rensselaer...
through involvement and support of the RAA’s activities. Keys were awarded to Judith Barnes ’71, Richard Bouchard ’58, Glenn Brown ’54, Corporate Key Executive Anthony Gaetano ’66, Awards to Edward Jeter ’60, and Janet Furtek ’92, Judy Jones ’80, Kaplan ’89, Larry McElroy ’76, Lawrence Pulvirent ’81, and Basil Whiting ’60.

The alumni relations staff presents Director’s Awards to individuals who have been especially supportive of the staff’s programs in the past year. This year director’s chairs were presented to Jeremy Furtak ’92, Judy Jones ’80, Robert Jones ’80, Audrey Kaplan ’89, Larry McElroy ’76, Lawrence Pulvirent ’81, and Basil Whiting ’60. James Meinell, senior vice president and provost of Rensselaer, presented the 1992 Outstanding Faculty Award to Robert Hawkins, dean of the School of Management.

Bruce Masland ’56, outgoing president of the RAA, opened the awards ceremony by presenting an RAA Special Recognition Award to Carl Westerdahl, who was director of alumni and community relations from 1982 through 1991.

**BOARD OF TRUSTEES APPROVES RAA LONG RANGE PLAN**

In the fall of 1991, the Rensselaer Alumni Association charged a committee, headed by John Malitoris ’78, now president of the RAA, to revise the association’s long range plan. The RAA Board of Trustees approved the plan in May 1992. Following is a summary of the new 1992-1995 RAA Long Range Plan.

**Mission Statement**

The committee revised the RAA’s mission statement to reflect both traditional strengths and a newly engaged and vibrant alumni organization: “The Rensselaer Alumni Association engages and empowers all alumni as active and effective partners in the Rensselaer Community; it seeks to promote the lifelong, mutually beneficial pursuit of the aspirations shared by Rensselaer and its alumni.”

**Vision**

To carry forth the mission, the committee defined an aggressive and progressive vision of what the RAA must accomplish. This vision supports the belief that the RAA:

- is a vehicle for nurturing pride in its alma mater, supporting past traditions while empowering alumni to create new ones.
- must be representative of the alumni population. It should support and encourage the multidimensional character and interests of its membership.
- should be recognized by the university both as a voice for alumni and as a full and active member of the Rensselaer community.
- provides the framework and infrastructure for building and maintaining a large and active network of alumni.
- ensures ongoing value for alumni from their Rensselaer education and association.
- develops leaders that help the entire Rensselaer community—as a whole and in individual parts—to meet and exceed the challenges of today and tomorrow.
- needs to be progressive in its views and actions that contribute to the growth and success of the university and the association.

**Goals**

Seven prioritized goals were developed to move the association toward its vision:

- Select, develop, and execute new programs to attract and serve alumni.
- Develop financial resources to support the goals of the RAA.
- Develop a strong, consistent foundation of alumni leadership to support the RAA and the Rensselaer community.
- Fortify the fundamental operational elements of the RAA—strengthen its infrastructure.
- Continue to provide outstanding service to Rensselaer in admissions, development support, and educational activities.
- Serve as advocates of and full partners in the Rensselaer community.
- Be instrumental in fostering a positive attitude toward the Rensselaer experience.

**Tactical Activities**

The plan provides a detailed list of tactics to support the goals, with activities targeted for the 1992-94 period. Five vice presidents of the RAA will oversee activities in the following areas: volunteer management, alumni programs, finance and marketing, outreach, and development.

**Measurement and Communication**

Annually, the president-elect of the RAA will review, report on, and revise or amend the tactical activities with the help of the RAA board. The annual review process will provide a vehicle for the kind of creative input needed to ultimately achieve the mission of promoting “the lifelong, mutually beneficial pursuit of aspirations shared by Rensselaer and its alumni.”
Class Notes Deleted for Privacy Concerns
A MESSAGE FROM THE CAMPAIGN CHAIRMAN

EACH YEAR we publish the Report of Gifts to let our alumni and friends know what the impact of their giving to Rensselaer has been and to say "Thank You." It's one of the most important and satisfying tasks we do all year and yet, somehow, words on paper aren't really up to the job. I wish all of you who made a contribution had the opportunity, as I so often do, to travel to campus to see first hand what a difference your contributions make to Rensselaer.

First let me give you the figures. The news from our New Century Campaign is terrific — in fact, things are going so well we have decided to end the the New Century Campaign a year early, in June of 1993. As of June 30, 1992, the end of the last fiscal year, we had raised more than $162 million toward our $200 million Campaign goal. Total private giving to Rensselaer last year was more than ever before: in excess of $25 million. The Rensselaer Fund also broke a record this past year, receiving more than $3.5 million from 15,720 people. (In 1990-91 The Fund received $3.25 million from 13,430 people, so we have made great progress.) These numbers translate into improvements for all who work and study at Rensselaer; they mean students getting financial aid, professors getting research support, and campus buildings being maintained and improved. Each time I go back to campus, I meet someone whose life has been touched by an act of generosity.

For example, the renovation of the Cogswell Laboratory was finished this year, largely on the strength of private donations. Cogswell is the principal research facility for about 20 faculty members, 25 post-doctoral students, 90 graduate students, and many undergraduates involved in Rensselaer's Undergraduate Research Program. Every one of them is able to do better work today because of the generosity of those who gave to support the renovation.

The financing for the Heffner Alumni House was also completed this year with a generous gift from Virginia Gallinger, wife of the late Ralph Gallinger '30. Each day alumni, student, and faculty groups use the house for special events and meetings. It has measurably improved the quality of life on campus.

An exciting new project, the campaign to build a $2.4 million synthetic-surface athletic field and track, also was launched in 1991 (see story on page 11). Many alumni and friends have already

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TOTAL GIFTS IN MILLIONS

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<th>Year</th>
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continued on page 2
CHAIRMAN continued from page 1

stepped forward to contribute their time and money — more than $600,000 so far — to make the track and field a reality for Rensselaer's students. I hope I will be able to report to you at this time next year that work on the project is well under way.

CORPORATE AND FOUNDATION SUPPORT

Of course, our corporate and foundation donors were also very generous to Rensselaer this year, aiding in everything from research to facilities to support for students and faculty. Rensselaer was one of only four schools in the nation last year to receive a Clare Boothe Luce Professorship for women in science and technology (see story in Kaleidoscope). Corporations such as Digital, IBM, AT&T, GE, Kodak and many others supported the work of the faculty and provided scholarships for students. Their support, including many gifts of equipment, brought more than $13 million to Rensselaer.

THANK YOU, ONE AND ALL

I'm sorry that space does not allow us to print the name of every person who gave to Rensselaer last year (it would more than double the size of this report). But I do thank each one of you who gave to Rensselaer last year, whatever the size of your contribution. With the budget pressure we feel these days, your support is increasingly important.

Pages 3-48 of the 1991-92 Report of Gifts have been deleted from this digitized copy.
JOIN ALUMNI AND FRIENDS AT...

FALL ALUMNI WEEKEND

OCTOBER 1-4, 1992

NSBE/SHPE CAREER FAIR '92
The 14th Annual Career Fair sponsored by the National Society of Black Engineers, RPI Chapter, and the Society of Hispanic Professional Engineers will bring to campus over 100 companies interested in recruiting. It will be held in the Alumni Sports and Recreation Center (Armony) on Saturday, October 3rd from 10 am to 4 pm, and it is open to the entire Rensselaer campus and alumni community.

LACROSSE -
40th REUNION OF CHAMPIONSHIP 1952 TEAM
This special celebration will start with a get-together Friday evening from 8-10 pm at the Notty Pine. Saturday at 11 am is the Alumni vs. Varsity Game on Upper Renwick Field. Then during half-time of the Football Game the members of the Championship team who are present will be introduced. Festivities will conclude Saturday evening with a dinner for the 1952 team members and their guests with Coach Ned Harkness. If you want to participate and have not received information in the mail, call the Lacrosse Coach at 518-276-6182.

FOOTBALL GAME
Vs. Worcester Polytechnic Institute, '86 Field Saturday at 1:30 pm.

CHOWDERFEST
After the Football game, come back to the Heffner Alumni House for a bowl of hot chowder compliments of the Alumni Relations Office.

RENSSELAER ALUMNI ASSOCIATION (RAA)
LEADERSHIP WEEKEND
The program for the weekend includes a Leadership Conference on Friday afternoon, and an RAA Board of Trustees meeting on Saturday.

PATROONS OF RENSSELAER
Leadership Phonathon on Thursday evening starts the weekend's activities. Friday is Corporate Key Executives' Day. An Endowed Chair Recognition Luncheon and Investiture Ceremony, and the Patroon Society Induction Ceremony and Annual Patroon Dinner are also on Friday. A Silent Auction organized by the Rensselaer Alumni Association (RAA) will be the highlight of the reception prior to the Patroon Dinner.

FRATERNITIES/SORORITIES/CLUBS
Many Greek society chapters and student clubs plan special activities for alumni during this weekend.

FOR MORE INFORMATION
You should receive announcements in the mail from your special group or invitations to events that require an RSVP. If you have questions or need more information about the weekend activities, call the Office of Alumni Relations (518) 276-6205. Come to the Heffner Alumni House, 14th St. and Peoples Avenue during the weekend for a final schedule of activities.
Is Technology moving faster than you are?  
Is your business showing signs of high-tech fatigue? Are you playing "Follow the Leader?"
Sharpen your edge and assure your competitive position by linking with Rensselaer. Join the growing list of Fortune 500 and forward-thinking high-tech companies accessing Rensselaer's world-renowned faculty through the proven resources of the Rensselaer Satellite Video Program. Successful business leaders understand productivity depends on engineers and scientists—skilled professionals familiar with the latest technologies, processes, and operations. When you're ready to invest in intellectual resources, Rensselaer delivers the state-of-art, where and when you need it. For service-minded, up-to-the-minute technical education delivered on-site, call the Rensselaer Satellite Video Program at 518-276-8351.

New on video for 1992!  
Complete M.S. program in Microelectronics Manufacturing