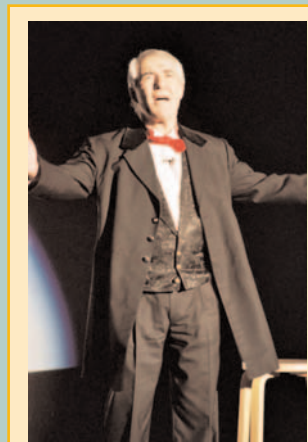


HOLD THE DATE

**Tickets Now Available for the R&D Council's Annual Patent Awards Dinner Scheduled for November 11, 2004**

It's time to mark your calendars for the R&D Council's big night, when we celebrate and honor New Jersey's finest inventors at the R&D Council's Annual Patent Awards Dinner. Scheduled for Thursday, November 11 at the Liberty Science Center, Jersey City, NJ, the Patent Awards Dinner applauds the achievements of New Jersey's outstanding leaders in research and development.



*Edison made an appearance at last year's awards*

The Thomas Alva Edison Patent Awards will be presented to the most innovative New Jersey inventors and their companies. The awards will honor those in research, technology, science and related categories.

The Science/Technology Medal will be awarded to the individual that best exemplifies a senior manager who contributes to the advancement of research and development by bringing innovative products to the marketplace.

The Educator of the Year Award will recognize the teacher that most supports research and development in the academic community.

The winners of these awards will be announced in the next newsletter. Show your support and make reservations for the Annual Patent Awards Dinner, the Council's biggest event of the year, by contacting the Council office at 973-627-5330.

**The Council Welcomes New Member**

Flow Safe is a company that combines innovative thinking, an extensive R&D program, and manufacturing expertise to provide laboratory ventilation that protects workers and helps sustain, not harm, the environment.

Flow Safe's commitment to providing state of the art, industrial, environmental controls, resulted in the world's first and only "real-time" dynamic, interactive fume hood containment system. Scientific laboratories, hospitals and industrial companies in the USA, Canada, and around the world, have come to rely on Flow Safe for quality airflow products and services. Flow Safe's innovations have been awarded numerous airflow patents over the last two decades.



**Former Scholarship Winner Ph.D. Candidate**

Diane Donnelly is now on her way to earning her Ph.D. in Biomedical Engineering.

*continued on page 4*



**Date Announced for Patent Awards**

New Jersey's finest inventors will be celebrated at the annual dinner on November 11, 2004.

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**Executive Notes**

**Bridging the Gap**

Welcome to the first issue of *Bridges to Innovation*, The R&D Council's regular communications vehicle for keeping you, our valued members, informed. The new name symbolizes our goal to continue bridging the gap between industry, academia and government. And to bridge the awareness gap among the general public as to the great value and contributions New Jersey's research community provides in an effort to make our lives a little longer, our health a little better and our world a little safer.

**The Power of One**

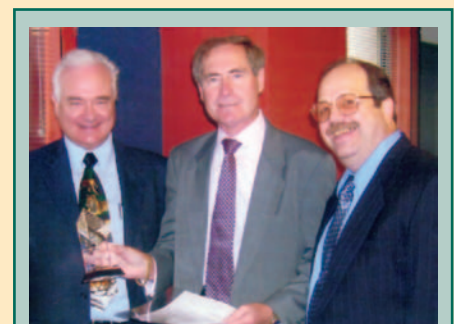
As your new executive director, I'd also like to introduce you to a new operating philosophy I call The Power of One. It embodies an overall spirit of teamwork, one that supports science education, fosters cooperation and celebrates innovation. Over the next several months, I will continue to build a team environment and to share with you, more aspects of The Power of One. Enjoy your first issue of *Bridges to Innovation*.

*(continued on page 5)*

**The R&D Council Hosts New Jersey Inventors Hall of Fame Awards Luncheon**

A special awards luncheon was held on June 23, 2004 at the New Jersey Institute of Technology (NJIT) for the New Jersey Inventors Hall of Fame Awards presented by the Research & Development Council. The luncheon was organized to honor the winners of the 2004 Inventors of the Year competition and inductees into the NJ Inventors Hall of Fame (NJIHOF).

The NJIHOF recognizes and applauds the hard work and creativity of New Jersey's inventors. All winners must have resided in the state of New Jersey and performed the majority of work on the invention in New Jersey. Nominations are judged according to the importance of the problem solved by the invention, the contribution to advancing the state of the art, utility and/or socio-economic value (ie. national security, advances in health care, etc...) and demonstrated commercial impact.



*Les Avery, Sarnoff Corp.; Robert*

**The Inventors of the Year are:**

Robert H. Morris, of Flow Safe, Inc., inventor of the high performance, low air flow, stable vortex fume hood, (continued on page 2) (continued from page 1)

**C o n t e n t s**

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**The Council Welcomes New Executive Director: Anthony Makoujy**

Anthony Makoujy is joining the Council's management staff to take on the responsibilities of Executive Director. He is assuming this position from John Daghlian who is leaving to pursue other opportunities. We wish John the best in his future endeavors.



Makoujy comes to the Council as a 20-year veteran in business marketing. He has worked in both corporate and agency environments and has experience on both a domestic and international level.

Prior to joining the Council, Makoujy was a business marketing communications consultant working with advertising agencies and corporations to execute scientific and life science related programs. Before venturing out on his own, he was the director of marketing for a CRM-based telecommunications company and for 14 years served as vice president of a high-tech marketing firm focused in the areas of life science, analytical instrumentation and specialty chemicals. Throughout his career, Makoujy

has developed a strong understanding of science and technology and is highly experienced in communicating with R&D professionals.

He also served as President for the Business Marketing Association (BMA), where among his other accomplishments, he helped to grow the association membership to new levels.

We all look forward to working with Anthony to help make the Council even better in the years ahead.

**One Unique Opportunity:**

An opportunity to focus on and celebrate discovery. As members, we share in celebrating our own achievements by formally recognizing members of distinction with a series of awards programs. It is our chance to share in each other's accomplishments and provide encouragement and support to all.

*Anthony Makoujy, Executive Director*

**Executive Notes**

*(continued from page 1)*

**The Power of One**

**One Powerful Voice:** United we stand. As a collective of innovation-based New Jersey companies and universities involved in R&D, your membership in the R&D Council helps to amplify the voice of many of the largest research facilities in New Jersey.

**One Shared Commitment:**

Commitment to the education of our youth and the growth of our industry. If we don't ensure the future involvement of today's youth, there will be no scientists of tomorrow to continue our efforts.

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## Inventors Hall of Fame Awards Luncheon

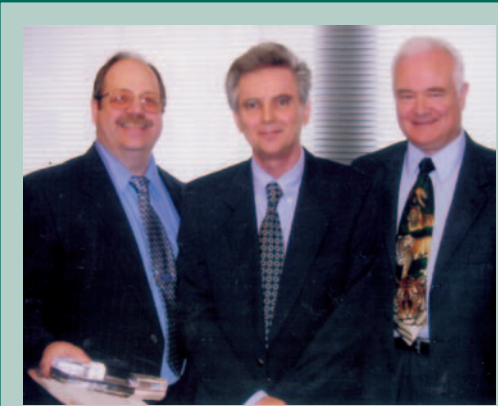
(continued from page 1)  
solving the problems of high energy consumption and poor containment found in conventional hoods.

**Igor Palley, of Honeywell International**, is a key co-inventor and technology developer of the SpectraShield, a high strength organic fiber that can be incorporated into protective clothing or body armor to protect the wearer from firearm blasts and explosion fragmentation.

**Also announced were the winners of two special awards given to:**

**Phillip J. Petillo, of Phil-Lu Incorporated**, who holds patents for surgical devices, hand tools, musical instruments and classified military projects, was honored for his inventions across a diverse scope of technologies.

**Magid Abou-Gharbia, of Wyeth**, who has made major contributions in the area of immunosuppressant



Harry Roman, Corrado Dragone, and Les

drugs. The inductees into the New Jersey Inventors Hall of Fame are:

Samuel Leeds Allen, of S.L. Allen Co., has been awarded almost 300 patents for farming machinery and implements. However, he is most



Robert Morris, Corrado Dragone, Walter Krupick, William Blair (accepting for his grandfather William Blair), Christopher Gourdine (accepting for his grandfather Meredith Gourdine), Mary Beth Early (accepting for her father James Early), Magid Abou-Gharbia, and Igor Palley

famous as the inventor of the Flexible Flyer, a sled with flexible runners that could be steered with ease, accuracy and safety, without shifting body weight.

**William R. Blair, of Army Signal Corps Laboratories**, the inventor of radar.

**Corrado Dragone, of Lucent Technologies/ Bell Labs**, the inventor of the waveguide grating router, also known as the Dragone router, a key enabling component of wavelength-division-multiplexing technology.

**James Early, of Lucent Technologies/ Bell Labs**, was one of the earliest researchers into transistors and semiconductors, and made theoretical contributions such as discovering an aspect of the behavior of bipolar transistors, known as the "Early effect." Transistor designers used the effect for faster transistor performance, which was crucial for applications like television, the FM transistor radio and early military radar.

**Meredith Gourdine, of Gourdine Systems**, is best known for his breakthrough work in the research of electrogasdynamics and an engineering technique called, "Incineraid" which aids in the removal of smoke from burning buildings and a method used to disperse fog from airport runways.

**Walter Krupick, of Kearfott Guidance & Navigation Corp.**, the inventor of the two-axis gyroscopes which provided a new, low-cost, highly reliable solution to gyroscopic sensors for navigation. This device has guided aircraft, missiles, spacecraft and the gunner's line of sight in tanks.

A four-column article covering The New Jersey Inventors Hall of Fame Awards Luncheon appeared in The Record on June 24, 2004. Articles on the NJ Inventors Hall of Fame inductees also recently appeared in *The Daily Record*, *The Home News Tribune*, *The Asbury Park Press*, *The Monmouth Message and Chemical & Engineering News*. Several Hall of Fame inventors were also featured on *NJN News*.

## The R&D Council Awards Engineering/Technician Scholarships to Deserving Community College Students

Although there were many fine applicants, the 11 winners stood out as truly exceptional:

In addition to working a full-time job as a maintenance person for the NJ Water Supply Authority, **LeRoy Branch** is also enrolled as a full-time student at Brookdale Community College for Environmental Engineering. Branch wrote in his application, "Coming back to school was the hardest, but most rewarding thing I've done in 10 years." He hopes to work some day for the Department of Environmental Protection.

**Agustin Calle** is majoring in electronics and computers at Middlesex County College. He works as an assistant for one of the professors there, who wrote "Agustin is a bright, hard-working student, always willing to cooperate and interact with others. I would consider him a role model for other students."

**Tara Dickson's** major field of interest at Cumberland County College is medical technology, research and microbiology. A mother of three, Dickson was named in the "Who's Who" among Junior Colleges, is a member of the Phi Theta Kappa Honor Society and belongs to the nursing club.

**Claudia Estrada** is majoring in construction technology at Raritan Valley Community College. In high school she was ranked first in her class and made the dean's list at Raritan Valley College during the fall semester of 2003.

**Cheri Fleming** is majoring in civil engineering at Ocean County College. This mother of four plans to transfer after graduation to a four-year school for a Bachelor of Science degree in Civil Engineering Technology.

**The Research & Development Council has once again awarded Engineering/ Technician Scholarships to eleven deserving students. Each year, the Council awards several \$1500 scholarships to students in engineering, science and technology-related fields, who are enrolled at any of New Jersey's community colleges. Grade point average, major field of interest, extra-curricular activities, financial need, other awards and career goals after college are all taken into consideration. The monies for the scholarships are available because of contributions from the Council's generous member companies.**

**This year's contributing members are:**  
Bristol-Myers Squibb  
Electro-Radiation Inc.  
Engelhard  
ExxonMobil  
Honeywell  
International Flavors & Fragrances  
National Starch & Chemical  
Novartis  
Schering-Plough  
Pfizer  
Wyeth

**Loubart Fok**, from the Ukraine, is a biology major at the County College of Morris. After transferring to a four-year college to earn his bachelor's degree in biology, Loubart plans to apply to medical school to become a doctor.

**Hirza Mitz Gonzales**, from the Philippines, is working towards

a degree in biomedical engineering at Middlesex County College and is a member of the Phi Theta Kappa Honor Society. One of Hirza's professors wrote that Hirza "has been an exceptionally conscientious and hardworking student. She has never limited herself to doing just what was required; she always went way beyond... She is a student who would be an asset in any academic environment."

**Amy McMurren** is majoring in Computer Aided Drafting (CAD) at Camden County College. One of her instructors wrote, "I have had the opportunity to work with Amy directly in the creation of several course-related projects... I have always found her eager, pleasant, and thorough in all assignments." McMurren hopes to continue her education for an Engineering Science degree and become an architect.

**Adam Paul**, an active duty United States Air Force member, is majoring in civil engineering at Gloucester County College. One of his professors wrote, "Adam distinguished himself early in the semester with his enthusiasm and interest in learning. Adam is a consistent participant in classroom discussions and often initiates the discussion when others in the class are silent. The quality of his comments shows insight and reveals he has not only read the assigned readings, but thoughtfully considered them."

Home-schooled Jeffrey Rothe is majoring in mechanical engineering at Warren County Community College. A coordinator at the college revealed an anecdote that speaks volumes about Jeffrey's determination and ability to take initiative. The coordinator recalled, "When Jeff learned that Calculus II was not going to be offered in the Fall 2004 term, he got a group of interested students together

and approached the Math Department Chairperson and Academic Dean with his request to add it to the schedule. As a result, students can take Calculus II this fall at 7:30 a.m., the only time a classroom is available."

**Xiao Ping Zhang**, from China, is studying chemistry and medical laboratory technology at Mercer County Community College. She hopes to eventually get her doctoral degree in pharmacy and integrate traditional Chinese and Western medicine.

### SUCCESS STORY

#### Diane Donnelly, 1999 Technician Scholarship Winner, Becomes Ph.D. Candidate at NJIT

Diane Donnelly was a licensed electrician for 14 years and had risen to the rank of General Foreman, supervising over 40 electricians, at the *New York Times* plant in Edison, New Jersey. She enjoyed the challenge, but was tired of what she was doing and did not feel she could go any further in her career. She wanted more.

In 1998, at the age of 42, Ms. Donnelly enrolled in Middlesex County College (MCC.) The following year she applied for, and was awarded, the Council's Technician Scholarship. In 2000 she transferred to NJIT, where she earned her B.S. in Electrical and Computer Engineering Technology and graduated summa cum laude in 2002. Donnelly's overall GPA was 4.0 and she graduated first in her class, of 834 graduates. In 2003 she earned her M.S. in Biomedical Engineering and is now a Ph.D. candidate for Biomedical Engineering.

Ms. Donnelly said, "At first, I just planned to get my Associates degree, but I had a great deal of support and encouragement from my professors at Middlesex County College to continue my education. I transferred to NJIT in 2000 to pursue a bachelor's degree. I became interested in Biomedical Engineering while still an undergraduate, following discussions with one of my professors, Dr. Ronald Rockland. With his encouragement, I enrolled in the Master's program." Dr. Rockland became Donnelly's advisor for her Master's thesis and is currently her Ph.D. advisor.

After Donnelly earns her Ph.D. in Biomedical Engineering, she plans to go into research or teaching.

The R&D Council is gratified to know that in some small way, we helped her get to where she is today.