

# SEEM

## SYSTEMS ENGINEERING & ENGINEERING MANAGEMENT

DEPARTMENT



NEWSLETTER

VOL. 1, NO.1

SPRING 2001

### Dear Friends and Alumni,

Welcome to the first edition of the Department of Systems Engineering and Engineering Management's biannual newsletter. Many new and exciting things are happening at Stevens. This newsletter is our attempt to convey information to you about our programs, faculty, and students. Hopefully, if you are receiving this newsletter, you are either an alumnus of the Engineering Management (EM) or Management programs or someone who has an interest in EM at Stevens.

First and foremost, the Department of Systems Engineering and Engineering Management (D/SEEM) was created July 1, 2000 to be home to the undergraduate Bachelor of Engineering in Engineering Management (BEEM) Program, the Integrated Product Development (IPD) Graduate Program, and the new master's and certificate program in Systems Design and Operational Effectiveness (SDOE). The old Department of Management formed the core faculty for what is now the Wesley J. Howe School of Technology Management (SoTM). However, to maintain accreditation, the EM program was moved back to the school of engineering. The new department will be temporarily housed on the 5th floor of Burchard until the SoTM building is constructed. Currently we are in the process of hiring three new faculty to support the BEEM program, the SDOE program, and to help create a graduate program in Systems Engineering. We are also in the process of starting both on and off campus graduate programs in Engineering Management and Systems Engineering. Over the next few months, I will be meeting with many industries in our region to help tailor these programs to their needs. If you or your company is interested in graduate programs in either of these two topics, please contact me. We need your input!

Next, I would like to mention that we are undertaking several new initiatives to better support our existing students. On September 22, we launched a department web site. Beyond the standard information, we have space reserved for student homepages and resumes to help with job placement.

Lastly, we are launching this newsletter. In addition to informing our graduates and friends, we hope to use this newsletter to better maintain and expand our network in the region.

Please feel free to send me your ideas and comments at [jfarr@stevens-tech.edu](mailto:jfarr@stevens-tech.edu) or 201-216-8103/8025.

Best Wishes From Stevens,



John V. Farr, Ph.D., P.E.

## INSIDE THIS ISSUE

- 2 ..... TECHNOGENESIS
- 3 ..... FACULTY NEWS
- 3 ..... IPD PROGRAM
- 4 ..... BEEM NEWS
- 4 ..... DEPARTMENT NEWS
- 4 ..... STEVENS NEWS
- 4 ..... OTHER NEWS
- 5 ..... NEW FACULTY

**STEVENS**  
Institute of Technology

# What is

# TECHNOGENESIS?

*Technogenesis: the educational frontier wherein faculty, students and colleagues in industry jointly nurture the process of conception, design, and market-place realization of new technologies.*

If you have seen any of the advertisements in national magazines run by Stevens, read your alumni newsletter, or talked to any of the faculty you have probably heard the term Technogenesis. In fact, Stevens has copyrighted the word. But what exactly does "Technogenesis" mean for the future of Stevens, our engineering management and systems students, faculty and staff, and its alumni?

First and foremost, the idea of faculty and students at a university nurturing technology from conception to realization is not new. Cisco Systems and Sun Microsystems are great examples of the concept in practice. By formalizing Technogenesis, Stevens has committed to fostering this type of environment and placing it at the forefront of all aspects of its academic and research programs.

Research in Technogenesis, for example, not only encourages faculty to pursue excellence leading to scholarly publications in top journals, but allows for a transition of the research to protected intellectual property. In turn this may facilitate its development to potential commercialization. The faculty's contributions to Technogenesis will be a major criteria for faculty promotions, tenure, and raises.

While being actively engaged in faculty research, Technogenesis is manifested through students at the undergraduate as well as the graduate level. It encourages students to pursue their own ideas for new technologies and services. It fosters creativity and entrepreneurship in the student body. It also encourages faculty to apply their research to the classroom through examples, demonstrations and to stimulate out of class projects and assignments.

The school of engineering (SOE) has undertaken several new initiatives in support of Technogenesis. Stevens Institute of Technology has been awarded two competitive High-Tech Workforce Excellence Grants totaling more than \$2.4 million by the New Jersey Commission on Higher Education. Part of this funding will be used to establish an undergraduate technology incubator.

Because of the nature of engineering management education, we are well positioned to support Technogenesis at Stevens. Our courses strive to instill this the entrepreneurial spirit needed to succeed in the interdisciplinary, information based and manufacturing businesses that hire our graduates. We will be trying to focus more on partnering with industry through capstone projects and sponsored research.

Technogenesis was formalized at Stevens to define the long-term strategic direction of the institution. If you want to read more about Technogenesis access [http://attila.stevens-tech.edu/technogenesis/tech\\_significance.htm](http://attila.stevens-tech.edu/technogenesis/tech_significance.htm) ■

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## FACULTY NEWS



*Dr. John V. Farr*

- Dr. John V. Farr is the new Director, Department of Systems Engineering and Engineering Management. Dr. Farr comes to Stevens from the U.S. Military Academy where he was Professor and Director of its EM program.

- Dr. Donald N. Merino received the Bernie Sarchet Award from the Engineering Management Division (EMD) of the American Society of Engineering Education (ASEE). This award is for lifetime contributions to the field of engineering management. Dr. John

Mihalasky received this award three years ago. Dr. Merino also received the Benard Sarchet award from the American Society of Engineering Management which is also a lifetime achievement award in the field of Engineering Management.



*Dr. Donald N. Merino*

- Dr. Aaron Shenhar, Institute Professor of Management in Wesley J. Howe School of Technology Management, received the Engineering Manager of the Year award from the Institute of Electronic and Electrical Engineers Inc. (IEEE). Dr. Shenhar also received the Morton Best teaching award for full professors and the research award at the Fall 2000 convocation.

# Integrated Product Development Program

## IPD PROGRAM

In a rapidly changing technological world, new challenges are rising when improvement of quality and reliability of engineering systems are demanded. This demand is increasing and is putting forth new challenges on government and industry personnel responsible for cutting costs, planning, and leading multidisciplinary product development projects. The traditional disciplinary engineering programs typically do not address the skill set, competencies, and practices needed for integrated product development. The program focuses on innovative designs and methodologies and on new materials and process technologies in new product development. The program's aim is to provide an innovative view of the landscape of product development to practitioners from

different engineering disciplines, to enhance their practice of engineering today and to position them for career growth in the global economy.

The IPD Program emphasizes the design, manufacture, implementation, and lifecycle issues of engineering systems. The program embraces and balances qualitative as well as quantitative aspects and utilizes state-of-the-shelf-tools and methodologies that stress the design, manufacture, implementation, and life-cycle issues of engineering systems. It aims to educate students in problem-solving methodologies, modeling, analysis, simulation, and technical management. The program trains engineers in relevant software applications, their productive deployment, and integration in the workplace.

All students in this program must complete ten courses (30 credits) comprised of four core courses and up to six elective courses selected from one of the nine engineering tracks listed below. The student, with the approval of the program director, may design customized tracks. Up to six elective credits may be taken in lieu of the course credits towards a project relevant to the selected track.

At the present time courses are offered at Picatinny Arsenal with all courses open to students from other companies. The program has a consortium of seven companies that reviews courses, provide suggestions on course content, and provide feedback from their students

# newsnews

- Ms. Elaine Chichizola is the new Assistant Director of the BEEM program. A 21-year employee of Stevens, she has been associated with the BEEM program since 1998.
- Many of Stevens students and friends fondly remember Hans J. Lang who taught Cost Accounting and Engineering Economics. Upon his death in the past year, the faculty endowed an award in his honor. At the Fall 2000 convocation, the award was presented to Engineering Management majors Elizabeth Herbst and John Davidvoich. The Hans J. Lang Award for Excellence in Cost Engineering and Engineering Economics is awarded annually to a member of the Junior Class in Engineering Management who has distinguished himself or herself in these topics. This award is given in memory of Hans Joachim Lang, Stevens class of '34, by his family and the faculty of the BEEM program. The award recipient(s) will be chosen by the Program Director of the BEEM program in consultation with the faculty. The award will be announced at the end of the academic year and presented at the annual Convocation at the beginning of the next academic year. The award consists of \$2,000 divided among the recipients and a plaque. A master plaque will be displayed in the BEEM display case with past and current winners.

## ADMISSION REQUIREMENTS

The requirement for admission into the Graduate Certificate and the Master of Engineering degree program is a Bachelor's degree in engineering. Applicants with degrees in computer science, chemistry, physics, or mathematics may also be admitted into the program and may need to complete prerequisite courses. A faculty advisor, on an individual basis with the students, will determine the specific requirements determined by the student's experience and background. Candidates for a Master's Degree in Engineering must complete 30 credits (10 courses with 3 credits/course) and earn a GPA of 3.0 or better. The Graduate Certificate consists of the four core courses or four courses in the engineering tracks.

## CONTACT INFORMATION

*Additional information may be obtained by completing and returning the attached mailer, by visiting the SEEM website, or by contacting: George J. Hudak, PE, IPD Program Director, Charles V Schaefer, Jr. School of Engineering Stevens Institute of Technology Castle Point on Hudson Hoboken, or e-mail: [ghudak@stevens-tech.edu](mailto:ghudak@stevens-tech.edu) ■*

## BEEMNEWS

- Seventeen students graduated with the class of 2000 with degrees in EM. This was one of our largest classes ever.
- The average starting salary for the class was \$46,200. The average for all engineering degrees can be found at: <http://attila.stevens-tech.edu/ocs/salary.edu>
- The class of 2000 found employment in such companies as Saloman Smith Barney, Deloitte Consulting, Arthur Andersen, K. Hovnanian Enterprises, United Postal Services, Stelex, Inc., PSEG, Pershing, Chase Manhattan, Bristol Myers Squibb, Lockheed Martin, and Merck & Co., Inc.

## DEPARTMENTNEWS

- Our new department website is located at <http://www.attila.stevens-tech.edu/seem>

Note that we have provided a place for our students to post their own web pages and resumes to aid in employment. Visit our site and let us know what you think. We still have a long way to go in developing a department website, and, ideally, all of our course notes, research efforts, copies of this newsletter, etc., will be accessible via the web in the near future.

## STEVENSNEWS

For the 443 students entering in 2000, the average SAT score was 1340. By all measures, 1999 was a great year at Stevens. Research funding, inventions, and patents were at all time highs. ■

**wanted:**

# NEW FACULTY

*We are in the process of hiring two new tenure track positions. The following will appear in several trade publications during October. Please pass this advertisement to anyone that might be interested in teaching in our department.*

The Department of Systems Engineering and Engineering Management (D/SEEM), Stevens Institute of Technology, invites applications for two positions in Systems Engineering, Engineering Management, Industrial Engineering, Economic Systems, or related field at the Assistant and/or Associate Professor level. The positions will be available July 1, 2001 and will remain open until filled. Priority will be given to applications received by November 30, 2000.

The first position will be dedicated to teaching and research in the areas of Design for Cost, Engineering Economy, Cost Analysis, or Life Cycle Costing. The second position will be dedicated to Systems Integration, Decision Analysis, Computer Simulation, or Information Systems. Applicants will be expected to develop and sustain a productive research program. Opportunities exist to teach courses in the Wesley J. Howe School of Technology Management and other departments within the Charles J. Schaefer, Jr., School of Engineering.

Minorities and women are encouraged to apply. The programs within the D/SEEM include a significant number of women and minorities. The applicant(s) should have a demonstrated record or potential to conduct independent research via funded research grants, proven verbal, written, and leadership skills, demonstrated a commitment to his/her academic field via participation in the relevant professional societies, and demonstrated outstanding teaching ability. Demonstrated busi-

ness/industrial/government experience in engineering/technical management would be a great asset in these positions. These positions are expected to embrace Steven's strategic direction of Technogenesis™ which is defined as the educational frontier wherein faculty, students, and colleagues in the industry jointly nurture the process of conception, design, and marketplace realization of new technologies.



Stevens is located on a scenic, 55-acre, park-like campus in Hoboken, New Jersey, just across the Hudson River from midtown Manhattan. Founded in 1870 in Hoboken, New Jersey, Stevens is one of the leading technological universities in the country. The university has a total enrollment of 1,400 undergraduate and 2,000 graduate students and a full-time faculty of 120. It offers bachelors, masters and doctoral degrees and is dedicated to solving real-world problems through study and research. The average SAT score for the class entering in 2000 was 1340. Visit [www.stevens-tech.edu](http://www.stevens-tech.edu) for more information.

Applicants should submit a letter containing a statement of professional goals, research interests and commitment to outstanding teaching. With the letter should be a full resume and the addresses of three (3) references to Dr. John V. Farr, Director, Department of Systems Engineering and Engineering Management, Charles V. Schaefer, Jr., School of Engineering, Stevens Institute of Technology, Castle Point on the Hudson, Hoboken, New Jersey 07030. Stevens is an Affirmative Action, Equal Opportunity Employer committed to a diversified workforce. ■

If the address on the front of this newsletter isn't correct, please provide us with your correct mailing address, email, and phone number for future mailings.

<b>NAME</b>	
<b>ADDRESS</b>	
<b>E-MAIL</b>	
<b>PHONE</b>	

Please check the appropriate items that you or someone in your organization would like to be contacted via email about:

<input type="checkbox"/>	Employing undergraduate Engineering Management students as part of the cooperative education program.
<input type="checkbox"/>	Employing undergraduate Engineering Management students part-time during the school year and during the summer.
<input type="checkbox"/>	Employing new graduates from the undergraduate Engineering Management.
<input type="checkbox"/>	Employing recent graduates with Masters and PhD degrees.
<input type="checkbox"/>	Sponsoring senior capstone design projects.
<input type="checkbox"/>	Other: _____

Please provide the name and email address of the individual if not yourself that we should contact.

<b>NAME</b>	
<b>E-MAIL</b>	

PLEASE MAIL OR FAX THIS FORM TO:

DEPARTMENT OF SYSTEMS ENGINEERING AND ENGINEERING MANAGEMENT • ATTN: MS. ELAINE CHICHIZOLA • CHARLES V. SCHAEFER, JR. SCHOOL OF ENGINEERING  
STEVENS INSTITUTE OF TECHNOLOGY • CASTLE POINT ON HUDSON, HOBOKEN, NJ 07030 • OR FAX TO: 201-216-5541



DEPARTMENT OF SYSTEMS ENGINEERING AND ENGINEERING MANAGEMENT  
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