



The Integrator

UNIVERSITY OF WASHINGTON
COLLEGE of ENGINEERING
A Community of Innovators

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UW EE Professional Masters Program To Commence In 2008

UW EE is pleased to announce the availability of an evening professional master's degree in electrical engineering. The Professional Masters Program (PMP) is designed primarily for the working professional employed locally in the Puget Sound to allow students the flexibility of working while pursuing an MSEE. Classes will be offered in the evening on the Seattle campus and are scheduled to begin winter quarter 2008. "For the first time, the UW MSEE degree will be available in an evening format," says Professor and Associate Chair for Education, Jim Ritcey. "The addition of an MS degree on your resume can be critical when seeking new opportunities."

Based on a comprehensive marketing survey carried out by UW Office of Educational Outreach, the PMP will initially focus on four curriculum areas. These include Controls,

Electromagnetics, Signal and Image Processing, and Wireless Communications. As the program matures, additional topic areas will be available to PMP students. The program will meet the same high standard as the full-time degree, although the course content will vary.

Each quarter, students in the PMP will attend a four credit class one evening per week, and a quarterly one credit seminar series. Following successful completion of 45 credits in EE, students will receive a Master of Science in Electrical Engineering. Shorter time to degree is possible if students double-up on their course load.

The final agreement signed by the University's Provost Dr. Phyllis Wise, Vice Provost David Szatmary, Dean Matt O'Donnell, and EE Chair Leung Tsang, culminates a year

Earn a MSEE In the Evening

Considered getting a MSEE but can't quit your job? UW EE's Professional Master's Program allows you to keep your knowledge up-to-date in this fast moving field by working during the day, and earning your MSEE in the evening.

Curriculum Areas:

*Controls, Electromagnetics,
Signal and Image Processing,
Wireless Communications*

Course Details:

*45 credits to earn MSEE
Classes offered in the evening
Classes taught by UW EE faculty*

Application Deadlines:

*November 1 for Winter Admissions
February 1 for Spring Admissions
July 1 for Autumn Admissions*

Contact Information:

<http://extension.washington.edu/pmpeel/>

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Department News

Dean O'Donnell Names Leung Tsang as Chair

As a strong supporter of UW EE, I'm pleased to announce that Professor and Acting Chair Leung Tsang accepted the position of Chair of the department.



During the search process, Leung emerged as the clear choice to lead EE. Leung received his PhD from MIT and has been a faculty member at UW

since 1983. His current research interests are in remote sensing and geoscience applications, signal integrity in interconnects, computational electromagnetics and multiphysics simulations. He is a Fellow of the IEEE and a Fellow of the Optical Society of America. Leung has published over 230 journal articles and is the lead author of four books.

This is an exciting time for the department, and under Leung's leadership we expect to make great

progress in three strategic areas: Nanoscience/technology and Molecular Engineering, Network/Information Science and Technology and Dynamical Systems/Systems Biology.

Please join me in congratulating Leung, we expect great things for Electrical Engineering under his leadership.

Matt O'Donnell
Frank and Julie Jungers Dean of Engineering

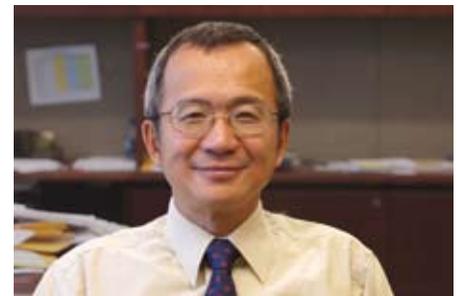
Message from the Chair

With all the recent achievements and great plans in the works for the future, UW EE is a great community to be a part of right now. As Chair, my vision is simple yet ambitious – to develop premier research teams and centers, recruit top notch faculty to be leaders in research and education, and meet industry demand for EE by increasing student enrollment and developing a Professional Master's Program.

UW EE is in a unique position to take advantage of the technological and medical expertise here at UW by establishing research teams and centers through multi-disciplinary collaborations. We have some of the brightest talent emerging as super stars as you'll see on page 4 with Assistant Professor Babak Parviz's TR35 Award win.

To support and ramp up inter-disciplinary collaborations, we will be recruiting the brightest new faculty in these emerging research areas. We already hired Assistant Professors Maryam Fazel, an expert in systems biology, and Michael Hochberg, an expert in nanophotonics to start with us this academic year.

Last year, we revamped our BSEE program to meet industry demands for increased expertise in specialized EE fields. Changes to our curriculum combined with a strong demand for EE, opens the door to increase the size of our program. Further goals include developing new freshman courses and multi-disciplinary specialty tracks (such as bioelectrical engineering, MEMS, and photonics), encouraging undergraduate research, and admitting more students.



One of our biggest anticipations for this academic year is the rollout of the UW EE Professional Master's Program (PMP) to commence in 2008. This exciting new opportunity will provide a viable way to obtain state-of-the-art education in Electrical Engineering for engineers in the Puget Sound region. For those of you who are thinking about going back to school, I strongly encourage you to check out our application process.

Leung Tsang
Professor and Chair

Department News

Welcome Hochberg and Fazel

The department welcomes two new faculty this academic year, Maryam Fazel and Michael Hochberg. Welcome aboard!

Michael Hochberg

Michael Hochberg received his PhD from Caltech in 2006. His research primarily uses integrated optics as a platform for building ultrafast devices. The concept is to take advantage of effects that fundamentally operate at speeds of 10 Terahertz (10,000 Gigahertz) and higher, and use them to build optical devices with bandwidth that's orders of magnitude higher than what can be achieved with conventional electronics.



Maryam Fazel

Maryam Fazel received her MS and PhD degrees in Electrical Engineering from Stanford University in 1997 and 2002. Her research interests include optimization, systems and control theory, with applications to engineering and biological systems. Fazel is looking forward to the collaborative atmosphere that fosters research across disciplines at UW.



Professor Mark Damborg Retires



Please join us for the Celebration of Damborg's Retirement on October 25th, 2007, from 2:30pm – 4:00pm in the EE Building, Room 303.

After 38 years of dedicated service to the department, Professor Mark Damborg is retiring Fall 2007. Damborg received his BSEE from Iowa State University in 1962, and his MS and PhD degrees from the University of Michigan. In 1969, he joined UW EE and was instrumental in building several programs including controls, systems and energy.

Over the course of his tenure, he introduced and taught a wide

range of EE courses, and taught several international short courses in his areas of interest. His research interests involved the analysis and control of dynamic systems with emphasis on power networks, and database applications to computer-aided engineering systems. Among a rather long list of other administrative services, Damborg served as Acting Chair in 1993. In 1994, he became Associate Dean for Research and Facilities and started his major role in the design and construction of a new EE building.

Among his best quality, Professor Damborg is an elegant communicator and graceful debater. His sophisticated thinking often resulted in a variety of viewpoints beyond the obvious ones. These assets are the reasons why he often achieves consensus in most debates.

On the personal side, Professor Damborg is a bird watcher. He enjoys hiding in bushes for hours to have a peek at any creature with wings. He keeps an extensive log of all native and non-native birds. Also, Mark is a precise wine sensor! His sophisticated taste of wine and his capability to study the history of each bottle he drinks make him an excellent wine scientist.

Damborg will remain on our teaching staff for the next few years where he will continue teaching his favorite courses. He will also continue his active role in the Northwest Electric Energy Symposium, of which he is a co-founder.

Professor Babak Parviz Wins TR35 Award



Congratulations to Assistant Professor Babak Parviz for being selected by Technology Review for the TR35. The TR35 salutes an elite group of 35 people under the age of 35 who exemplify the spirit of innovation in business, technology and the arts. Parviz was one of three winners to come from the UW College of Engineering, which also included Assistant Professor Yoshi Kohno and Research Associate Tapan Parikh from the Computer Science and Engineering Department.

Parviz was recognized for his research on biologically inspired self-assembly, which is at the interface of biology and nanotechnology. He has used the method to build flexible plastic circuits, nano-scale electronics and low-cost biological sensors for detecting diseases such as HIV. To read more about Parviz's research, visit his TR35 winner profile:

www.technologyreview.com/TR35/Profile.aspx?Cand=T&TRID=620

Professional Master's Program

(Continued from Page 1)

long planning effort. EE Associate Chairs Jim Ritcey and Sumit Roy, along with Graduate Program Coordinator Professor Lih Lin all played pivotal roles in defining the program's structure. The department also received strong support from Boeing VP Todd Zarfos and Phantom Works Associate Director John Ehrenberg.

Admission to the PMP will be held quarterly, and the deadline for Winter 2008 admissions is November 1, 2007. No GRE is required, but admission is competitive.

An appropriate undergraduate degree is required. More information regarding curriculum, admissions and fees can be found on the department website: <http://extension.washington.edu/pmpee/>

In Memory of Chih-Chi Hsu

Professor Emeritus Chih-Chi Hsu passed away peacefully on July 11, 2007, at the age of 84. Professor Hsu was born in Shanghai, China, and earned his undergraduate degree at Chiao-Tung University. In 1948, he came to the U.S. for graduate study, receiving his master's degree from the University of Michigan and his doctorate from Ohio State University.



Professor Hsu was a dedicated teacher, pioneer and visionary, having co-invented the plans for the original car radio and AM/FM receiver signals in the 1950's while working for Bendix Aviation. In 1958, Hsu became an Assistant Professor at UW EE, and was promoted to full Professor in 1971. He served the department for 35 years, receiving outstanding teaching awards that spanned his career.

He is lovingly survived by his wife Patricia, and daughters Jeanne, Eileen, and Diane Hsu. In honor of Professor Hsu, a scholarship fund has been established in his name. For more information, please call 206-685-9816, or visit:

www.ee.washington.edu/supportee

New Fellowship Award Winners for 2007/2008

NSF Fellowships

Amy Dashiell, Robert Egbert, Nicole Nichols

Microsoft Fellowships

Amarnag Subramanya, Anna Pyayt

Intel Fellowship

Jeffrey Walling, Cherry Wakayama

Grainger Fellowship

Eric Sortomme

07/08 IEEE Solid-State Circuit Society Pre-Doctoral Fellowship

Sudip Shekhar

Department of Energy Computational Sciences Fellowship

Matthew Adams

EE Innovator Fellowship

Sergey Feldman

NDSEG, DOD, SMART Fellowships

Nathan Parrish, J. Quinn Bagley

Student Awards and Best Papers

2007 Barry M. Goldwater Scholarship Competition

Sam Burden, Honorable Mention

Best Paper at IEEE NEMS Conference

Samuel Kim, Ehsan Saeedi

2007 Donald O. Pederson Award

Bo Hu, Best Paper

Best Idea Award for Technology

Leo Lam, UW Business School, Business Plan Competition

Magnus Tate Crawford Memorial Scholarship

The Crawford family always had a tradition of giving, and believed in the importance of giving back to their Alma Mater. In honor of his father, one of the first students of UW EE, the late N. Craig Crawford established the Magnus Tate Crawford Memorial Scholarship Fund in Electrical Engineering.



A graduation photo of Magnus Tate Crawford (1907 Tyee photograph).

Magnus Tate Crawford received his BSEE in 1907, and was the first student to receive the professional Electrical Engineer degree from UW in 1910. In 1913, Magnus T. Crawford became the superintendent of power transmission for Puget Power. He was also a Lecturer at UW.

N. Craig Crawford followed in his father's footsteps and attended the UW as well, receiving a degree in Business Administration in 1951. He was a strong believer in undergraduate student support, and the Magnus T. Crawford Scholarship will continue to allow students the opportunity to receive the education that N. Craig Crawford always valued so much.

Scholarships are critically important to EE, as they allow us to provide educational opportunity to those who may not have otherwise been able to attain an education. Additionally, scholarships help us recruit the most talented students, thus enhancing the department's overall academic excellence.

Senior Design Projects: Undergraduate Research Leads to Successful Patent

For many students, EE 499 provides an opportunity to move theory into practice to see the impact of engineering solutions. Projects vary in their scope and focus, with some students enhancing existing designs, and others attempting to create game-changing innovations.

In 1995, EE alumnus Ed Suominen worked with Professors John Sahr and Murat Azizoglu to develop a radio receiver technology with novel ways of tuning a radio among several channels. Ed created a technology that eased the design and improved the performance of contemporary personal wireless data services such as mobile phones, personal computers and other devices. Ed's invention has proven particularly compatible for use in well-known Bluetooth®-enabled wireless devices.

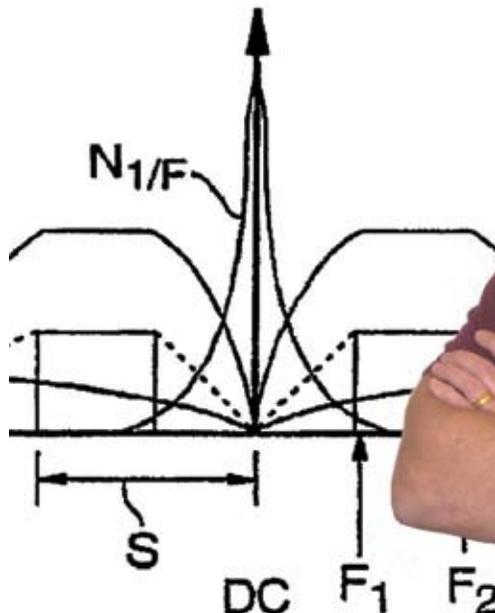
Ed's successful experience in EE 499 was influenced by Professor Sahr, who suggested that he look into having the UW patent his senior project. "I'm grateful to Professor Sahr for the encouragement he gave me throughout the project, and to the people at Washington Research Foundation for their diligence in the patenting and licensing work over the years," said Suominen, who works as a registered patent agent. Sahr remembers sitting with former Professor Murat Azizoglu as they witnessed Ed's

demonstration of a working prototype, which he video-taped in the old EE building.

Ed voluntarily assigned the rights to UW in exchange for a share of licensing income by working with UW TechTransfer. In turn, the UW exclusively licensed the patents to the Washington Research Foundation (WRF). "I've really been pleased with the arrangement, in which I receive an inventor's share of UW's portion of the revenue generated by this technology. I encourage other students to work with the University on ideas from their own work that may be patentable, even where they have no obligation to do so, as was the case with me," said Suominen, who

has worked closely with WRF as a result of the arrangement.

WRF helps Washington State research institutions capture value from their emerging technologies. Early in 2007, an ongoing licensing program conducted by WRF yielded a \$15 million settlement related to the use of Ed's inventions in the field of radio receiver technology and methods of tuning radio channels. WRF has been an outstanding partner to the UW, with gifts and licensing disbursements totaling more than \$150 million. The gifts from WRF have supported the creation of over 100 endowments for chairs, professorships, research fellowships and graduate stipends in science, medicine and engineering.



Alumni on the Radar - EE Class Notes

We would like to hear from you! Check out our Alumni Connections webpage to read a complete list of updates from your former classmates, or to provide an update of your own:

www.ee.washington.edu/people/alumni/index.html

F. Ross Holmstrom, BSEE '58
Cambridge, MA – Holmstrom has been working as a consulting engineer on Sound Transit's Link Light Rail extension from downtown Seattle to and through UW campus, focusing on the mitigation of stray magnetic fields caused by DC propulsion currents and subway cars' perturbation of the earth's magnetic field. He and his wife Lynda (a Sociology Professor at Boston College) travel, ski, sample the cultural offerings of the Boston area, and spend time with their children and grandchildren.

Delmar M. Fadden, MSEE '63
Preston, WA – Fadden retired from Boeing in 1999, and subsequently consults on Avionics and Flight Deck design for a number of companies. Since retirement he and his wife (Sandy Callahan, UW, 1963) have flown their Cirrus Design SR20 to Alaska and multiple trips to the southwest canyon lands and the Colorado plateau. They have also participated in several geologic field trips and explorations in the Yellowstone area. They have two children and two grandchildren.

Gary V. Ball, BSEE '70
Lacey, WA – Alumnus Gary Ball retired from Fluke Corporation in 1998 where he worked as a Corporate Engineering Manager and Manager of Investor Relations. He currently volunteers and teaches investment classes around the country. Ball is married and has two daughters and two grandchildren.



Pictured (L to R): Victor Grinich (EE Alumnus, MSEE 1950), Gordon Moore, Robert Noyce, and Julius Blank.

The late EE Alumnus Victor Grinich along with Gordon Moore, Robert Noyce, and Julius Blank belonged to the group dubbed the "Traitorous Eight" who, upon resignation from Shockley Semiconductor Laboratory, cofounded Fairchild Semiconductor in 1957. In addition to being the author of Moore's Law, Moore and Noyce went on to cofound Intel Corporation.

A special thanks to Mrs. Grinich for sharing this photo with the department. If you have any interesting photos that you would like to share, please email them to:

alumni_relations@ee.washington.edu

Dr. Chris Gulacsik, Ph.D. '81
Medina, WA – Gulacsik has 23 years of experience in optical engineering with The Boeing Company, working on both ground-based and space-based systems. His principle area of expertise is optical scattering, with a focus on low-scatter optical coatings and materials. He is nationally recognized as an expert in specialized laboratory facilities that are used for investigation and characterization of scattered light fields. Presently, he is a Boeing Technical Fellow, working in the Kent Space Center, Kent WA.

Noel Jolivet, MSEE '82
Lake Oswego, OR - Jolivet has been working in the infrared industry for 25 years as an engineering project manager. Currently, she is a project manager for FLIR Systems in Portland, OR in the Advanced Development Group creating proof of concept and prototype systems for evaluation as product candidates. FLIR designs and builds infrared cameras and the Portland facility specializes in gyro-stabilized gimballed platforms for fixed and rotor wing aircraft. Jolivet has been married for 24 years and have two teenage sons.

Jack Tang, MSEE '87
Danville, CA – Tang currently works for Verizon Wireless as the Executive Director of Network for the Northern California/Nevada Region. Based in the bay area, Tang resides

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Alumni on the Radar - EE Class Notes

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there with his wife of 17 years, whom he met at the UW, and together they have a 12 year-old boy and 10 year-old girl.

Scott Amsden, BSEE '00

Federal Way, WA – Currently working in the Power Management Department of Tacoma Power, Amsden is the project lead for the tidal power project in the Tacoma Narrows. This project looks at generating power from the tides in Puget Sound. The current phase takes measurements of the Narrows' currents and models them to determine the feasibility of installing in-stream hydrokinetic turbines to generate electricity. If feasible, tidal power could prove to be a source of green power.

Eddy Ferre, MSEE '03

Mountlake Terrace, WA – After dabbling in the Telecommunication industry, Ferre is now a Simulation Software Engineer in the aerospace industry. He is currently working with Redmond-based Triakis on the verification and valida-

tion of embedded systems for Boeing and Airbus aircrafts. He is also entering his second year of marriage, and proudly has a 3-month old son named Manu.

Melissa Meyer, Ph.D. '06

Dodgeville, MI – Meyer accepted an Assistant Professor position at Michigan Technological University in the fall of 2006. She received a Certificate of Service from the MTU IEEE Chapter for highest honor and in recognition of excellence in service to the undergraduate student body.

Kurt Yazici, BSEE '07

Sammamish, WA – Yazici started working for Microsoft as a Technical Account Manager in their Display Media Operations Group, and works with digital advertising agencies to put their creative display ads on the MSN network. His job involves building and testing their ads and then working with sales teams to ensure the agency's experience working with Microsoft is excellent.

The Integrator

Website: www.ee.washington.edu / Tel: 206.221.5270 / Fax: 206.543.3842

Leung Tsang
Professor & Chair

Hui Liu
*Associate Chair for
Research & Development*

James A. Ritcey
*Associate Chair
for Education*

Laura J. Haas
Publications Manager

Contributors
*David Iyall
Travis Saling*

Send address corrections to:
alumni_relations@ee.washington.edu

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University Of Washington
Department of Electrical Engineering
Paul Allen Center - Room AE 100R
Box 352500
Seattle, Washington 98195-2500