Lifeline After Graduate School:
Tips from Top Achievers

Two IPS graduate students who have launched outstanding careers were recently asked to share their experience with upcoming graduate students and general readers.

Michael Geile, MS ‘96, and Tzyy-Ping Jung, PhD ‘93, were both students in the IPS Lab. Geile is today a principal officer in a successful commercial communications firm he co-founded, and Jung is a staff scientist with a world-renown health research institution.

Q: What good word do you have for today’s EE graduate student?

“Enjoy the journey on your way to the goal,” said Geile, father of three and co-founder of Nova Engineering, Inc. in Cincinnati, a start-up operation in 1991 which presently employs over 50 persons.

“Higher education is a privilege that shouldn’t be taken for granted,” Geile added. “Keep a balance, too. Technical expertise goes only so far without effective human relations.”

“Watch the ‘NIH’ mentality— not invented here!” Geile cautions. “It’s the most powerful negative force I’ve seen. Stay open; listen. Usual...
Cupertino, CA instant messaging firm, by Associate Professor Ashok Krishnamurthy, 43, now on leave of absence from the University for the 2000-2001 academic year.

“My role for ecrio is to start the design center here in Columbus,” Krishnamurthy explained in a memo to his colleagues in the Electrical Engineering Department. “We expect the center to be 10-12 employees strong within a year, and grow to about 30 in two years.”

Aware of the magnetism exerted on his graduate students by the California job market, Dr. Krishnamurthy responded with the local design center concept.

“I wanted to show that OSU and Columbus could participate in high-technology entrepreneurial activities,” he emphasized, “and that it is not only in Silicon Valley, Austin (TX), Boston, and Research Triangle Park (NC) where such things are possible. The ecrio founders looked favorably on Columbus, and President Kirwan’s initiatives encouraged faculty to attract technology to Central Ohio, so it seemed to me to be a good opportunity—a good test case. That’s why I decided to ‘go for it!’”

Beginning in the Autumn 2000 quarter, Krishnamurthy soon established the Columbus Design Center as a part of ecrio’s engineering division.

IPS alumni Mark Hanes and Srinivasa Uphadhya have joined Krishnamurthy at the ecrio Columbus office.

“We now participate in all engineering design activities, and will continue to do that, while expanding the scope of our work,” Krishnamurthy explained. “We were recently involved in a synergistic development, moving several ecrio Web servers used by customers and partners, and relocating them in Columbus at OARnet.” OARnet is now in transition from an Internet provider for universities and non-profit organizations to a provider which also serves private companies.

Instant messaging in the U.S. is beginning to rival the success of e-mail and Web browsers in the mid-1990s, ecrio reports. Over 130 million persons currently use free IM software, and about 80 million use it daily. One single supplier clocks 475 million messages daily. Current ecrio revenue, now $7.6 million a year, is forecasted to grow 250 percent by 2003. The greatest near-term need is for a cost-effective IM connection to wireless networks plus presence detection and availability of real time communication, all combined into Wireless Instant Messaging (WIM).

Dr. Krishnamurthy, a native of Madras, India, served as a consultant to ecrio for about a year before his present assignment. After its startup in 1998, ecrio introduced the Rich Instant Messaging Platform, a device for transmitting text, script or images from and to any wireless or desktop appliance. Strategic partnerships were established with Seiko Instruments and IBM-Japan for distribution of the product in the U.S. and Japan. Another ecrio development is the paper notepad portfolio, easily used for handwritten notes and images automatically captured by a Palm organizer, and transmitted instantly as e-mail directly from modem-equipped handhelds.

The ecrio venture is not the first for Professor Krishnamurthy. Six years ago, he took sabbatical leave to engage in product development projects with a small company.

“I enjoy teaching and research,” Ashok smiled. “You know, the traditional activities. And I plan to continue enjoying them, long-term. At the same time, I also enjoy these more entrepreneurial activities, and I hope to continue that, too.”

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New Students, New Ideas

Ten students recently began graduate research studies in the IPS Lab.

Anand Arunachalam hails from Bangalore University, Bangalore India. Anand’s interests include chess, cricket, reading and formula-1 racing.

Bijoy Bhukania holds the BTech degree from the Indian Institute of Technology, Kharagpur. Bijoy is a University Fellowship recipient.

Marie-Hélène Bourles is a second year MS student from Supélec, Cesson-Sevigne Cedex, France. Marie-Hélène enjoys piano, reading, jogging and cinema.

Tansu Demirbilek is a graduate of Middle East Technical Institute, Ankara, Turkey.

Oguz Demirci, from Bilkent University, Ankara, Turkey, enjoys soccer, movies and traveling.

David Hamon is a second year student from Supélec, Cesson-Sevigne Cedex, France. David’s past-times include saxophone, jogging, swimming and cinema.

Anurag Jain received the BE degree from Veermata Jijabai Technological Institute, M antuga, Mumbay, India. Anurag enjoys swimming and playing rock guitar.

Dushyanth Krishnamurthy, from Madras University, India, and Robert Patterson, an alumnus of Lafayette College, Easton, PA, are conducting research on acoustic arrays.

Adam Margetts received the BS degree from Utah State University, Logan. Adam says pursuit of his hobby, mountaineering, is a challenge in Ohio, but he enjoys biking and being with his wife, Ruth.

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Eight Receive MS

Eight IPS students were conferred the degree of Master of Science during Autumn and Winter Quarters.

Wanshi Chen and Junsheng Han are both now at Ericsson, San Diego, CA. Wanshi’s thesis is entitled, “Adaptive MMSE Receiver for DS/CDMA Communications in Fast Fading Environments.” Junsheng defended his thesis, “On the D ecoding St ructure of M ultiple T urbo C odes.”

Kang Wang, completing the trio of IPS graduates heading to San Diego, completed his thesis, “Synchronization and D emodulation Algorithms for Continuous Phase Modulation.” Kang is now a PhD candidate at UCSD.

Jifeng Geng, who is continuing PhD studies at University of Southern California, defended his thesis, “Optimal Space-Time Block Codes for CDMA Systems.”

Yueheng Sun, now at Philips in San Jose, CA, completed his thesis “Design and Implementation of Trellis Code Demodulators.”

Srinivas Upadhya, whose thesis is entitled “A Lane Detection System for Intelligent Vehicle Applications,” is presently a software engineer at the Columbus office of ecrio, Inc., a California-based advanced wireless messaging company.

Yi Zhao is continuing studies as a PhD candidate in IPS, and Weijun Zhu is now a research engineer in the IPS Wireless Laboratory.

“Ubli” Mitra Joins USC; Californian Returns

Ubashi “Ubli” Mitra, Associate Professor of Electrical Engineering, has accepted a faculty position at the University of Southern California, effective January.

A native Californian, Ubli received her BS and MS degrees from the University of California, Berkeley, and the PhD degree at Princeton. She joined the OSU Electrical Engineering faculty in 1994 and is past recipient of the MacQuigg Teaching Award, the Lumley Research Award and the NSF CAREER award in 1996.

Dr. Mitra was raised in Santa Barbara and will be returning “home” to the greater Los Angeles area. Her Rancho Park location is within 90 minutes of her parents’ home, and within a circle of former classmates and childhood friends.

Despite the promise of “homecoming” and a new career challenge, Dr. Mitra admits that she will miss the “collegiality found in the IPS Lab.” Calling this experience “the most precious thing I had at OSU,” she reflected, “(it was) a kind of friendship and cooperation I have never seen anywhere else. I hope to continue cooperating with my IPS colleagues well into the future.”

As the child of teachers, she was early attracted to the academic life, and the “opportunity to reinvent yourself so many times and learn so many things. I became an electrical engineer,” she reflected, “because it enables me to work on problems that have a greater impact while still playing with math. I also find working with students really fulfilling.”

An outdoor enthusiast, Ubli and her husband, Dr. Maarten A. Rutgers, a physicist, look forward to more hiking adventures in California mountain and canyon lands.
Liu Awarded PhD

Youjian Liu received the PhD degree March 19 during Ohio State's 355th Commencement ceremony. Research results from Dr. Liu's dissertation, "An Algebraic Space-Time Coding Theory and Its Applications," have been accepted to IEEE Journal on Selected Area of Communications, ICC 2001, and ISIT 2001. Since January, he has been Member of Technical Staff at Lucent Technologies, Whippany, NJ, where he was a student intern in 1999. Dr. Liu holds the M.S. degree in Electronics from Beijing University, China, and the M.S. degree in electrical engineering from Ohio State University. Youjian and his wife, Hong, reside in Randolph, NJ.

Seminar Series Hosts Distinguished Visitors

The 2000-2001 IPS Seminar Series and the Interdisciplinary Research Seminar Series on Statistical Signal and Image Processing are host to fourteen distinguished visiting speakers. The Series, supported by the Departments of Electrical Engineering and Statistics and the OSU Office of Research, seeks to foster collaborative research in statistics and its application to problems in signal and image processing and related sciences.

Speakers on Tuesdays in May will be: Professor Stuart Geman, Brown University; Dr. Raul Casas, NxtWave Communications; Professor Anil K. Jain, Michigan State University; Professor Akbar Sayeed, University of Wisconsin; and, Professor Thomas Kailath, Stanford University.


In 2001 the series has hosted four presentations: Professor Tryphon Georgiou, University of Minnesota, "Spectral Analysis, State Covariances, and Analytic Interpolation;" Professor Michael Miller, Johns Hopkins University, "Image Understanding via Deformable Templates, Diffeomorphisms, Metrics and Geodesics;" Professor Donald Brown, Worcester Polytechnic, "Performance Analysis of Parallel Interference Cancellation for CDMA Multi-user Communication Systems;" Professor Joachim Rosenthal, University of Notre Dame, "Three Challenges by Claude Shannon."

A complete seminar schedule and abstracts are available on-line at: eewww.eng.ohio-state.edu/ips

Internet access to IPS is available at http://eewww.eng.ohio-state.edu/ips
In Print


In Press


In Review


D. K. Aktas and M. P. Fitz, "Computing the Distance Spectrum of Space-Time Trellis Codes," WCNC 2000, Chicago, IL, September.


R. Rajagopal and L. Potter, "FIR Inverse Filters: IMM Systems in Several Variables," Ninth DSP Workshop, Hunt, TX, October.


G. V. Siwamogatham and M. P. Fitz, "Robust Space-Time Coding for Correlated Rayleigh Fading Channels," 38th Annual Allerton Conference, Monticello, IL, October.


