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ACADEMIC EMPLOYMENT

Administrative Director of Computer Engineering, City College, Fall 2004–present

- Oversee and improve curriculum (quality, prerequisites, scheduling).
- Produce and manage information (curricula, conflict-free schedules, circulars, bulletin, web).
- Organize faculty advising of undergraduates.
- Monitor course content and communicate with course coordinators.
- Advise all majors, intended majors, and transfer students.
- Do quality control: exit interviews of graduates; data collection in surveys of graduates and of students in courses.
- Help with department’s strategic plan.
- Advise ACM club.
- Coordinated the first accreditation of the Computer Engineering program, from the phase of first contact with visiting evaluator on, including solicitation of course information from faculty, preparation of course displays, coordinating the visit, arranging meetings with students and faculty, being liaison with the evaluator, and ensuring delivery of information after the visit.

Assistant Professor, City College, Fall 2001–Spring 2004,
Substitute Assistant Professor, City College, Spring 2001,
Substitute Instructor, City College, Fall 1998–Fall 2000

- Research collaboration with other CCNY machine vision faculty; multiple grant proposals in 2003.
- Contribute to other collaborative grant proposals.
- Refereed PSC/CUNY grants.
- Served on doctoral exam and proposal committees.
- Curriculum Committee, since June 2000.
- Faculty advisor for student ACM club since Spring 2002; coach for ACM programming contest teams since 2002.
- Advise student projects and independent study; includes Alliance for Minority Participation and Mellon Minority Fellowship mentoring.
- Course coordinator for Data Structures (C.Sc. 21200).
- Coordinated undergrad Computer Vision (C.Sc. 47100); introduced it to the permanent curriculum.
- Teach graduate Computer Vision (C.Sc. I1896).
Students most recently evaluated course and instructor as 4.5 out of 5.
- Taught New Student Seminar (NSS). Received award for service.
- Voted one of the most popular instructors by seniors, Fall 1999.
- Deputy undergraduate chair, Computer Science, 1998 to Sep. 2000:
 - * Liaison with Engineering Undergraduate dean; advised on past major rules.
 - * Curriculum advisory activities; produced class/requirements documents; kept records on changes.
 - * Spoke and coordinated for orientation and recruitment.

- * Coordinated undergraduate advising scheduling and content.
- * Handled course cancellations and student cases.
- * Represented department at internal and external School of Engineering meetings.
- Served on search committee for SOE head of computing systems.
- Chaired search committee for computer system administrators in C.Sc. and C.E./M.E.

PUBLICATIONS

“Nonparametric Training of Snakes to Find Indistinct Boundaries,” by Samuel D. Fenster, Chun-Bin Gary Kuo and John R. Kender. *Workshop on Mathematical Methods in Biomedical Image Analysis*, pp. 139–144. At IEEE conference on Computer Vision and Pattern Recognition, Dec. 2001, Kauai, Hawaii (oral presentation).

“A Comparative Technique and Performance Results on Novel Learned Snakes in Two Dissimilar Medical Domains,” by Samuel D. Fenster and John R. Kender. *IEEE Computer Vision and Pattern Recognition*, v. II pp. 706–713. June 2000, Hilton Head (oral presentation, 1 in 7 accepted).

“Training Snakes to Find Object Boundaries and Evaluating Them,” by Samuel D. Fenster and John R. Kender. *Proc. SPIE* v. 4050, pp. 245–258, Automatic Target Recognition X, Aug. 2000 (oral presentation at SPIE Aerosense conference, April 2000, Orlando).

“Sectored Snakes: Evaluating Learned-Energy Segmentations,” by Samuel D. Fenster and John R. Kender. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, v. 23 #9 pp. 1028–1034, Sep. 2001. Originally appeared in *Proc. International Conference on Computer Vision*, pp. 420–426. Jan. 1998, Bombay (27% acceptance rate). Also in *Proc. DARPA Image Understanding Workshop*, pp. 1193–1199. Nov. 1998, Monterey, ISBN 1-55860-583-5.

“Physics in a Fantasy World vs. Robust Statistical Estimation,” by Terrance E. Boulton, Samuel D. Fenster and Thomas O’Donnell. *Proc. NSF/ARPA Workshop on 3-D Object Representation for Computer Vision*, pp. 277–296, Dec. 1994. Archived in *Lecture Notes in Computer Science 1995*, v. 994: *Object Representation in Computer Vision*, Springer.

“Reinterpreting Physically-Motivated Modeling,” by Terrance E. Boulton, Samuel D. Fenster and Thomas O’Donnell. *Proc. ARPA Image Understanding Workshop*, v. II pp. 1375–1390. Nov. 1994, Monterey. This is an extended version of the above paper.

“Dynamic Attributes, Code Generation and the IUE,” by Terrance E. Boulton, Samuel D. Fenster and Jason W. Kim. *Proc. ARPA Image Understanding Workshop*, v. I pp. 405–422. Nov. 1994, Monterey.

“SALT: A Laboratory T.I.L.,” by Samuel D. Fenster and Lincoln E. Ford. *BYTE*, v. 10 #6 pp. 147–164, June 1985.

GRANTS

“Exploring Learned Sectored Snakes for Automatic Organ Boundary Detection” (J. Kender, P.I.), Center for Advanced Technology (CAT), administered by the N.Y. State Science & Technology Foundation and Columbia University, 1998–1999, \$70,000. Renewed for 2000–2001, at \$70,000.

PATENTS

“Determination of Image Shapes Using Training and Sectoring,” U.S. Patent 6,111,983, August 29, 2000, Samuel D. Fenster and John R. Kender. Claims: spatially varying objective functions in a deformable shape model; a stochastic method for determining objective function suitability.

EDUCATION

Ph.D., Department of Computer Science, Columbia University, 2000.

- **Thesis:** “Training, Evaluation and Spatial Adaptation in Deformable Models.” Selected as Columbia University’s 2000 entry for ACM’s Best Dissertation award.
- **Advisors:** John Kender; former advisor, Terry Boult (now at Lehigh University).

M.S., Comp. Sci., School of Engineering and Applied Science, Columbia University, 1990. GPA 3.90.
B.A., Comp. Sci., Columbia College, Columbia University, 1987.

INVITED TALKS

“Finding Shapes,” CUNY-wide interdisciplinary faculty senate conference “Pleasures of the Mind.” Nov. 1, 2002.

PRIOR TEACHING

Best Ph.D. TA/Instructor Award, C.S. Dept., Columbia Univ. Cowinner for 1994-95, of 12 eligible.

PROFESSIONAL EMPLOYMENT

Research Assistant, Medical Physics Computer Services, Memorial Sloan-Kettering Cancer Center, May 1994–Sep. 1994. Created C++ deformable model implementation to segment abdominal CT data. Tested system on patient data.

Programmer/Analyst, Electronic Joint Venture (E.J.V.) (a financial services software house supported by a consortium of seven major Wall Street firms), *Feb. 1991–Sep. 1991.* Designed, coded and tested flexible C/C++ programmer’s interface for binomial option pricing model; implemented routines to do standard financial calculations; formulated improved rules for date arithmetic.

Programmer, Fixed Income Strategies, Shearson Lehman, Jan. 1990–Feb. 1991. Wrote, validated and maintained C software for database of securities and prices.

Programmer/Analyst, Derivative Products Research, Shearson Lehman, May 1988–Jan. 1990. Designed, coded, validated and maintained stochastic mortgage pricing model and user interface in C, on both Unix and VM/CMS. Provided support and enhancements to analysts and traders.

Programmer/Analyst, Portfolio Strategies, E.F. Hutton and Shearson Lehman, Feb. 1987–May 1988. Designed, coded and validated treasury strip calculation and database system and special portfolio assessments.

Programmer, Cardiology, University of Chicago Hospitals, summers, 1984–1986. Designed, coded in assembler and tested programmable system to collect, analyze and display laboratory data and control high-speed experiments in real time using an IBM PC. Developed FORTH-like language interfaced to BASIC for this purpose. With cardiologist Lincoln E. Ford, marketed and sold about 150 copies around the world.

OTHER TECHNICAL CONTRIBUTIONS

Snake Training and Training Evaluation System (STaTES): Conceived, designed and wrote C++ image segmentation package using trained deformable models. Includes graphical user interface, interchangeable objective functions, and tools to train and evaluate them under Unix.

Dynamic attributes: Conceived and created initial design and implementation of the DARPA Image Understanding Environment’s (IUE’s) system for storing the data of its C++ class objects. Allows run-time specification of inherited defaults, consequent space savings, context-dependent values and space/time/flexibility tradeoffs. Work done for Terry Boult, who took over development.

PRIOR ACADEMIC SERVICE

Reviewed papers for the IEEE Conference on Computer Vision and Pattern Recognition.

Last updated October, 2005.