

William Arms

University Activities

- Ph.D. students graduated
 - Pavel Dmitriev
- Grants
 - NSF. Computer Science Research Using the Cornell Web Lab to Study Social and Informational Processes on the Web

Professional Activities

- American Bar Association. Committee on the Status and Future of Federal e-Rulemaking American Law Institute, Adviser
- Principles of the Law of Software Contracts
- MIT Press, series editor for Digital Libraries and Electronic Publishing
- Joint Conference on Digital Libraries, program committee
- European Conference on Digital Libraries, program committee

Publications

- William Y. Arms. "Cyberscholarship: High Performance Computing meets Digital Libraries", Journal of Electronic Publishing. January 2008.
- William Y. Arms and Ronald L. Larsen, co-chairs. "The future of scholarly communication: building the infrastructure for cyberscholarship." NSF/JISC workshop, Phoenix, Arizona, April 17 to 19, 2007. <http://www.sis.pitt.edu/~repwkschop/NSF-JISC-report.pdf>.

Lectures

- Cyberscholarship: Supercomputing meets Digital Libraries, Belver Griffith Memorial Lecture, Drexel University, December 2007.
- Building the infrastructure for Cyberscholarship. Sara Fine Institute and the Digital Libraries Colloquium Series, University of Pittsburgh, December 2007

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Professional Activities

Program Committees

- SIGGRAPH Asia 08
- Eurographics 08
- Interactive 3D Graphics (I3D 08)
- Eurographics Symposium on Rendering (EGSR) 08
- Pacific Graphics (PG) 08
- Interactive Ray Tracing (IRT) 08
- Symposium on Point-Based Graphics (PBG) 08

Associate Editor, Transactions on Visualization and Graphics (TVCG)

Steering Committee Member, Eurographics Symposium on Rendering

Publications

- Ganesh Ramanarayanan, Kavita Bala, James Ferwerda. Perception of Complex Aggregates In ACM SIGGRAPH '08 (Journal: Transaction on Graphics) August 2008, Los Angeles CA
- Milos Hasan, Edgar Velazquez-Armendariz, Fabio Pellacini, Kavita Bala. Tensor Sampling for Rendering Many-Light Animations, Eurographics Symposium on Rendering (EGSR 2008), Computer Graphics Forum, June 2008, Sarajevo, Bosnia-Herzegovina
- Milind Kulkarni, Keshav Pingali, Ganesh Ramanarayanan, Bruce Walter, Kavita Bala, Paul Chew. Scheduling Strategies for Optimistic Parallel Execution of Irregular Programs, Symposium on Parallelism in Algorithms and Architectures (SPAA '08) June 2008, Munich, Germany
- Adam Arbree, Bruce Walter, Kavita Bala. Single-pass Scalable Subsurface Rendering with Lightcuts, In Eurographics '08, (Journal: Computer Graphics Forum) April 2008, Crete
- Ganesh Ramanarayanan, James Ferwerda, Bruce Walter, Kavita Bala. Dimensionality of Visual Complexity in Computer Graphics Scenes, SPIE Human Vision and Electronic Imaging (HVEI) '08 Jan 2008, San Jose CA
- Milind Kulkarni, Keshav Pingali, Ganesh Ramanarayanan, Bruce Walter, Kavita Bala, Paul Chew. Optimistic Parallelism Benefits from Data Partitioning, Architectural Support for Programming Languages and Operating Systems (ASPLOS) '08 Mar 2008, Seattle
- Ganesh Ramanarayanan, James Ferwerda, Bruce Walter, Kavita Bala. Visual Equivalence: Towards a new standard for Image Fidelity, SIGGRAPH 2007, (Journal: Transactions on Graphics) August 2007, San Diego CA
- Milos Hasan, Fabio Pellacini, Kavita Bala. Matrix Row-Column Sampling for the Many Lights Problem, SIGGRAPH 2007, (Journal: Transactions on Graphics) August 2007, San Diego MA

Lectures

- *When is a rendered image good enough?: Visual equivalence, a new standard of image fidelity for scalable rendering*, Microsoft Research, Graphics and Vision Colloquium, Nov 2007.
- *Kalachakra Mandala: Constructing a 3D Model Johnson Museum*, Tibet Lecture Series, Oct 2007.
- *Scalable realistic rendering of complex scenes*, Cornell University, Computer Science Department Colloquium, Sep 2007.

Students Graduated

- Ganesh Ramanarayanan (PhD: 2008, Visual Equivalence: A New Standard of Image Fidelity for Computer Graphics)

Ken Birman

University Activities, including PhD students graduated

- Graduated Students:
 - Mahesh Balakrishnan
 - Krzysztof Ostrowski
- Chairman, CIS Building Committee

Professional Activities

- 5th IEEE International Conference on Autonomic Computing (ICAC 2008)
- Second IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO 2008)
- 2nd International Conference on Distributed Event-Based Systems (DEBS 2008)
- International Conference on Distributed Computing Systems (ICDCS 2008)
- Symposium on Networked Systems Design and Implementation (NSDI 2008)

Publications

- Using Live Distributed Objects for Office Automation. Jong Hoon Ahnn, Ken Birman, Krzysztof Ostrowski, Robbert van Renesse. In proceedings of the ACM/IFIP/USENIX 9th International Middleware Conference. Leuven, Belgium. December 2008.
- Dr. Multicast: Rx for Datacenter Communication Scalability. Ymir Vigfusson, Hussam Abu-Libdeh, Mahesh Balakrishnan, Ken Birman, Yoav Tock. HotNets VII: Seventh ACM Workshop on Hot Topics in Networks. October 6-7, 2008. Calgary, Canada.
- Bosco: One-Step Byzantine Asynchronous Consensus. Yee Jiun Song, Robbert van Renesse. The 22nd International Symposium on Distributed Computing (DISC 2008), Arcachon, France, September, 2008.
- Sliver: A Fast Distributed Slicing Algorithm (Brief Announcement). Vincent Gramoli, Ymir Vigfusson, Ken Birman, Anne-Marie Kermarrec, Robbert van Renesse. Principles of Distributed Computing (PODC). Toronto, Canada. August 2008.
- QuickSilver Scalable Multicast (QSM). Krzysztof Ostrowski, Ken Birman, Danny Dolev. 7th IEEE International Symposium on Network Computing and Applications (IEEE NCA 2008). Cambridge, MA. July 2008.
- Programming with Live Distributed Objects. Krzysztof Ostrowski, Ken Birman, Danny Dolev, and Jong Hoon Ahnn. In Proceedings of the 22nd European Conference on Object-Oriented Programming (ECOOP 2008). Cyprus. July 2008. J. Vitek, Ed. Lecture Notes In Computer Science, vol. 5142. Springer-Verlag, Berlin, Heidelberg, 463-489.
- Supporting Scalability and Adaptability via ADaptive Middleware And Network Transports (ADAMANT) Joe Hoffert, Douglas Schmidt, Mahesh Balakrishnan, Ken Birman. OMG Workshop on Distributed Object Computing for Real-time and Embedded Systems. July 2008, Washington DC.
- SENSTRAC: Scalable Querying of SENSOR Networks from Mobile Platforms Using TRACKing-Style Queries. Stefan Pleisch and Ken Birman. International Journal of Sensor Networks. Volume 3, Issue 4. Pages 266-280. June 2008.
- Tempest: Soft State Replication in the Service Tier. Tudor Marian, Mahesh Balakrishnan, Ken Birman, Robbert van Renesse. In Proceedings of the 38th Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN-DCCS 2008), June 2008, Anchorage, AL.
- Maelstrom: Transparent Error Correction for Lambda Networks. Mahesh Balakrishnan, Tudor Marian, Ken Birman, Hakim Weatherspoon, Einar Vollset. *USENIX Symposium on Networked System Design and Implementation (NSDI 08)*. April 2008.

- Tempest: Soft State Replication in the Service Tier. Tudor Marian, Mahesh Balakrishnan, Ken Birman, Robbert van Renesse. Accepted to *DSN-DCSS 2008: 38th Annual IEEE/IFIP International Conference on Dependable Systems and Networks*, Anchorage, AL. June 24-27, 2008
- Programming with Live Distributed Objects. Krzysztof Ostrowski, Ken Birman, Danny Dolev, and Jong Hoon Ahnn. *22nd European Conference on Object-Oriented Programming (ECOOP 2008)*. Cyprus. July 2008.
- QuickSilver Scalable Multicast (QSM). Krzysztof Ostrowski, Ken Birman, Danny Dolev. *7th IEEE International Symposium on Network Computing and Applications (IEEE NCA 2008)*. Cambridge, MA. July 2008.
- Sliver: A Fast Distributed Slicing Algorithm. Vincent Gramoli, Ymir Vigfusson, Ken Birman, Anne-Marie Kermarrec, Robbert van Renesse. *Technical Report*. December 2007
- Declarative Reliable Multi-Party Protocols Krzysztof Ostrowski, Ken Birman, Danny Dolev. *Cornell University Technical Report (TR2007-2088)*. April, 2007.
- Implementing High-Performance Multicast in a Managed Environment Krzysztof Ostrowski, Ken Birman, Danny Dolev. *Cornell University Technical Report (TR2007-2088)*. April, 2007.
- Exploiting Gossip for Self-Management in Scalable Event Notification Systems. Ken Birman, Anne-Marie Kermarrec, Krzysztof Ostrowski, Marin Bertier, Danny Dolev, Robbert Van Renesse. *Distributed Event Processing Systems and Architecture Workshop (DEPSA)*. June 2007.
- Active and Passive Techniques for Group Size Estimation in Large-Scale and Dynamic Distributed Systems. Dionysios Kostoulas, Dimitrios Psaltoulis, Indranil Gupta, Ken Birman, Al Demers. To Appear in the *Journal of Systems and Software*, 2007.
- Extensible Architecture for High-Performance, Scalable, Reliable Publish-Subscribe Eventing and Notification. Krzysztof Ostrowski, Ken Birman, and Danny Dolev. To Appear in the *International Journal of Web Services Research*. Volume 4, Number 4, Pgs 15-58. October-December 2007.

Lectures

- Keynote Speaker, 5th IEEE International Conference on Autonomic Computing, Chicago, IL. June 2008.
- Invited Speaker, Hebrew University. January 2008.
- Wunsch Distinguished Lecture, Technion University. January 2008.
- Distinguished Lecture, CISCO Systems, Technology Visionary Distinguished Lecture, December 2007.

Claire Cardie

University Activities

- ON SABBATICAL during 2007-2008

Professional Activities

- Board Member, Executive Committee of the Association for Computational Linguistics
- Associate Editor, Journal of Artificial Intelligence Research
- Action Editor, Journal of Machine Learning Research
- Editorial Board Member, Computational Linguistics
- Editorial Board Member, Machine Learning
- Editorial Board Member, Journal of Information Technology & Politics
- Steering Committee Member, SIGNLL, Special Interest Group of the Association for Computational Linguistics for Natural Language Learning
- Executive Board Member, SIGDAT, Special Interest Group of the Association for Computational Linguistics for Linguistic Data and Corpus-based approaches to NLP
- 24th National Conference on Artificial Intelligence (AAAI-2007) (senior program committee), 2007
- Reviewer, National Science Foundation, CISE proposals, Winter 2008 and Spring 2008
- Reviewer, Hercules Foundation, Large-Scale Research Infrastructure Program, Belgium, 2008
- Reviewer, State of Indiana 21st Century Fund proposals, Summer 2007
- Jury Member, Doctoral Dissertation Committee, Laurianne Sitbon, Université d'Avignon, graduated 2007
- External Member, Doctoral Dissertation Committee, Elena Filatova, Columbia University, graduated 2007

Publications

- Annotating Topics of Opinions. Veselin Stoyanov and Claire Cardie. Proceedings of the Sixth International Conference on Language Resources and Evaluation (LREC 2008), Marrakech, Morocco, 2008.
- An eRulemaking Corpus: Identifying Substantive Issues in Public Comments. Claire Cardie, Cynthia Farina, Matt Rawding, Adil Aijaz. Proceedings of the Sixth International Conference on Language Resources and Evaluation (LREC 2008), Marrakech, Morocco, 2008.
- A Study in Rule-Specific Issue Categorization for e-Rulemaking. Claire Cardie, Cynthia Farina, Adil Aijaz, Matt Rawding, Stephen Purpura. 9th Annual International Conference on Digital Government Research, Montreal, Canada, 2008.
- Active Learning for e-Rulemaking: Public Comment Categorization. Stephen Purpura, Claire Cardie, Jesse Simons. 9th Annual International Conference on Digital Government Research, Montreal, Canada, 2008.

Lectures

- "'In my opinion ...': Extracting Content from Subjective Language", Invited Plenary Talk, Les Conférences TALN (Traitement Automatique des Langues Naturelles) et JEP (Journées d'Etudes sur la Parole), Avignon, France, June 2008.

- "An eRulemaking Corpus: Identifying Substantive Issues in Public Comments", Sixth International Conference on Language Resources and Evaluation (LREC 2008), Marrakech, Morocco, June 2008.
- "Topic Identification for Fine-Grained Opinion Analysis", Université d'Avignon, France, May 2008.
- "The Jodange 'Top of Mind' Service", with Larry Levy, DEMO 08, Palm Desert, January 2008.
- "Automatic Analysis of Subjective Language", Laboratoire Parole et Langage, Université de Provence, France, October 2007.
- "Opinions in Text", Laboratoire Parole et Langage, Université de Provence, France, August 2007.

Awards/Honors

- Elected to Executive Council, Association for the Advancement of Artificial Intelligence (AAAI).

Rich Caruana

University Activities

- Graduating Students
 - o Alexandru Niculescu-Mizil. Thesis: Multitask Bayesian Networks Structure Learning
 - o Daria Sorokina. Thesis: Modeling Additive Structure and Detecting Interactions with Groves of Trees

Publications

- E. Ipek, S. McKee, K. Singh, R. Caruana, B. Supinski, and M. Schulz, "Efficient Architectural Design Space Exploration via Predictive Modeling," ACM Transactions on Architecture and Code Optimization (TACO), Vol. 4, No. 4 January 2008, pp.1-33.
- K. Singh, E. Ipek, S.A. McKee, B.R. de Supinski, M. Schulz, R. Caruana, "Predicting Parallel Application Performance via Machine Learning." Concurrency and Computation: Practice and Experience (CCPE), Vol. 19, No. 13, 10 December 2007, pp. 2219-2235.
- W.M. Hochachka, R. Caruana, D. Fink, S. Kelling, A. Munson, M. Riedewald, and D. Sorokina, "Data Mining for Discovery of Pattern and Process in Ecological Systems," Journal of Wildlife Management, Vol. 71, No. 7, pp. 2427-2437, 2007.
- N. Nguyen and R. Caruana, "Improving Classification with Pairwise Constraints: A Margin-based Approach." To appear in The Proceedings of The European Conference on Machine Learning and Practice of Knowledge Discovery in Databases (ECML PKDD), September 2008.
- N. Nguyen and R. Caruana, "Classification with Partial Labels." To appear in The Proceedings of the 14th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), August 2008.
- R. Caruana, A. N. Karaampatzakis, and Y. Yessenalina, "An Empirical Evaluation of Supervised Learning in High Dimensions." To appear in The Proceedings of the International Conference on Machine Learning (ICML), July 2008.
- D. Sorokina, R. Caruana, M. Riedewald, and D. Fink, "Detecting Statistical Interactions with Additive Groves of Trees." To appear in The Proceedings of the International Conference on Machine Learning (ICML), July 2008.
- E. Ipek, O. Mutlu, J. Martinez, and R. Caruana, "Self-Optimizing Memory Controllers: A Reinforcement Learning Approach." To appear in The Proceedings of The 35th International Symposium on Computer Architecture (ISCA), June 2008.
- N. Nguyen and R. Caruana, "Consensus Clusterings." The Proceedings of the Seventh International Conference on Data Mining (ICDM), October 2007.
- D. Sorokina, R. Caruana, and M. Riedewald, "Additive Groves of Regression Trees." The Proceedings of the European Conference on Machine Learning (ECML), September 2007 (Best Student Paper Award).
- D. Skalak, A. Niculescu-Mizil, and R. Caruana, "Classifier Loss Under Metric Uncertainty." The Proceedings of the European Conference on Machine Learning (ECML), September 2007.

Awards

- Best Student Paper Award at the European Conference on Machine Learning (ECML), 2007 for D. Sorokina, R. Caruana, and M. Riedewald, Additive Groves of Regression Trees.
- Invited Speaker, NIPS 2007 Workshop on Overcoming Computational Bottlenecks in Machine Learning, December 2007.
- Invited Speaker, AAAI Workshop on Evaluation Methods for Machine Learning, July 2007.

Al Demers

Professional Activities

- Program committee, ACM VLDB conference, 2008

Publications

- SGL: A Scalable Language for Data-Driven Games (demo paper). *SIGMOD 2008*, Vancouver, Canada, June 2008 (with R. Albright, J. Gehrke, N. Gupta, H. Lee, R. Kelly, G. Sadowski, B. Sowell and W. White).
- Declarative Processing for computer Games. *SANDBOX SIGGRAPH Video Game Symposium*, August 2008 (with W. White, B. Sowell and J. Gehrke).
- Database Research Opportunities in Computer Games. *ACM SIGMOD Record*, 36:2, September 2007 (with W. White, C. Koch, N. Gupta and J. Gehrke).

Lectures

- Declarative, Domain-Specific Languages: Elegant Simplicity or a Hammer in Search of a Nail? (invited panel discussion). *ICDE 2008*, Cancun, Mexico, April 2008.

Kit-Yee Daisy Fan

University Activities

- College of Engineering Admissions Committee
- Faculty Fellow--develop academic and social programs for campus residential communities
- Faculty panels and hosting events for Engineering admission and diversity initiatives
- Faculty panel for University Admissions

Professional Activities

- Treasurer, American Society for Engineering Education (ASEE) St. Lawrence Section
- Session Co-Chair, ASEE Zone I Conference Student Paper Competition (March 2008)
- Participant,
 - o SIGCSE Technical Symposium (March 2008)
 - o ASEE St. Lawrence Section Conference (October 2007)
 - o ASEE Annual Conference and Exposition (June 2007)

Publications

- "A New Start: Innovative Introductory AI-Centered Courses at Cornell," presented at the AAAI Symposium on Using AI to Motivate Greater Participation in Computer Science, Palo Alto, CA (March 2008). With Eric Breck, David Easley, Jon Kleinberg, Lillian Lee, Jennifer Wofford, and Ramin Zabih.

Awards

- The Zellman Warhaft Commitment to Diversity Award (Cornell Engineering)

Faculty Innovation in Teaching Grant (Cornell). With David Gries.

Johannes Gehrke

University Activities

- On sabbatical

Professional Activities

- 13th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD 2007). San Jose, CA, August 2007. Program Committee.
- 27th ACM SIGMOD International Conference on Management of Data (SIGMOD 2008). Vancouver, Canada, June 2008. Program Committee.
- Adjunct Associate Professor, University of Tromsø.
- Chief Scientist, Fast Search and Transfer

Publications

- David Martin, Johannes Gehrke, and Joseph Halpern. Toward Expressive and Scalable Sponsored Search Auctions. In *Proceedings of the 23rd IEEE International Conference on Data Engineering (ICDE 2008)*. Cancun, Mexico, April 2008.
- Ashwin Machanavajjhala, Daniel Kifer, John Abowd, Johannes Gehrke, and Lars Vilhuber. Privacy: From Theory to Practice on the Map. In *Proceedings of the 23rd IEEE International Conference on Data Engineering (ICDE 2008)*. Cancun, Mexico, April 2008.
- Robert Albright, Alan Demers, Johannes Gehrke, Nitin Gupta, Hooyeon Lee, Rick Keilty, Gregory Sadowski, Ben Sowell, and Walker White. SGL: A Scalable Language for Data-Driven Games. (Demonstrations Paper.) In *Proceedings of the 2008 ACM SIGMOD Conference on Management of Data (SIGMOD 2008)*. Vancouver, Canada, June 2008.
- Nitin Gupta, Alan Demers, and Johannes Gehrke. SEMMO: A Scalable Engine for Massively Multiplayer Online Games. (Demonstrations Paper.) In *Proceedings of the 2008 ACM SIGMOD Conference on Management of Data (SIGMOD 2008)*. Vancouver, Canada, June 2008.
- Walker M. White, Christoph Koch, Nitin Gupta, Johannes Gehrke, Alan J. Demers: Database research opportunities in computer games. *SIGMOD Record* 36(3): 7-13 (2007)
- Christoph Koch, Johannes Gehrke, Minos N. Garofalakis, Divesh Srivastava, Karl Aberer, Anand Deshpande, Daniela Florescu, Chee Yong Chan, Venkatesh Ganti, Carl-Christian Kanne, Wolfgang Klas, Erich J. Neuhold: Proceedings of the 33rd International Conference on Very Large Data Bases, University of Vienna, Austria, September 23-27, 2007 ACM 2007
- Samuel Madden, Johannes Gehrke: Declarative, Domain-Specific Languages - Elegant Simplicity or a Hammer in Search of a Nail? *ICDE 2008*: 7

Lectures

- Scaling Games to Epic Proportions. Colloquium at Microsoft Research. Seattle, WA, September 2007.
- Scaling Games to Epic Proportions. Colloquium at Yahoo! Research. Santa Clara, CA, September 2007.
- Scaling Games to Epic Proportions. Colloquium at the Department of Computer Science, ETH Zurich. Zurich, Switzerland, March 2008.
- Scaling Games to Epic Proportions. Colloquium at the Ecole Polytechnique Fédérale de Lausanne. Lausanne, Switzerland, March 2008.

- Scaling Games to Epic Proportions. Colloquium at the Max Planck Institute for Software Systems. Saarbruecken, Germany, March 2008.

Awards, honors, and grants you got this year

- New York State Foundation for Science, Technology, and Innovation. Faculty Development Award, 2007

Donald Greenberg

University Activities

- Computing & Information Science Council
- Provost's Committee on Digital Arts & Culture
- Cornell University Center for Advanced Computing (CAC) Advisory Committee
- Graduate Fields
 - Architecture Science, Computer Science, Computing & Information Science, Structural Engineering, Johnson Graduate School of Management
- Student Theses:
 - Brendan Holt, Master's thesis Cornell University – Fall 2008 (in progress)
 - David Kaplan, Master's thesis Cornell University – Fall 2008 (in progress)
 - Todd Harvey, Master's thesis Cornell University – Spring 2009 (in progress)

Research Activities

- National Science Foundation, ITR/AP – “Beyond Polygons & Pixels: New Paradigms for Real-Time, Physically-Based Rendering” 2001 -2008 (approx. \$2.75M)
- Autodesk – (software, approximately \$100^k)
- Pixar – Animation Research (\$15^k)
- DreamWorks – Animation Research
- Intel – Microsoft – Dell – Collaboration for Cluster Computing ($\approx$ \$425,000)
- Cornell Ornithology Lab – Physically-Based Simulation of Avian Flight (\$50^k)

Professional Activities:

- Chyron Corporation – Board of Directors
- Interactive Data Corporation – Board of Directors
- Pixar, Dreamworks, Microsoft, Cleveland Clinic – Consulting

Publications:

- Vikash Goel, Roy Greenberg, Donald Greenberg. “Automated Vascular Geometric Analysis of Aortic Aneurysms,” to be published in IEEE Computer Graphics and Applications May/June or July/August 2008.
- Vikash Ravi Goel, MS, Roy K. Greenberg, MD, Donald P. Greenberg, PhD. “Mathematical analysis of DICOM CT datasets: Can endograft sizing be automated for complex anatomy? Journal of Vascular Surgery, to be published.
- Talk given at the Annual Meeting for Vascular Surgery, Baltimore MD, June 2007.
- The Quest for the Ivory-billed Woodpecker Chronicle of Higher Ed (in progress)
- A Model-based Approach to Access the Documentation of the Ivory-billed Woodpecker, Science (in progress)

Film:

- The Lord God Bird, DC Environmental Film Festival 2008, Directed by: George Butler, National Geographic Society, March 14, 2008.

Lectures:

- June 1, 2007 – “Ivory-Billed Woodpecker, Is it real?” Lab of Ornithology Board, Cornell University, Lab of O’s (Trustees/Directors?)
- June 7, 2007 – “Mathematical Analysis of DICOM CT Datasets for Fenestrated and Branched Endografts: Can It All Be Automated?” 2007 Vascular Annual Meeting, Baltimore, MD.
- June 8, 2007 – “Universities in the 21st Century,” 1957 Class Reunion Panel (Donald P. Greenberg, Director Program of Computer Graphics/ Frank H.T. Rhodes, President Emeritus / Ron Ehrenberg, Director of Cornell High Education Research Institute), Statler Auditorium, Cornell University
- June 18, 2007 – Beginning With Children Charter School Workshop
- August 1, 2007 – “Architecture from the Ground-Up – How has the design process changed? How the design process has not changed.” Cornell Adult University.
- September 14, 2007 – “Plans and Potential Collaborations,” Cornell Weill Medical College, Center for Advanced Computing, & Program of Computer Graphics, Cornell Weill Medical College, New York, NY.
- November 26, 2007 – AEM 121 Lecture “Boundaries in an Exponentially Changing Digital World,” Call Auditorium, Cornell University

David Gries

University Activities

- Member, Core Curriculum Governing Board (CCGB)
- Chair, Independent Major Committee
- Member, Bovay Steering Committee
- Member, CIT Lecture Capture Committee
- Member, CLT Recruiting Committee
- Chair, Engineering College Educational Policy Committee
- Member, University Committee on Integrity
- Member, CUSP Advisory Board
- Member, E-Cornell Board
- Member, FABIT
- Member, OMEA Director Interview Committee
- Member, CIT Web Accessibility Committee
- Advisor, Hindu Student Council

Professional Activities

- Member, ACM Karl Karlstrom Outstanding Educator Award Committee.
- Chair, ACM Karl Karlstrom Outstanding Educator Award Committee (beginning 1 June 2008).
- Member, Advisory Board, NSF Grant 0722274 (Owen Astrachan) on Problem Based Learning in Computer Science.
- Reviewer, Sathya Sai Baba School, Toronto, Canada. 5 April 2008.
- Editorial Boards
 - Editorial Board, Acta Informatica
 - Advisory Editor, Information Processing Letters (on board since 1972)
 - Co-Editor, Springer Verlag Texts and Monographs Series (1972–)

Publications

- Forward in Bennedsen, Jens, Michael Caspersen, Michael Kolling (Eds) Reflections on the Teaching of Programming. LNCS 4821, Springer Verlag, 2008.
- A principled approach to teaching OO first. Proceedings SIGCSE 2008, Portland, Oregon. 20 March 2008.

Lectures

- Keynote. Developing Correct Software. International Forum on Computer Science and Advanced Software Technology. Jiangxi Normal University, Nanchang, Jiangxi 330033. 9–11 June 2007.
- Keynote. Teaching OO Programming [using Java]. PPPJ07, Lisboa, Portugal. 6 September 2007.
- Invited Lecture. Education in Programming Methodology. 40 Jahre Informatik an der TUM. Garching, Germany. 25-26 October 2007.
- A principled approach to teaching OO first. SIGCSE 2008, Portland, Oregon. 20 March 2008.

Joseph Halpern

Professional Activities

- External reviewer, University of Calgary computer science department review
- Program committee member for
- Twenty-Fifth National Conference on Artificial Intelligence (AAAI 2008), Nectar Track
- Third World Congress of Game Theory (2008)
- Twenty-Fourth Annual Conference on Uncertainty in Artificial Intelligence (2008) (area chair)
- Ninth ACM Conference on Electronic Commerce, 2008
- Eleventh International Conference on Principles of Knowledge Representation and Reasoning (KR 2008), 2008

Publications:

- J. Y. Halpern and R. Pucella, Characterizing and reasoning about probabilistic and non-probabilistic expectation, *Journal of the ACM* 54:3, 2007.
- J. Y. Halpern and L. C. Rego, Characterizing the NP-PSPACE gap in the satisfiability problem for modal logic, *Journal of Logic and Computation* 17:4, pp. 795-806, 2007.
- F. C. Chu and J. Y. Halpern, Great expectations. Part I: On the customizability of generalized expected utility, *Theory and Decision* 64:1, 2008, pp. 1-36
- J. Y. Halpern and L. C. Rego, Interactive unawareness revisited, *Games and Economic Behavior* 62:1, 2008, pp. 232--262.
- J. Y. Halpern and V. Weissman, A formal foundation for XrML, *Journal of the ACM* 55:1, 2008.
- H. Chockler, J. Y. Halpern, and O. Kupferman, What causes a system to satisfy a specification?, *ACM Transactions on Computational Logic* 9:3, 2008.
- D. J. Martin, J. Gehrke, and J. Y. Halpern, Toward expressive and scalable sponsored search auctions, *Proc. 24th International Conference on Data Engineering*, 2008, pp. 237-246.
- Lower bounds on implementing robust and resilient mediators, *Proc. Fifth Theory of Cryptography Conference*, 2008, pp. 302-319 (with I. Abraham and D. Dolev).
- J. Y. Halpern, Computer science and game theory: A brief survey, *The New Palgrave Dictionary of Economics*, (S. N. Durlauf and L. E. Blume, eds.) Palgrave MacMillan, 2008.

Lectures:

- Plausibility Measures: A Uniform Approach to Counterfactual Reasoning, Default Reasoning, and Belief Change - What If? So What? (Workshop on Causality and Counterfactuals), Rotterdam, Netherlands (December 2007)
- Distributed Computing Meets Game Theory: Robust Mechanisms for Secret Sharing and Implementation with Cheap Talk - ETH, Zurich (June, 2008)
- Redoing the Foundations of Decision Theory
 - o International Congress of Philosophy, Logic, Methodology, and Philosophy of Science, Beijing (August 2007).
 - o Hong Kong University of Science and Technology (August, 2007)

- o University of Kentucky, Computer Science Colloquium (January, 2008)
 - o University of Indiana Cognitive Science Colloquium (March, 2008)
- Constructive Decision Theory
 - o Cowles Conference on Choice, Contracts, and Computation, New Haven (June 2008)
 - o Workshop on Bayes and Savage, Bergen, Norway (June, 2008)
- Reasoning About Knowledge in Multiagent Systems –
 - o Workshop on Information, Control, and Communication, Berlin (April, 2008)
- Causality, responsibility, and blame: a structural-model approach –
 - o University of Indiana (March, 2008)
- Beyond Nash equilibrium: solution concepts for the 21st century –
 - o EPFL, Lausanne, Switzerland (June, 2008)

Juris Hartmanis

Professional Activities

- Member, Science Board, Santa Fe Institute, Santa Fe, NM
- Member, Science Advisory Board, Dagstuhl Conference Center, Dagstuhl, Germany
- Member, International Scientific Board, Wolfgang Pauli Institute, Vienna, Austria
- Member, Advisory Board, DIMACS, Rutgers University, Piscataway, NJ
- Participant, Second US-China Computer Science Leadership Summit, Arlington, VA (July, 2008)

Lectures

- "The Nature of Computer Science, its Impact and Future" Einstein Lecture, Chinese Academy of Science, Beijing, China (September, 2007)
- "Some Old and New Unsolved Computer Science problems" China Theory Week, Tsinghua University, Beijing, China, (September, 2007)
- "The Changing Computer Science" Institute of Software, Chinese Academy of Science, Beijing, China (September 2007)
- "Planning Your Research Career" CRA Careers Workshop 2008, Washington, DC (February, 2008)
- "Computational Complexity of Mathematics" Rome Mathematics Festival, Rome, Italy (March, 2008)

John Hopcroft

University activities

- Member, University Committee on Program Review

Professional Activities

Member

- National Research Council Board on Mathematical Sciences and Applications
- World Bank's Chilean Millennium Science Initiative
- National Academies' Vietnam Education Foundation Review Team
- Packard Foundation Science Advisory Board

Consultant

- Microsoft

Editorial Board Member

- Algorithmica
- Journal of Computer and System Sciences
- Journal of Frontiers of Computer Science and Technology

Publications

- Local Computation of PageRank Contributions. WAW 2007 (with Reid Andersen, Christian Borgs, Jennifer Chayes, Vahab Mirrokni, and Shang-Hua Teng)
- Manipulation-resistant Reputations using Hitting Time. WAW 2007 (with Dan Sheldon) Robust PageRank and Locally Computable Spam Detection Features. AIRWeb 2008 (with Vahab Mirrokni, Banadaki, et al)

Lectures

- "Future Directions in Computer Science", Hanoi University of Technology, Hanoi, Vietnam, August 6, 2007
- "Future Directions for Computer Science", Keynote Address, International Forum on Computer Science and Advanced Software Technology, Nanchang University, Nanchang, P.R. China, June 10, 2007
- "Future Directions for Computer Science", Keynote Address, 21st Century Computing Conference Oct 29, 2007, Nanjing, China
- "Future Directions for Computer Science", Keynote Address, 21st Century Computing Conference Nov 2, 2007, Seoul, Korea
- "Computer Science in the Information Age", RPI, April 3, 2008
- "Computer Science in the Information Age", Drexel, May 8, 2008

Awards, honors, and grants

- CRA Distinguished Service Award, 2007
- Honorary degree, Doctor of Engineering, University of Sydney, 2008

Dan Huttenlocher

University activities

- Ph.D. students Graduated
 - Xiangyang Lan, PhD, August 2007.
- Acting Director, Information Science, 2007-2008
- Chair, Information Science Recruiting Committee, 2007-2008
- Member, CIS Building Committee, 2006-present
- Member, CS Computing Facilities Committee, 2006-present

Professional Activities

- Area Chair, European Conference on Computer Vision (ECCV), 2008.
- Scientific advisory committee, MacArthur Foundation, 2007-present.
- ACM-AAAI Newell Award Committee, 2007-2010.
- Editorial Board Member, International Journal of Computer Vision (IJCV), 2006-present.

Publications

- Learning for Stereo Vision Using the Structured Support Vector Machine, Proceedings of the IEEE Computer Vision and Pattern Recognition Conference, 2008 (with Y. Li).
- Team Cornell's Skynet: Robust Perception and Planning in an Urban Environment, *Journal of Field Robotics* (with I. Miller, M. Campbell, A. Nathan, F. Kline, P. Moran, N. Zych, B. Schimpf, S. Lupashin, E. Garcia, J. Catlin and M. Kurdziel).

Lectures

- Team Cornell and the DARPA Urban Challenge:
 - EPFL, Lausanne Switzerland, May 2008
 - Army Research Labs, January 2008
 - Google, January 2008
 - TTI-Chicago, January 2008
- Vision in the 3D World, Intl. Workshop on Computer Vision, Venice, May 2008

Awards, honors, and grants

- Fellow of the ACM, 2007
- Finalist DARPA Urban Challenge, Team Cornell (team co-leader), 2007
- Phi Beta Kappa Visiting Scholar, 2007-08
- NSF 0705774 III-CXT: Computer Science Research Using the Cornell Web Lab to Study Social and Informational Processes on the Web, 2007-2009, \$900,000 (co-investigators William Arms and Jon Kleinberg).
- NSF IIS 0713185 RI: A Context-Based Approach to the Recognition and Localization of Visual Object Categories, 2007-2010, \$450,000.
- Kodak/NYSTAR-CEIS, Object Category Recognition, 2007-08, \$110,000.
- DARPA through ONR contract HR0011-06-C-0147 Urban Challenge: Team Cornell, 2006-2007, \$1,000,000 (co-investigators Mark Campbell and Ephraim Garcia).

Doug L. James

Professional Activities

- Chair, ACM SIGGRAPH/Eurographics Symposium on Computer Animation 2008
- Chair, ACM Student Research Competition for ACM SIGGRAPH 2008
- Associate Editor, *ACM Transactions on Graphics*
- Member, Editorial Board, *Graphical Models*
- Member, Program Committee, ACM SIGGRAPH 2007
- Member, Program Committee, ACM SIGGRAPH ASIA 2008
- Member, Program Committee, ACM SIGGRAPH/Eurographics Symposium on Computer Animation 2007

Publications

- "Mesh Ensemble Motion Graphs: Data-driven Mesh Animation with Constraints," *ACM Transactions on Graphics*, 26(4), October 2007. (with C.D. Twigg, A. Cove and R.Y. Wang.)
- "Many-Worlds Browsing for Control of Multibody Dynamics," *ACM Transactions on Graphics (ACM SIGGRAPH 2007)*, 26(3), July 2007. (With C.D. Twigg.)
- "FastLSM: Fast Lattice Shape Matching for Robust Real-Time Deformation," *ACM Transactions on Graphics (ACM SIGGRAPH 2007)*, 26(3), July 2007. (With A.R. Rivers.)
- "Time-critical distributed contact for 6-DoF haptic rendering of adaptively sampled reduced deformable models," In Proc. of *ACM SIGGRAPH/Eurographics Symposium on Computer Animation (SCA 2007)*, San Diego, CA, August 2007. (with J. Barbič) (*Best paper award*)
- "Fast Modal Sounds with Scalable Frequency-Domain Synthesis," *ACM Transactions on Graphics (ACM SIGGRAPH 2008)*, 27(3), August 2008 (with N. Bonneel, G. Drettakis, N. Tsingos and I. Viaud-Delmon).
- "Wavelet Turbulence for Fluid Simulation," *ACM Transactions on Graphics (ACM SIGGRAPH 2008)*, 27(3), August 2008 (with T. Kim, N. Thuerey and M. Gross).
- "Backward Steps in Rigid Body Simulation," *ACM Transactions on Graphics (ACM SIGGRAPH 2008)*, 27(3), August 2008 (with C.D. Twigg).
- "Simulating Knitted Cloth at the Yarn Level," *ACM Transactions on Graphics (ACM SIGGRAPH 2008)*, 27(3), August 2008 (with J. Kaldor and S. Marschner).
- "Six-DoF haptic rendering of contact between geometrically complex reduced deformable models," *IEEE Transactions on Haptics* (with J. Barbič) (to appear).

Lectures

- "Toward Multi-Sensory Physical Simulation," Dept. Of Computer Science, New York University (Feb 2007); also Theoretical and Applied Mechanics Seminar, Cornell University (Feb 2007).
- "Many-Worlds Browsing: Controlling physics via interactive search," Google Inc., Mountain View, CA (May 2007).
- "Physics control as information browsing, and recent work on real-time deformation" (and related talks), Computer Science Department, California Institute of Technology; Computer Science, Stanford University; Computer Science and Electrical Engineering, Berkeley University; Pixar Animation Studios (May 2007).
- "Mechanical Highlights from Interactive and Emerging Multi-sensory Digital Physics," Mechanical and Aerospace Engineering Colloquium Series, Cornell University, March 2008.

Awards and Honors

- Fellow, Alfred P. Sloan Research (2006-2008)
- Recipient, NSF CAREER Award, “Precomputing Data-driven Deformable Systems for Multimodal Interactive Simulation”
- Citation, One of *Popular Science* magazine's “Brilliant 10” young scientists for 2005
- Best Paper Award, ACM/Eurographics Symposium on Computer Animation 2007 (with Jernej Barbic)

Thorsten Joachims

University Activities

- Director of Graduate Studies, Information Science
- Senator, Computer Science
- Cognitive Science Steering Committee
- Graduated Ph.D. Student: Filip Radlinski

Professional Activities

- Action editor, Journal of Machine Learning Research,
- Associate editor, Journal of Artificial Intelligence Research
- Best Paper Awards Chair of the 2007 ACM SIGKDD Conference on Knowledge Discovery and Data Mining.
- SIGIR 07 Workshop “Learning to Rank for Information Retrieval”, coorganizer, with Hang Li, Tie-Yan Liu, Cheng Xiang Zhai, July 2007.
- NIPS07 Workshop “Machine Learning for Web Search” co-organizer, with Dengyong Zhou, Olivier Chapelle, Thomas Hofmann, December 2007.

Publications

- T. Joachims, F. Radlinski (2007). Search Engines that Learn from Implicit Feedback, IEEE Computer, 40(8):34 – 40, August.
- T. Joachims, L. Granka, B. Pang, H. Hembrooke, F. Radlinski, and G. Gay (2007). Evaluating the Accuracy of Implicit Feedback from Clicks and Query Reformulations in Web Search. ACM Transactions on Information Systems (TOIS), 25(2), April.
- Radlinski, F., Joachims, T. (2007). Active Exploration for Learning Rankings from Clickthrough Data. In Proceedings of the ACM Conference on Knowledge Discovery and Data Mining (KDD), San Jose, CA.
- Shaparenko, B., Joachims, T. (2007). Information Genealogy: Uncovering the Flow of Ideas in Non-Hyperlinked Document Databases. In Proceedings of the ACM Conference on Knowledge Discovery and Data Mining (KDD), San Jose, CA.
- Yisong Yue, Finley, T., Radlinski, F., Joachims, T. (2007). A Support Vector Method for Optimizing Average Precision. In Proceedings of the Conference on Research and Development in Information Retrieval (SIGIR), Amsterdam, Netherlands.
- Yu, Ch-N., Joachims, T., Elber, R., Pillardy, J. (2007). Support Vector Training of Protein Alignment Models. In Proceeding of the International Conference on Research in Computational Molecular Biology (RECOMB), San Francisco, CA.
- Pohl, S., Radlinski, F., Joachims, T. (2007). Recommending Related Papers Based on Digital Library Access Records. In Proceeding of the Joint Conference on Digital Libraries (JCDL), Vancouver, BC.

Lectures

- Large-Margin Training for Predicting Structured Outputs. Invited talk at the BIRS Workshop on Mathematical Programming in Data Mining, Banff, AB.
- Support Vector Machines for Structured Outputs.
 - Yahoo Research, San Jose, CA.
 - Columbia University, Center for Computational Learning Systems, New York, NY.

Awards

- Michael Tien Excellence in Teaching Award, 2007.
- NSF Award IIS-0713483 "Learning Structure to Structure Mappings".

Uri Keich

University Activities

- Courses:
 - CS628 Biological Sequence Analysis, Cornell University, Fall 2007.
 - CS426 Introduction to Bioinformatics, Cornell University, Spring 2008.
- Sequence analysis journal club (ran together with Brona Brejova and Tomas Vinar from BSCB), Fall 2007, Spring 2008.
- Comp bio search committee - CS department
- Undergraduate students advisor

Professional Activities

- Journal Reviewing: Bioinformatics, IEEE/ACM Transactions on Computational Biology and Bioinformatics, PLoS Computational Biology
- Conference Reviewing: SODA 2008, Recomb 2008, GIW 2008
- Other Reviewing: Israeli Science Foundation
- Program Committees:
- Genome Informatics Workshop (2008)

Publications

- Keich U., Ng P. A conservative parametric approach to motif significance analysis. Proceedings of the 18th International Conference on Genome Informatics (GIW 2007), Singapore 2007, 19:61-72.
- Nagarajan N., Keich U. FAST: Fourier transform based algorithms for significance testing of ungapped multiple alignments. Bioinformatics. 2008 Feb 15;24(4):577-8.
- Accepted (subject to revisions) papers:
- Keich U., Gao H., Garretson JS., Bhaskar A., Liachko I., Donato J., Tye B. Computational detection of significant variation in binding affinity across two sets of sequences with application to the analysis of replication origins in yeast. BMC Bioinformatics.
- Ng P., Keich U. GIMSAN: A Gibbs motif finder with significance analysis. Bioinformatics.
- Ng P., Keich U. Factoring local sequence composition in motif significance analysis. GIW 2008.

Lectures

- Center for Scientific Computation and Mathematical Modeling, University of Maryland, 9/07
- 18th International Conference on Genome Informatics (GIW 2007), December 2007, Biopolis Singapore
- School of Mathematics and Statistics, University of Sydney, 2/08
- Department of Computer Science and the Center for Bioinformatics and Computational Biology at the University of Maryland, 3/08
- Computer Science Department and the BioMaPS Institute for Quantitative Biology at Rutgers University, 3/08

Jon Kleinberg

Professional Activities:

- Member of National Academies Computer Science and Telecommunications Board.
- Member of National Science Foundation Computing and Information Science and Engineering Advisory Committee.
- Editorial board: Springer book series in Information Science and Statistics.
- Editorial board: Springer Lecture Notes in Computer Science (LNCS).
- Editorial board: Journal of Internet Mathematics.
- Editorial board: Foundations and Trends in Theoretical Computer Science.
- Program Committee: ACM Conf. on Hypertext and Hypermedia, 2008.
- Program Committee: ACM Conf. on Electronic Commerce, 2008.
- Program Committee: ACM Intl. Conf. on Web Search and Data Mining, 2008.
- Program Committee: ACM SIGCOMM Workshop on Online Social Networks, 2008.
- Chair of CS Computational Biology Recruiting Committee.
- Member of Cornell CIS Council.
- Member of Cornell Institute for the Social Sciences Theme Project on Networks.

Publications:

- D. Liben-Nowell, J. Kleinberg. Tracing Information Flow on a Global Scale Using Internet Chain-Letter Data. Proc. National Academy of Sciences, 105(12):4633-4638, 25 March 2008.
- L. Meyerguz, J. Kleinberg, R. Elber. The network of sequence flow between protein structures. Proceedings of the National Academy of Sciences 10.1073, 27 June 2007.
- J. Kleinberg, E. Tardos. Balanced Outcomes in Social Exchange Networks. Proc. 40th ACM Symposium on Theory of Computing, 2008.
- L. Backstrom, J. Kleinberg, R. Kumar, J. Novak. Spatial Variation in Search Engine Queries. Proc. 17th International World Wide Web Conference, 2008.
- E. Breck, D. Easley, D. Fan, J. Kleinberg, L. Lee, J. Wofford, R. Zabih. A new start: Innovative introductory AI-centered courses at Cornell. Proc. AAAI Spring Symposium, 2008.
- J. Kleinberg The Wireless Epidemic. Nature (News and Views) 449(2007), 287-288.
- J. Kleinberg. Cascading Behavior in Networks: Algorithmic and Economic Issues. In Algorithmic Game Theory (N. Nisan, T. Roughgarden, E. Tardos, V. Vazirani, eds.), Cambridge University Press, 2007.
- J. Kleinberg, M. Sandler. Using mixture models for collaborative filtering. J. Comput. Syst. Sci. 74(1): 49-69 (2008)
- D. Liben-Nowell, J. Kleinberg. The link-prediction problem for social networks. J. American Soc. for Information Science 58(7): 1019-1031 (2007)

Lectures:

- "Link Structures, Information Flow, and Social Processes," Invited Plenary Lecture at ACM Conf. on Hypertext and Hypermedia, June 2008.

- "Social Networking," Cornell Silicon Valley, April 2008.
- "Computational Perspectives on Large-Scale Social Network Data," CRA/CCC Data-Intensive Computing Symposium, March 2008.
- "Social Networking," Cornell Entrepreneur Network / Computing and Information Science, March 2008.
- "Modeling Social and Economic Exchange in Networks," NYU Courant Lecture, March 2008.
- "The Geography of Social and Information Networks," NYU Courant Lecture, March 2008.
- "Computational Perspectives on Large-Scale Social Network Data," Stanford Univ. MS&E Colloquium, January 2008.
- "Search Problems and Information Flow in Social Networks," Univ. Chicago Graduate School of Business, November 2007.
- "The Geography of Social and Information Networks," Univ. Toronto Keyfitz Lecture in the Mathematics and the Social Sciences, October 2007.
- "Challenges in Mining Social Network Data" Univ. Toronto CS Department Distinguished Lecture Series, October 2007.
- "Challenges in Mining Social Network Data: Processes, Privacy, and Paradoxes," Invited Plenary Lecture at ACM Intl. Conf. on Knowledge Discovery and Data Mining, August 2007.

Awards and Honors:

2007-2008:

- National Academy of Engineering: elected 2008.
- Smithsonian "37 Under 36: America's Young Innovators in the Arts & Sciences," 2007
- Kenneth A. Goldman '71 Excellence in Teaching Award, Cornell College of Engineering, 2008.

Cumulative (before June 2007):

- American Academy of Arts and Sciences: elected 2007.
- Rolf Nevanlinna Prize, International Mathematical Union, 2006.
- John D. and Catherine T. MacArthur Foundation Fellowship, 2005.
- National Academy of Sciences Award for Initiatives in Research, 2001.
- David and Lucile Packard Foundation Fellowship, 1999.
- Office of Naval Research Young Investigator Award, 1999.
- Alfred P. Sloan Research Fellowship, 1997.
- NSF Faculty Early Career Development Award, 1997.
- IBM Outstanding Innovation Award, 2002.
- Cornell Association of C.S. Undergraduates, Faculty of the Year Award, 2002.
- Fiona Ip Li '78 and Donald Li '75 Excellence in Teaching Award, Cornell College of Engineering, 2000.
- Best paper award, Intl. World Wide Web Conference, 2007.
- Best paper award, Intl. Conf. on Information Proc. in Sensor Networks, 2006.
- Best research paper award, ACM SIGKDD Intl. Conf. on Knowledge Discovery and Data Mining, 2005.

- Best research paper award, ACM SIGKDD Intl. Conf. on Knowledge Discovery and Data Mining, 2003.
- Best paper award, ACM Symposium on Principles of Database Systems, 2000.
- Machtey Award for best student paper, IEEE Symp. Foundations C.S., 1996.
- George M. Sprowls Ph.D. dissertation prize, MIT Dept. of Elec. Eng. and Computer Science, 1996.

Selected Press Appearances:

- "Reaping Results: Data-Mining Goes Mainstream," New York Times, 20 May 2007.
- "Data sharing threatens privacy," Nature (News), 11 October 2007.
- "Net Worker," Smithsonian, October 2007.
- "What a Wi-Fi Worm Outbreak Would Look Like," IEEE Spectrum, January 2008.
- "From ranking blogs to predicting posture," MSNBC, 28 January 2008.
- "A Big World After All? (Editors' Choice: Highlights of the recent literature)" Science, 11 April 2008.
- "How did that chain letter get to my inbox?" US News & World Report, 21 May 2008.

Selected Publications:

- J. Kleinberg, E. Tardos. Algorithm Design. Addison-Wesley, 2005.
- J. Kleinberg. Navigation in a Small World. Nature 406(2000), 845.
- J. Kleinberg. Authoritative sources in a hyperlinked environment. Journal of the ACM 46(1999).

Robert Kleinberg

Professional Activities

- Program committees:
 - ACM Symposium on Theory of Computing (STOC 2007)
 - IEEE Symposium on Foundations of Computer Science (FOCS 2007)
 - ACM Conference on Electronic Commerce (EC 2008)
- Board of editors, Theory of Computing

Publications

- "Multiplicative updates outperform generic no-regret learning in congestion games" (FOCS 2008), with G. Piliouras and E. Tardos.
- "Brief announcement: On the Internet delay space dimensionality" (PODC 2008), with B. Abraham.
- "Truthful germs are contagious: a local-to-global characterization of truthfulness" (EC 2008), with A. Archer.
- "Learning diverse rankings with multi-armed bandits" (ICML 2008), with F. Radlinski and T. Joachims.
- "Regret bounds for sleeping experts and bandits" (COLT 2008), with A. Niculescu-Mizil and Y. Sharma.
- "Multi-armed bandit problems in metric spaces" (STOC 2008), with A. Slivkins and E. Upfal.
- "Online linear optimization and adaptive routing" Journal of Computer and System Sciences 74(1), 97-114, special issue on learning theory, 2008. With B. Awerbuch.
- "Localized client-server load balancing without global information" SIAM Journal on Computing 37(4), 1259-1279, 2007. With B. Awerbuch, M. Hajiaghayi, and T. Leighton.
- "Oblivious routing on node-capacitated and directed graphs" ACM Transactions on Algorithms 3(4), 2007. With M. Hajiaghayi, H. Raecke, and T. Leighton.

Lectures

- "Optimal Pricing and Prophet Inequalities"
 - Invited talk, Dagstuhl Workshop on Computational Social Systems and the Internet. Dagstuhl, Germany, July 2007.
 - Invited talk, INFORMS Annual Meeting. Seattle, WA, November 2007.
- "Online Learning Algorithms for Searching and Ranking"
 - University of Washington CS Theory Seminar, November 2007.
 - MIT Applied Mathematics Colloquium, December 2007.
- "Multi-armed Bandit Problems in Metric Spaces"
 - University at Buffalo CSE Theory Seminar, March 2008.
- "Learning to Surpass the Price of Anarchy".
 - Stanford iCME Colloquium, May 2008.
- "Truthful Germs Are Contagious: A Local-to-global Characterization of Truthfulness"

- o Invited talk, SED Conference on Economic Design, Ann Arbor, MI, June 2008.

Awards

- Microsoft Research New Faculty Fellowship
- Alfred P. Sloan Research Fellowship
- Cornell Association of CS Undergraduates, Faculty of the Year Award, 2007-08
- NSF grant: "Combinatorial and Algorithmic Aspects of Network Coding"

Christoph Koch

Professional Activities:

- Associate Editor, ACM Transactions on Internet Technology (TOIT).
- Panelist, SIGMOD 2008 New Faculty Symposium, Vancouver, Canada.
- PC Chair, WebDB 2008, Vancouver, Canada.
- PC Vice Chair (XML and Semistructured Data), 24th IEEE International Conference on Data Engineering (ICDE) 2008.
- Proceedings Chair, 33rd VLDB 2007, Vienna, Austria.
- Program Committee Member, 26th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS 2007), Beijing, China.
- Program Committee Member, 16th International World Wide Web Conference (WWW) 2007, Banff, Alberta, Canada.
- Program Committee Member, 34th International Colloquium on Automata, Languages and Programming (ICALP 2007), Wroclaw, Poland.
- Program Committee Member, 12. GI-Fachtagung fuer Datenbanksysteme in Business, Technologie und Web (BTW 2007), Aachen, Germany.
- Program Committee Member, ACM SIGMOD International Conference on Management of Data 2008, Vancouver, Canada.
- Program Committee Member, 11th International Conference on Extending Database Technology (EDBT) 2008, Nantes, France.

Publications:

- Christoph Koch, Stefanie Scherzinger, and Michael Schmidt. XML Prefiltering as a String Matching Problem. In Proc. ICDE 2008, Cancun, Mexico.
- Lyublena Antova, Thomas Jansen, Christoph Koch, Dan Olteanu. Fast and Simple Relational Processing of Uncertain Data. In Proc. ICDE 2008, Cancun, Mexico.
- Michaela Goetz, Christoph Koch, and Wim Martens. Efficient Algorithms for the Tree Homeomorphism Problem. In Proc. DBPL 2007, Vienna, Austria.
- Christoph Koch, Stefanie Scherzinger, and Michael Schmidt. "The GCX System: Dynamic Buffer Minimization in Streaming XQuery Evaluation." In Proc. VLDB 2007, Vienna, Austria. Demo paper.
- Lyublena Antova, Christoph Koch, and Dan Olteanu. "Query language support for incomplete information in the MayBMS system." In Proc. VLDB 2007, Vienna, Austria. Demo paper.
- Lyublena Antova, Christoph Koch, Dan Olteanu. From Complete to Incomplete Information and Back. In Proc. of the 2007 ACM SIGMOD Int. Conf. on Management of Data (SIGMOD 2007), pp. 713–724.
- Walker White, Alan Demers, Christoph Koch, Johannes Gehrke, and Rajmohan Rajagopalan, Scaling Games to Epic Proportions. In Proc. of the 2007 ACM SIGMOD Int. Conf. on Management of Data (SIGMOD 2007), pp. 31–42.
- Alan Demers, Johannes Gehrke, Mingsheng Hong, Christoph Koch, Mirek Riedewald, and Walker White. Massively Multi-Query Join Processing in Publish/Subscribe Systems. In Proc. of the 2007 ACM SIGMOD Int. Conf. on Management of Data (SIGMOD 2007), pp. 761–772.
- Lyublena Antova, Christoph Koch, and Dan Olteanu. "MayBMS: Managing Incomplete Information with Probabilistic World-Set Decompositions." In Proc. ICDE 2007, Istanbul, Turkey, pp. 1479–1480. Demo Paper.

- Michael Schmidt, Stefanie Scherzinger, and Christoph Koch. Combined Static and Dynamic Analysis for Effective Buffer Minimization in Streaming XQuery Evaluation. In Proc. ICDE 2007, Istanbul, Turkey, pp. 236–245.
- Lyublena Antova, Christoph Koch, and Dan Olteanu. 10^{10^6} Worlds and Beyond: Efficient Representation and Processing of Incomplete Information. In Proc. ICDE 2007, Istanbul, Turkey, pp. 606–615.
- Lyublena Antova, Christoph Koch, and Dan Olteanu. “World-set Decompositions: Expressiveness and Efficient Algorithms”. In Proc. ICDT 2007, pp. 194–208, Barcelona, Spain.

Lectures:

- “XPath Leashed”. Invited talk, PLANX 2007, Jan. 20, 2007, Nice, France.
- “MayBMS – A System for Managing Large Amounts of Incomplete Information”. Presented at Wilhelm-Schickard-Institut fuer Informatik, Universitaet Tuebingen, Germany, Mar. 19, 2007.
- “MayBMS: A System for Managing Large Uncertain and Probabilistic Databases”. Presented at the Departmental Colloquium of the Brown University Computer Science Department, Providence, RI, Jan. 24, 2008.
- “MayBMS: A System for Managing Large Uncertain and Probabilistic Databases”. Presented at CIS, University of Pennsylvania, May 2, 2008.

Dexter Kozen

University Activities:

- Faculty advisor,
 - o Cornell Men's Rugby Football Club,
 - o Cornell Women's
 - o Rugby Football Club,
 - o Absolute A Cappella
 - o University Appeals Committee

Professional Activities:

- Program committee, MPC'08

Publications

- Dexter Kozen. Nonlocal flow of control and Kleene algebra with tests. In Proc. 23rd IEEE Symp. Logic in Computer Science (LICS'08), pages 105-117, June 2008.
- Dexter Kozen. On the coalgebraic theory of Kleene algebra with tests. Technical Report <http://hdl.handle.net/1813/10173>, Computing and Information Science, Cornell University, March 2008.
- Dexter Kozen and Wei-Lung (Dustin) Tseng. The Böhm-Jacopini theorem is false, propositionally. In P. Audebaud and C. Paulin-Mohring, editors, Proc. 9th Int. Conf. Mathematics of Program Construction (MPC'08), volume 5133 of Lect. Notes in Comput. Sci., pages 177-192. Springer, July 2008.
- Fred B. Schneider, Dexter Kozen, Greg Morrisett, and Andrew C. Myers. Language-based security for malicious mobile code. In Department of Defense Sponsored Information Security Research: New Methods for Protecting Against Cyber Threats, pages 477-494. Wiley, 2007.
- Kamal Aboul-Hosn and Dexter Kozen. Local variable scoping and Kleene algebra with tests. J. Log. Algebr. Program., 2007. DOI: 10.1016/j.jlap.2007.10.007.
- Dexter Kozen. Coinductive proof principles for stochastic processes. Logical Methods in Computer Science, 3(4:8), 2007. DOI: 10.2168/LMCS-3 (4:8) 2007.
- Dexter Kozen and Marc Timme. Indefinite summation and the Kronecker delta. Technical Report
- Dexter Kozen and Alexa Sharp. On distance coloring. Technical Report TR2007-2084, Computing and Information Science, Cornell University, June 2007.
- Daniel Sheldon, M. A. Saleh Elmohamed, and Dexter Kozen. Collective inference on Markov models for modeling bird migration. In J. Platt, D. Koller, Y. Singer, and S. Roweis, editors, Advances in Neural Information Processing Systems (NIPS'07), volume 20, December 2007.
- Dexter Kozen and Nicholas Ruoizzi. Applications of metric coinduction. In T. Mossakowski et al., editor, Proc. 2nd Conf. Algebra and Coalgebra in Computer Science (CALCO 2007), volume 4624 of Lecture
- Notes in Computer Science, pages 327-341. Springer, August 2007.

Lectures

- On the coalgebraic theory of Kleene algebra with tests, Workshop on fixpoint logic, Amsterdam, March 2008
- On the coalgebraic theory of Kleene algebra with tests, CMCS'08, Budapest, March 2008 (keynote)

- Nonlocal flow of control and Kleene algebra with tests, LICS'08, Pittsburgh, June 2008 (invited talk)
- The Boehm-Jacopini Theorem is false, propositionally, MPC'08, Marseille, France, July 2008

Awards, honors:

- Michael Tien '72 Excellence in Teaching Award, 2008.

Dean Krafft

University Activities

- 2007-2008 Member, Task Force on Personal Productivity
- 2007-2008 Member, ITMC Steering Committee
- 2005-2008 CIS representative, IT Security Council
- 2004-2008 CIS representative, IT Managers Council
- *Research Grants*
 - o 5/1/08-10/31/09 Principal Investigator, NSF DUE, *SGER: Increasing the Educational Impact of NSF-funded Research*, \$175,000
 - o 11/1/07-10/31/09 Principal Investigator, Moore Foundation/Fedora Commons, *Fedora Commons Durable Platform for Collections, Collaboration, and Publications*, \$1,174,128
 - o 10/1/07-9/30/08 Principal Investigator, NSF DUE/UCAR, *NSDL Core Integration - Increasing Capacity and Engagement*, \$1,133,467
 - o 9/1/07-8/30/10 Principal Investigator, NSF DRL/Ohio State, *Beyond Penguins and Polar Bears: Integrating Literacy and IPY in the K-5 Classroom*, \$403,152

Professional Activities

- 2008 Program Committee, International Conference on Dublin Core and Metadata Applications
- 2008 Program Committee, Workshop on Very Large Digital Libraries (VLDL 2008) in conjunction with ECDL 2008

Publications

- NCore: Architecture and Implementation of a Flexible, Collaborative Digital Library. In Joint Conference on Digital Libraries, (Pittsburgh, PA, 2008), ACM. (with Aaron Birkland and Ellen J. Cramer) <http://arxiv.org/abs/0803.1500>
- The NCore Platform: An Open-Source Suite of Tools and Services for Implementing Digital Libraries. In OR2008, Third International Conference on Open Repositories (Southampton, England, 2008). <http://pubs.or08.ecs.soton.ac.uk/11/>
- NSDL MatDL: Adding Context to Bridge Materials e-Research and e-Education. In ECDL 2007, (Budapest, Hungary, 2007), Springer, 499-500. (with Laura Bartolo, et al.) http://dx.doi.org/10.1007/978-3-540-74851-9_51

Lectures

- NSDL: Creating an Extensible, Collaborative, Community-based Digital Library for STEM Education, NSF EHR Cyberinfrastructure for Education Workshop Series, Arlington, VA, (February 2008)

Christoph Kreitz

University Activities

- Chair, Department of Computer Science, University of Potsdam
- Chair, Development and Planning Committee, University of Potsdam
- Member, Foundation Board, Hasso-Plattner Institute for IT-Systems Engineering, University of Potsdam
- Faculty Search Committee, Department of Computer Science, University of Potsdam

Professional Activities

- Editorial Board, Journal of Applied Logic.
- Editorial Board, Journal of Algorithms in Cognition, Informatics and Logic.
- Editorial Board, DISKI Book series.

Carl Lagoze

University Activities:

- Grants
 - Repository Interoperability Framework, \$524K Andrew W. Mellon Foundation
 - New Models in Scholarly Communication in Chemistry, \$100K, National Science Foundation
 - eChemistry, \$999K, Microsoft Corporation
- Ph.D. Students
 - Pavel Dmitriev, Computer Science

Professional Activities:

- Member, DLF Aquifer technology advisory group
- Member, Board of Directors, Fedora Commons
- Member, ERIC Steering Committee
- Co-Director, Open Archives Initiative
- Member, Program Committee, Twelfth European Conference on Research and Advanced Technology for Digital Libraries; Joint Conference on Digital Libraries (2008); Open Repositories 2008; First Workshop on CyberInfrastructure: Information Management in eScience (CIMS)
- Faculty, Joint NSDL-DELOS Summer School (2007)

Publications

- S. Warner, J. Bekaert, C. Lagoze, X. Liu, S. Payette, H. Van de Sompel, Pathways: Augmenting interoperability across scholarly repositories, *International Journal of Digital Libraries*, 2007.
- Y. Jo, C. Lagoze, and C. Lee Giles, Detecting research topics via the correlation between graphs and texts, KDD 2007, (San Jose 2007)
- H. Van de Sompel, H. and C. Lagoze. Interoperability for the Discovery, Use, and Re-Use of Units of Scholarly Communication. *CTWatch Quarterly*, 3 (3).
- C. Lagoze, H. Van de Sompel, M. Nelson, S. Warner, R. Sanderson, and P. Johnston, "Object Re-Use & Exchange: A Resource-Centric Approach," 2008, *arXiv:0804.2273*

Lectures

- Open Archives Initiative: Object Reuse and Exchange, Microsoft eScience Workshop at RENCI, October, 2007.
- Open Archives Initiative: Object Reuse and Exchange, Joint Conference on Digital Libraries, June 2008.

Lillian Lee

University Activities

- Member, Committee on Academic Freedom and Professional Status of the Faculty
- Department director of undergraduate studies (involves membership in the College [of Engineering] Curriculum Governing Board (CCGB))
 - Member, CCGB committee on humanities and social sciences electives
 - Member, CCGB committee on minors
 - Member, Engineering Co-op Faculty Advisory Committee
- Member, Department of Linguistics' Computational Linguistics Search committee
- Member, Women in Science and Engineering Term Chair Award sub-committee
- Chair, department ad-hoc curriculum committee
- Member, department visibility committee
- Member, department colloquium committee
- Member, department games committee
- Member, department 211-curriculum committee
- Panelist, forum on advancing in academia, Women's Institute in Summer Enrichment, organized by the Team for Ubiquitous Secure Technology (TRUST), 2008

Professional Activities

- Secretary of the NAACL, elected by the North American chapter of the Association for Computational Linguistics (ACL)
- NAACL Nominating Committee
- Organizing-committee member, ACL Special Interest Group on Linguistic Data and Corpus-Based Approaches to NLP (SIGDAT)
- Co-organizer (with Claire Cardie and Jennifer Wofford), North American Computational Linguistics Olympiad, Ithaca site (competition for high-school students)
- Guest editor, IEEE Transactions on Audio, Speech and Language Processing, special issue on New Approaches to Statistical Speech and Text Processing (with Bill Byrne, Mark Johnson, and Steve Renals)
- Member, editorial board, Journal of Artificial Intelligence Research
- Member, editorial board, Machine Learning
- Member, program committees and review panels: ACL 2008; COLING 2008; WWW 2008; AAAI workshop, Wikipedia and artificial intelligence: An evolving synergy, 2008; ACL workshop, Teaching Computational Linguistics, 2008
- Journal referee: American Political Science Review (flagship journal in political science), Journal of Empirical Finance

Publications

- A new start: Innovative introductory AI-centered courses at Cornell. Eric Breck, David Easley, K-Y Daisy Fan, Jon Kleinberg, Lillian Lee, Jennifer Wofford, and Ramin Zabih. AAAI Spring

Symposium on Using AI to Motivate Greater Participation in Computer Science, AAAI Technical Report SS-08-08, pp. 8-13, 2008.

- IDF revisited: A simple new derivation within the Robertson-Sparck Jones probabilistic model. Lillian Lee. Proceedings of SIGIR, pp. 751--752, 2007. Poster paper.

Lectures

- Johns Hopkins, 2007: Only connect! Two explorations in using graphs for IR and NLP
- Internal:
 - o Third North East Student Colloquium on Artificial Intelligence, 2008: Only connect! Explorations in graph-based approaches to information retrieval and natural-language processing
 - o External department review, 2007: The undergraduate program(s)
 - o Presentation to dept staff, 2008: The undergraduate program(s)

Steve Marschner

University Activities

- Piti Irawan, CS PhD, graduated

Professional Activities

- NSF panelist
- Papers co-chair, Eurographics Symposium on Rendering 2008.

Publications

- Efficient Multiple Scattering in Hair Using Spherical Harmonics,” by Jonathan T. Moon, Bruce Walter, and Steve Marschner. In proceedings of SIGGRAPH 2008.
- “Simulating Knitted Cloth at the Yarn Level,” by Jonathan M. Kaldor, Doug L. James, and Steve Marschner. In proceedings of SIGGRAPH 2008.

Lectures

- “Rendering materials with complex 3D structure”
 - o Microsoft Research, Redmond, WA, May 2007
 - o Department of Computer Science, University of Washington, May 2007
 - o Adobe Laboratories, Seattle, WA, May 2007
 - o Computer Science Department, Carnegie Mellon University, July 2007
 - o Computer Graphics Group, Massachusetts Institute of Technology, September 2007
 - o Computer Graphics Lunch, University of California—Berkeley, October 2007
 - o Computer Graphics Group, California Institute of Technology, October 2007
 - o Invited talk, Pixar, October 2007
 - o Invited talk, Industrial Light and Magic, October 2007
- “The science of material appearance in computer graphics”
 - o Computer Science Colloquium, Yale University, September 2007
 - o Computer Science Colloquium, Brown University, September 2007
 - o Computer Science Seminar, University of North Carolina—Chapel Hill, October 2007
- “Hair Rendering.” In Sunil Hadap, organizer, Strands and Hair: Modeling, Animation, and Rendering. SIGGRAPH 2007 Course 33.

Awards

- Unilever Corporation, collaborative research contract, \$644,818, 2007-2010

Andrew Myers

Professional Activities

- DARPA Information Science and Technology Study Group
- Program Committee, PLACES 2008 workshop
- Program Committee, 2008 IEEE Symposium on Security and Privacy (Oakland)
- Program Committee, 2008 ACM Workshop on Programming Languages and Security (PLAS)
- Lead, IARPA STONESOUP study on software assurance
- Editorial board, Journal of Computer Security and ACM Transactions on Information and System Security

Publications

- "SIF: Enforcing Confidentiality and Integrity in Web Applications," Proceedings of the 16th USENIX Security Symposium, pages 1–16, August 2007. (with S. Chong, K. Vikram)
- "Secure Web Applications via Automatic Partitioning," Proceedings of the 21st ACM Symposium on Operating Systems Principles, 31–44, October 2007. (with S. Chong, J. Liu, X. Qi, K. Vikram, L. Zheng,
- X. Zheng)
- "Civitas: Toward a Secure Voting System," Proceedings of the 2008 IEEE Symposium on Security and Privacy, 354-368, May 2008. (with M. R. Clarkson, S. Chong)
- "Securing Nonintrusive Web Encryption through Information Flow," Proceedings of the 3rd ACM SIGPLAN Workshop on Programming Languages and Security, June 2008. (with L. Zheng)
- "End-to-End Enforcement of Erasure and Declassification," Proceedings of the 21st IEEE Computer Security Foundations Symposium, June 2008. (with S. Chong)

Lectures

- "Guiding distributed systems synthesis with language-based security policies," keynote talk, 10th IFIP International Conference on Formal Methods for Open Object-based Distributed Systems (FMOODS), June 2008.

New Honors

- Best paper award, ACM SOSP 2007.
- Alfred P. Sloan Research Fellowship (2002)
- Abraham T. C. Wong '72 Excellence in Teaching Award (2002)
- Best paper award, ACM SOSP 2001.

Software Releases

- Civitas 0.7: a secure remote voting system
(<http://www.cs.cornell.edu/projects/civitas>)

- Swift 0.9: a framework for automatically partitioning secure web applications
(<http://www.cs.cornell.edu/jif/swift>)
- SIF 1.0: a framework for building secure web applications
(<http://www.cs.cornell.edu/jif/swift>)
- Jif 3.2 : Java + information flow
(<http://www.cs.cornell.edu/jif>)
- Polyglot 2.3 : an extensible compiler front end framework
(<http://www.cs.cornell.edu/Projects/polyglot>)

Rafael Pass

University Activities

- Faculty recruiting committee

Professional Activities

- 39th ACM Symposium on Theory of Computing (STOC'08) in Victoria, May 17-20.
- 35th International Colloquium on Automata, Languages and Programming (ICALP'08) in Reykjavik, July 7-11.
- RSA Conference 2008, Cryptographers' Track (CT-RSA'08) in San Francisco, April 8-11
- 34th International Colloquium on Automata, Languages and Programming (ICALP'07) in Wroclaw, July 9-13.

Publications

- *Precise Concurrent Zero Knowledge*. (EuroCrypt'08) O. Pandey, R. Pass, A. Sahai, W. Tseng and M. Venkatasubramanian.
- *Concurrent Non-malleable Commitments from One-way Functions*. (TCC'08) H. Lin, R. Pass and M. Venkatasubramanian.
- *On Constant-Round Concurrent Zero Knowledge*. (TCC'08) R. Pass and M. Venkatasubramanian.
- *Relations Among Notions of Non-malleability for Encryption*. (AsiaCrypt'07) R. Pass, V. Vaikuntanathan and A. Shelat.
- *Bounded-CCA Secure Encryption*. (AsiaCrypt'07) R. Cramer, G. Hanaoka, D. Hofheinz, H. Imai, E. Kiltz, R. Pass, A. Shelat and V. Vaikuntanathan.
- *Cryptography from Sunspots: How to Use an Imperfect Reference String*. (FOCS'07) R. Canetti, R. Pass and A. Shelat.

Lectures

- MIT, TOC Colloquium, May 6th: Game Theory with Costly Computation
- AFOSR presentation, June 12: Defending against Man-in-the-middle Attacks.

Awards

- NSF Career Award, \$500,000
- AFOSR grant

Mirek Riedewald

University Activities

- Grants:
 - SGER: FINDING INTERESTING PATTERNS THROUGH ANALYSIS OF COMPLEX PREDICTION MODELS (PI: Mirek Riedewald, co-PI: Daniel Fink), \$200K

Professional Activities

- 2008 IEEE Int. Conf. on Data Engineering (ICDE), Program Committee
- 2008 ACM Conf. on Information and Knowledge Management (CIKM), Program Committee
- 2008 Int. Symp. on Temporal Representation and Reasoning (TIME), Program Committee
- 2008 Int. Conf. on Data Warehousing and Knowledge Discovery (DaWaK), Program Committee
- 2008 ACM Int. Workshop on Data Warehousing and OLAP (DOLAP), Program Committee
- 2008 Int. Workshop on Mining Multimedia Streams in Large-Scale Distributed Environments (MMSDE), Program Committee
- 2008 Int. Workshop on Scalable Stream Processing Systems (SSPS), Program Committee
- 2008 IEEE Int. Conf. on Computational Science and Engineering, Program Committee
- 2008 IEEE Int. Conf. on Intelligence and Security Informatics (ISI), Program Committee
- 2008 SIGMOD Ph.D. Workshop on Innovative Database Research (IDAR), Program Committee
- Journal Reviews:
 - ACM Transactions on Database Systems (TODS)
 - IEEE Transactions on Knowledge and Data Engineering (TKDE)
 - International Journal of Business Intelligence and Data Mining

Publications

- Lachmann and M. Riedewald. Finding Relevant Patterns in Bursty Sequences. To appear in Proc. Int. Conf. on Very Large Databases (VLDB), 2008
- D. Sorokina, R. Caruana, M. Riedewald, and D. Fink. Detecting Statistical Interactions with Additive Groves of Trees. To appear in Proc. International Conference on Machine Learning (ICML), 2008
- W. M. Hochachka, R. Caruana, D. Fink, A. Munson, M. Riedewald, D. Sorokina, and S. Kelling. Data-Mining Discovery of Pattern and Process in Ecological Systems. In Journal of Wildlife Management, 71(7):2427--2437, 2007
- D. Sorokina, R. Caruana, and M. Riedewald: Additive Groves of Regression Trees. In Proc. European Conf. on Machine Learning (ECML), pages 323-334, 2007 (Best Student Paper)
- Panda, M. Riedewald, J. Gehrke, and S. B. Pope: High-Speed Function Approximation. In Proc. IEEE Int. Conf. on Data Mining (ICDM), pages 613-618, 2007

Lectures

- Scalable Data Stream Processing (invited talk at Northeastern University, March 2008)
- Scalable Data Stream Processing (invited talk at Saarland University, Germany, January 2008)

Fred B. Schneider

University Activities

- CS Department: New Building Committee.
- CS Department: Recruiting Committee.

Professional Activities

- Director: AFRL/Cornell Information Assurance Institute.
- Chief Scientist, NSF TRUST Science and Technology Center.
- Editorial: *Distributed Computing*, *IEEE Security and Privacy* (Associate Editor-in-Chief), *IEEE Transactions on Dependable and Secure Computing*, Springer-Verlag Texts and Monographs in Computer Science (co-managing editor).
- Industrial Advisory: Fast Search and Transfer; Fortify Software; Lockheed Martin Corp; Microsoft Trustworthy Computing Academic Advisory Board (co-chair).

Other Advisory Committees:

- National Research Council, Computer Science and Telecommunications Board;
- National Research Council, Committee on Improving Cybersecurity Research;
- PCAST Technical Advisory Group on Networking and Information Technology;
- Department of Commerce, Information Security and Privacy Advisory Board;
- Board of Directors, Computing Research Association;
- Computing Community Consortium Council.

Publications

- Language-Based Security for Malicious Mobile Code. *Department of Defense Sponsored Information Security Research: New Methods for Protecting Against Cyber Threats*. Wiley Publishing Company, Indianapolis, Indiana, 2007, 477–494. With Dexter Kozen, Greg Morrisett, and Andrew C. Myers.
- Credentials-Based Authorization: Evaluation and Implementation. Abstract of Plenary Lecture. *Proceedings 34th International Colloquium, ICALP 2007* (Wroclaw, Poland, July 2007), Lars Arge, Christian Cachin, Tomasz Jurdzinski, and Andrzej Tarlecki (eds.). Lecture Notes in Computer Science, Volume 4596, Springer-Verlag, Heidelberg, 2007, 12–14.
- Mapping the Security Landscape: A Role for Language Techniques. Abstract of Invited Lecture. *Proceedings 18th International Conference, CONCUR 2007* (Lisbon, Portugal, September 2007), Luis Caires and Vasco T. Vasconcelos (eds.). Lecture Notes in Computer Science, Volume 4703, Springer-Verlag, Heidelberg, 2007, 1.
- Technology Scapegoats and Policy Saviors. Editorial. *IEEE Security and Privacy* 5, 5 (September/October 2007), 3–4.
- The building blocks of consensus. *Proceedings 9th International Conference on Distributed Computing and Networking ICDCN 08*, (Kolkata, India, Jan. 2008), Lecture Notes in Computer Science, Volume 4904 (S. Rao et al, eds.), Springer-Verlag, Heidelberg, 2008, 54–72. With Yee Jiun Song, Robert van Renesse, and Danny Dolev.
- Hyperproperties. *21st IEEE Computer Security Foundations Symposium* (Pittsburgh, PA, June 2008), 5165. With Michael Clarkson.

Lectures

- Credentials-based authorization: Evaluation and implementation. Keynote lecture. ICALP 2007: 34th International Colloquium on Automata, Languages and Programming. Wroclaw, Poland. July 2007.
- Credentials-based authorization: Evaluation and implementation. Microsoft Corporation, Redmond, Washington. July 2007.
- Mapping the security landscape: A role for language techniques. Invited lecture. 18th International Conference on Concurrency Theory (CONCUR 2007), Lisbon, Portugal. Sept. 2007.
- Nexus project: Overview. NICAR Principal Investigators Meeting, Boston, Mass. Sept. 2007.
- Making state-machine replication secure. A 30-year perspective on Replication. Invited lecture. Monte Verita, Ascona, Switzerland. November 2007.
- What price insularity? Dialogs about computer security failings. University Computer Policy and Law Program, Cornell University, Ithaca New York. November 2007.
- What price insularity? Dialogs about computer security failings. EDUCAUSE Live! Webinar. January 2008.
- Nexus: Status and plans. NICECAP Review, Annapolis Junction, MD. February 11, 2008.
- Building trustworthy distributed services. Wayne State University, Troy, Michigan. March 25, 2008.
- Revised vision and research agenda. TRUST Site Review, Berkeley, CA. April 2008.
- Nexus project: Current status. NICAR Principal Investigators Meeting, Lisle, Illinois. April, 2008.
- Independence: Getting and keeping it. DARPA IPTO Visiting Lecture Series, Arlington VA. June 2008.
- Proactive obfuscation in action. AFOSR PI Meeting, Arlington VA. June 2008.

David B. Shmoys

University Activities

- Member, Ad Hoc Committee of the Dean of the Faculty on Course and Exam Scheduling

Professional Activities

- Editorial Board, *SIAM Journal on Discrete Mathematics*
- Member, Executive Council, Prize Coordinator, ACM SIGACT
- Council Member for Publications, Mathematical Programming Society
- Member, ACM Lawler Prize Committee

Publications

- "Algorithms for the universal and *a priori* TSP", *Operations Research Letters*, 36(1), 1-3, January 2008. (With F. Schalekamp.)
- "Provably near-optimal sampling-based algorithms for stochastic inventory control models", *Mathematics of Operations Research*, 32(4), 821-839, November 2007. (With R. Levi and R. Roundy.)
- "A constant approximation algorithm for the *a priori* traveling salesman problem", *Proceedings of the 13th MPS Conference on Integer Programming and Combinatorial Optimization*, 331-343, 2008. (With K. Talwar.)
- "Primal-dual schema for capacitated covering problems", *Proceedings of the 13th MPS Conference on Integer Programming and Combinatorial Optimization*, 288-302, 2008. (With T. Carnes.)
- "A constant approximation algorithm for the one-warehouse multiretailer problem", *Management Science*, 54(4), 763-776, April 2008. (With R. Levi, R. Roundy, and M. Sviridenko.)

Lectures

- "A constant approximation algorithm for the *a priori* traveling salesman problem", Dagstuhl Workshop on Randomization and Algorithms, (September 2007).
- "Approximation algorithms for stochastic inventory control models" Invited tutorial at INFORMS, Seattle, (October 2007).
- "Approximation algorithms for stochastic optimization problems," Columbia University, Distinguished IEOR-DRO Seminar, (December 2007).
- "A constant approximation algorithm for the *a priori* traveling salesman problem", JKL60, The Technical University of Eindhoven, (December 2007).
- "Approximation algorithms for stochastic optimization problems", Microsoft Research, Colloquium, (January 2008).
- "Approximation algorithms for stochastic optimization problems," Tutte Seminar, Department of Combinatorics and Optimization, University of Waterloo, (April 2008).
- "A constant approximation algorithm for the *a priori* traveling salesman problem", 13th MPS Conference on Integer Programming and Combinatorial Optimization, Bertinoro, Italy, (June 2008).

- “A constant approximation algorithm for the *a priori* traveling salesman problem”, New Algorithmic Paradigms in Optimization, ETH-Zurich, (June 2008).
- “Approximation algorithms for 2-stage stochastic optimization problems,” Tutorial lecture at New Algorithmic Paradigms in Optimization, ETH-Zurich, (June 2008).

Awards and Honors

- Fellow, Association for Computing Machinery (2002)
- Recipient, Sonny Yau Award for Excellence in Teaching, Cornell College of Engineering (1995, 1998, 2003)
- Recipient, National Science Foundation Presidential Young Investigator Award (1987)

Selected Publications

- “Using dual approximation algorithms for scheduling problems: Theoretical and practical results,” *Journal of the ACM*, 34:144-162 (1987). (With D.S. Hochbaum.)
- “Scheduling to minimize the average completion time: On-line and off-line approximation algorithms,” *Mathematics of Operations Research*, 22:513-544 (1997). (With L.A. Hall, A.S. Schulz, and J. Wein.)
- “Improved approximation algorithms for the uncapacitated facility location problem,” *SIAM Journal on Computing*, 33:1-25 (2003). (With F. Chudak.

Emin Gun Sirer

University Activities, including PhD students graduated

- On sabbatical leave.

Professional Activities (such as program committees)

- Co-Chair for ACM Symposium on Networked System Design and Implementation (NSDI'09).
- Program committee member for
 - o Symposium on Principles of Distributed Computing (PODC'08),
 - o ACM Symposium on Networked System Design and Implementation (NSDI'08),
 - o European Conference on Computer Systems (EuroSys'08),
 - o ACM Symposium on Networked System Design and Implementation (NSDI'07),
 - o Usenix Annual Technical Conference (USENIX'07).

Publications

- Device Driver Safety through a Reference Validation Mechanism. Dan Williams, Patrick Reynolds, Kevin Walsh, Emin Gün Sirer, and Fred B. Schneider. Cornell University, Computing and Information Science, Ithaca, New York, May 2008.
- Approximate Matching for Peer-to-Peer Overlays with Cubit. Bernard Wong, Aleksandrs Slivkins, and Emin Gün Sirer. Cornell University, Computing and Information Science, Ithaca, New York, May 2008.
- Some Lesser Known Laws of Computer Science. Emin Gün Sirer and Rik Farrow. In ;login: 32(4), New York, New York, August 2007.
- Going Beyond Tit-for-Tat: Designing Peer-to-Peer Protocols for the Common Good. Ryan Peterson and Emin Gün Sirer. In Proceedings of the Workshop on Future Directions in Distributed Computing, Bertinoro, Italy, June 2007.
- Hyperspaces for Object Clustering and Approximate Matching in Peer-to-Peer Overlays. Bernard Wong, Ymir Vigfusson, and Emin Gün Sirer. In Proceedings of the Workshop on Hot Topics in Operating Systems, San Diego, California, May 2007.
- Octant: A Comprehensive Framework for the Geolocalization of Internet Hosts. Bernard Wong, Ivan Stoyanov, and Emin Gün Sirer. In Proceedings of the Symposium on Networked System Design and Implementation, Cambridge, Massachusetts, April 2007.

Eva Tardos

University Activities

- Chair, Computer Science Dept

Professional Activities

- Editor-in-chief, *SIAM Journal on Computing* (since 2004)
- Editor, *Journal of the ACM; Combinatorica; Theory of Computing*
- Member, Advisory Board, Center for Discrete Mathematics and Computer Science (DIMACS) at Rutgers
- Member, Scientific Advisory Board, Max Planck Institute, Informatik, Saarbrücken, Germany.
- Member, Scientific Advisory Panel, Field's Institute, Toronto, Canada.
- Member, SIGACT Executive Committee

Publications

- *A Network Pricing Game for Selfish Traffic*, Distributed Computing. A. Hayrapetyan, E. Tardos, and T. Wexler. 19(4): 255-266 (2007).
- *Cost-Sharing Mechanisms for Network Design*, A. Gupta, A. Srinivasan, and E. Tardos. Algorithmica 50(1): 98-119 (2008)
- *Balanced Outcomes in Social Exchange Networks*. Jon Kleinberg and Eva Tardos. ACM Symposium on the Theory of Computing (STOC), 2008.
- *Algorithmic Game Theory*. Noam Nisan, Tim Roughgarden, Eva Tardos, Vijay Vazirani (eds), Cambridge University Press, 2007.
- *Solution Concepts and Computational Issues*. Eva Tardos and Vijay Vazirani, in *Algorithmic Game Theory* eds. N. Nisan, T. Roughgarden, E. Tardos and V. Vazirani, Cambridge University Press, 2007.
- *Introduction to the Inefficiency of Equilibria*. Tim Roughgarden and Eva Tardos, in *Algorithmic Game Theory* eds. N. Nisan, T. Roughgarden, E. Tardos and V. Vazirani, Cambridge University Press, 2007.
- *Network Formation Games*. Eva Tardos and Tom Wexler, in *Algorithmic Game Theory* eds. N. Nisan, T. Roughgarden, E. Tardos and V. Vazirani, Cambridge University Press, 2007.

Lectures

- *Trading Networks with Price-Setting Agents* Conference on Diffusion in Networks, University of Essex, July, 2007.
- *Network-formation games*. 6th International Congress of Industrial and Applied Mathematics, Zurich, July 2007.
- *Games in Network*. ACO Distinguished Lecture Series, Georgia Tech, September 2007
- *Games in Network*. CSAIL Colloquium, MIT, December 2007
- *Games in Network*. The Ninth Annual Alan J. Goldman Lecture JHU, December 2007
- *Bargaining and Trading in Networks*, Microsoft Research, Redmond, December 2007
- *Games in Network*. Triangle CS Distinguished Lecturer Series, Duke, January 2008
- *Games in Network*. Triangle Computer Science Distinguished Lecturer Series, UNC, January 2008.
- *Bargaining and Trading in Networks*, Computer Science Colloquium, Yale, February 2008
- *Bargaining and Trading in Networks*, Israel Theory Day, March 2008
- *Games in Networks*, Women in Computer Science, Israel, March 2008
- *Games in Networks*. LATIN, April 2008

- *Balanced Outcomes in Social Exchange Networks*. STOC, Victoria, BC, May 2008
- *Games in Networks: The Price of Anarchy, Stability, and Learning*. Colloquium of the Santa Fe Institute, June 2008
- *Games in Networks: price of anarchy and learning*. Women in Theory Workshop, Princeton, June 2008

Awards and Honors

- Elected to the National Academy of Engineering (2007).
- Dantzig Prize (2006)
- Fellow, American Academy of Arts and Sciences
- Fellow, Association of Computing Machinery
- Fellow, INFORMS
- Recipient, Guggenheim Fellowship
- Recipient, Packard Fellowship
- Recipient, Sloan Foundation Fellowship
- ACSU Faculty of the Year (2005)
- Recipient, F.I. Li '78 and D. Li '75 Excellence in Teaching Award
- Recipient, Fulkerson Prize (of AMS and MPS) (1988)

Charles Van Loan

University Activities:

- ECE Director Search, Member
- College of Engineering Teaching Excellence Board, Member
- College of Engineering Policy Committee, Member

Professional Activities:

- Householder Thesis Prize Committee, Chair
- Householder Symposium Program Committee, Member

Lectures

- 50/50, 24/7, and Other Golden Ratios-- Tribute to Gene Golub, Stanford, February
- Computational Multilinear Algebra, University of Texas, March
- Multilinear Computation in Quantum Chemistry, Zeuthen Germany, June

Robbert VanRenesse

University Activities

- Ph.D. student graduated: Maya Haridasan 2008

Professional Activities

- GlobeCom 2007, November 2007

Publications

- Chi Ho, Robbert van Renesse, Mark Bickford, and Danny Dolev. *Nysiad: Practical Protocol Transformation to Tolerate Byzantine Failures*. USENIX Symposium on Networked System Design and Implementation (NSDI 08). April 2008. BibTeX
- Robbert van Renesse. *Program Committee Meetings Considered Harmful*. USENIX Workshop on Organizing Workshops, Conferences, and Symposia for Computer Systems (WOWCS 08). April 2008. BibTeX
- Maya Haridasan and Robbert van Renesse. *Gossip-based Distribution Estimation in Peer-to-Peer Networks*. International Workshop on Peer-to-Peer Systems (IPTPS 08). February 2008. BibTeX
- Yee Jiun Song, Robbert van Renesse, Fred B. Schneider, and Danny Dolev. *The Building Blocks of Consensus*. 9th International Conference on Distributed Computing and Networking (ICDCN 08). January 2008. BibTeX
- Maya Haridasan, Ingrid Jansch-Porto, Kenneth Birman, and Robbert van Renesse. *Enforcing Fairness in a Live-Streaming System*. Multimedia Computing and Networking (MMCN 08). January 2008. BibTeX
- Maya Haridasan and Robbert van Renesse. *SecureStream: An Intrusion-Tolerant Protocol for Live-Streaming Dissemination*. The Journal of Computer Communication's Special issue on Foundation of Peer-to-Peer Computing. 2007. BibTeX
- Chi Ho, Danny Dolev, and Robbert van Renesse. *Making Distributed Systems Robust*. Proceedings of the 11th International Conference On Principles Of Distributed Systems (OPODIS'07). Guadeloupe, West Indies. December 2007. BibTeX
- Ezra Hoch, Danny Dolev, and Robbert van Renesse. *Self-Stabilizing and Byzantine-Tolerant Overlay Network*. Proceedings of the 11th International Conference On Principles Of Distributed Systems (OPODIS'07). Vol. LNCS 4878. Springer. Guadeloupe, West Indies. December 2007. BibTeX
- L. Alvisi, J. Doumen, R. Guerraoui, B. Koldehofe, H. Li, R. van Renesse, and G. Tredan. *How Robust are Gossip-Based Communication Protocols?*. ACM SIGOPS Operating Systems Review, Special Issue on Gossip-Based Networking. October 2007. BibTeX
- Ken Birman, Anne-Marie Kermarrec, Krzysztof Ostrowski, Marin Bertier, Danny Dolev, and Robbert Van Renesse. *Exploiting Gossip for Self-Management in Scalable Event Notification Systems*. Distributed Event Processing Systems and Architecture Workshop (DEPSA). June 2007. BibTeX

Lectures

- Google Labs: Feb 15th 2008, "Nysiad: making distributed systems tolerant of Byzantine failures without solving consensus"
- Microsoft Research Silicon Valley and Search Labs -- Distinguished Speaker Series: May 19th 2008, "Building scalable and fault-tolerant enterprise search platforms"

Walker White

University Activities

- Grants
 - o IIS-0725260: Design Methodologies for Scalability in Computer Games, National Science Foundation.

Professional Activities

- Chair, Education Committee, Association of Symbolic Logic
- Member, Program Committee, Eleventh Annual Legacy of R. L. Moore Conference
- Member, Program Committee, 25th International Conference on Data Engineering
- Member of ACM, AMS, and ASL.

Publications

- Declarative Processing for Computer Games. Proceeding of SIGGRAPH Sandbox (2008). (With A. Demers, J. Gehrke, and B. Sowell).
- SGL: A Scalable Language for Data Driven Games (Demonstration Paper). Proceedings of SIGMOD (2008). (With R. Albright, A. Demers, J. Gehrke, N. Gupta, R. Keilty, H. Lee, G. Sadowski, and B. Sowell)
- Database Research Opportunities in Computer Games. SIGMOD Record, September 2007. (With A. Demers, J. Gehrke, N. Gupta, and C. Koch)
- Pseudoprime factorizations of integer matrices. Linear Algebra and its Applications, July 2008. (With D. Wallace)

Lectures

- Scaling Computer Games to Epic Proportions. Mathematics Colloquium, Dartmouth College, October 2007.
- Scaling Computer Games to Epic Proportions. Computer Science Colloquium, Brown University, November 2007.
- Applying Database Technology to Games and Simulations. Flight Simulator Studios, Microsoft, May 2008.