William Arms
Title: Professor
Office: 301 College Avenue
Phone: 607/255-3046
Email: wya@cs.cornell.edu

University Activities

- Grants
    - NSF. SGER: EScience in the All-Digital Library

Professional Activities

- MIT Press Series editor for Digital Libraries and Electronic Publishing
- Cornell Faculty Senate,
- Information Science Curriculum Committee.
- American Bar Association. Committee on the Status and Future of Federal e-Rulemaking
- American Law Institute, Adviser, Principles of the Law of Software Contracts

Publications

- William Y. Arms. Implementation and Innovation in the NSDL. Wordpress. September 2008. http://nsdlreflections.wordpress.com/2008/09/18/
- William Arms, Manuel Calimlim, and Lucia Walle. EScience in Practice: Lessons from the Cornell Web Lab. D-Lib Magazine, May/June 2009. http://www.dlib.org/

Other/Misc.

- Will retire from Computer Science on June 30, 2009.

Name: **Kavita Bala**
Title: Prof Assoc
Office: Upson Hall, Room 5142
Phone: 607/255-1383
Email: kb@cs.cornell.edu

University Activities

- Students Graduated
    - Ganesh Ramanarayanan (PhD: August 2008)
    - Milos Hasan (PhD: August 2009)
    - Adam Arbree (PhD: August 2009)
    - Edgar Velazquez Armendariz (Masters: August 2009)

Professional Activities

- SIGGRAPH 09, Interactive 3D Graphics (I3D) 09 http://graphics.cs.williams.edu/i3d09/
- High Performance Graphics 09,
- Eurographics Symposium on Rendering (EGSR) 09,
- Pacific Graphics (PG) 09,
- SIGGRAPH Asia 2008

Publications

- Bruce Walter, Shuang Zhao, Nicolas Holzschuch, Kavita Bala. Single Scattering in Refractive Media with Triangle Mesh Boundaries
  http://www.cs.cornell.edu/%7Ekb/publications/SIG09Amber.pdf
  In ACM SIGGRAPH '09 (Journal: Transaction on Graphics) August 2009, New Orleans LA
- Ganesh Ramanarayanan, Kavita Bala, James Ferwerda. Perception of Complex Aggregates
  http://www.cs.cornell.edu/%7Ekb/publications/SIG08Aggregates.pdf
  In ACM SIGGRAPH '08 (Journal: Transaction on Graphics) August 2008, Los Angeles CA
- James Ferwerda, Ganesh Ramanarayanan, Bruce Walter, Kavita Bala. Visual Equivalence: An Object-based Approach to Image Quality http://www.cs.cornell.edu/%7Ekb/publications/
  Proceedings of IS&T 16th Color Imaging Conference (CIC) '08 Nov 2008
- Bruce Walter, Kavita Bala, Milind Kulkarni, Keshav Pingali. Fast Agglomerative Clustering for Rendering http://www.cs.cornell.edu/%7Ekb/publications/IRT08.pdf Proceedings of IEEE/ACM Interactive Ray Tracing (IRT 2008) August 2008, Los Angeles

Lectures

- Perceptually-based scalable graphics. Yale University, Computer Science Department Colloquium, Sep 2008.

Name: **Ken Birman**
Title: Professor
Office: Upson Hall, Room 4119B
Phone: 607/255-9199
Email: ken@cs.cornell.edu

Professional Activities

- Ninth International Conference on Peer-to-Peer Systems (P2P 2009)
- International Conference on Distributed Computing Systems (ICDCS 2009)
- 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

- Code-Partitioning Gossip. Lonnie Princehouse and Ken Birman. 5th Workshop on Programming Languages and Operating Systems (PLOS 09). Big Sky, MT. 11 October 2009.
- GO: Platform Support For Gossip Applications. Ymir Vigfusson, Ken Birman, Qi Huang, Deepak P. Nataraj. To Appear in Proceedings of IEEE P2P 2009. Seattle, WA. September 9 - 11.
- Storing and Accessing Live Mashup Content in the Cloud. Krzysztof Ostrowski and Ken Birman. To appear in Proceedings of the 3rd ACM SIGOPS International Workshop on Large Scale Distributed Systems and Middleware (LADIS 2009).
- Towards A Cloud Computing Research Agenda. Ken Birman, Gregory Chockler, Robbert van Renesse. To Appear SIGACT News Distributed Computing Column. June 2009.
- Edge Mashups for Service-Oriented Collaboration. Ken Birman, Jared Cantwell, Daniel Freedman, Qi Huang, Petko Nikolov, and Krzysztof Ostrowski. IEEE Computer. Volume 42, Number 5, pgs 92-96. May 2009
- Building Collaboration Applications That Mix Web Services Hosted Content with P2P Protocols. Ken Birman, Jared Cantwell, Daniel Freedman, Qi Huang, Petko Nikolov, Krzysztof Ostrowski. To Appear in Proceedings of IEEE International Conference on Web Services (ICWS). Los Angeles, CA. July 6-10, 2009.
- Sharing Private Information Across Distributed Databases. Siegenthaler, M. and Birman, K. Submitted to IEEE International Symposium on Network Computing and Applications (IEEE NCA09), Boston, MA, 9-11 July 2009.
- Privacy Enforcement for Distributed Healthcare Queries. Siegenthaler, M. and Birman, K. Pervasive Health 2009, London, UK, 1-3 April 2009.
- Adaptive Gravitational Gossip: A Gossip-Based Communication Protocol with User-Selectable Rates. Kenneth Hopkinson, Kate Jenkins, Kenneth Birman, James Thorp, Gregory Toussaint, and Manu Parashar. To Appear in IEEE Transactions on Parallel and Distributed Systems.

- WS-OBJECTS: Extending Service-Oriented Architecture with Hierarchical Composition of Client-Side Asynchronous Event-Processing Logic. Krzysztof Ostrowski, Ken Birman. Submitted to IEEE 7th International Conference on Web Services (ICWS 2009) July 6-10, 2009, Los Angeles, CA, USA
- Building Collaboration Applications That Mix Hosted and P2P Content. Ken Birman, Jared Cantwell, Daniel Freedman, Qi Huang, Deepak Nataraj, Petko Nikolov, Krzysztof Ostrowski. Submitted to IEEE 7th International Conference on Web Services (ICWS 2009) July 6-10, 2009, Los Angeles, CA, USA
- Achieving Reliability Through Distributed Data Flows and Recursive Delegation. Krzysztof Ostrowski, Ken Birman, Danny Dolev, and Chuck Sakoda. In submission.
- FWP: Featherweight User-Mode Processes with Fast Reflexes. Tudor Marian, Hakim Weatherspoon, Mahesh Balakrishnan (Microsoft Research, Silicon Valley), Ken Birman, Robbert van Renesse. Technical Report. 2009.
- Live Distributed Objects for Service Oriented Collaboration. Ken Birman, Jared Cantwell, Daniel Freedman, Qi Huang, Petko Nikolov, Krzysztof Ostrowski. Third International Conference on Intelligent Technologies for Interactive Entertainment (Intetain '09), Demo Track. Amsterdam, The Netherlands. June 22, 2009.
- Slicing Distributed Systems. Vincent Gramoli, Ymir Vigfusson, Ken Birman, Anne-Marie Kermarrec, Robbert van Renesse. To appear in IEEE Transactions on Computers, Special Issue on Autonomic Network Computing, June 2009.
- Sharing Private Information Across Distributed Databases. Siegenthaler, M. and Birman, K. IEEE International Symposium on Network Computing and Applications (IEEE NCA09), Boston, MA, 9-11 July 2009.Privacy Enforcement for Distributed Healthcare Queries. Siegenthaler, M. and Birman, K. PervasiveHealth 2009, London, UK, 1-3 April 2009.
- Adaptive Gravitational Gossip: A Gossip-Based Communication Protocol with User-Selectable Rates. Kenneth Hopkinson, Kate Jenkins, Kenneth Birman, James Thorp, Gregory Toussaint, and Manu Parashar. To Appear in IEEE Transactions on Parallel and Distributed Systems. 2009.
- Smoke and Mirrors: Reflecting Files at a Geographically Remote Location Without Loss of Performance. Hakim Weatherspoon, Lakshmi Ganesh, Tudor Marian, Mahesh Balakrishnan (MSR), and Ken Birman. To Appear in Proceedings of 7th USENIX Conference on File and Storage Technologies (FAST '09). San Francisco, CA. February 24-27, 2009.
- The Monoculture Risk Put into Context. Fred B. Schneider and Ken Birman. IEEE Security & Privacy. Volume 7, Number 1. Pages 14-17. January/February 2009.
- Program Committee Overload in Systems. Ken Birman and Fred B. Schneider. Accepted, CACM Viewpoints, Feb. 2009.
- Dr. Multicast: Rx for Data Center Communication Scalability. Ymir Vigfusson, Hussam Abu-Libdeh, Mahesh Balakrishnan, Ken Birman, and Yoav Tock. Cornell University Technical Report (TR 1813\11587). November 2009
- SOLO: Self Organizing Live Objects. Qi Huang (Huazhong University of Science and Technology), Ken Birman. Technical Report. December 2008.
- Ajil: Distributed Rate-limiting for Multicast Networks. Hussam Abu-Libdeh, Ymir Vigfusson, Ken Birman, and Mahesh Balakrishnan (Microsoft Research, Silicon Valley). Technical Report. December 2008.

Lectures

- Keynote Speaker, 29th Int'l Conference on Distributed Computing Systems (ICDCS 2009). Montreal, Quebec, Canada. June 2009.
- Distinguished Lecture, Triangle Distinguished Lecture Series. University of North Carolina, Chapel Hill, NC. November 2008.
- Distinguished Lecture, Harvard University Colloquium Series. Harvard University, Harvard, MA. November 2008.
- Distinguished Lecture, Cray Colloquium Lecture Series. University of Minnesota, Duluth, MN. October 2008
- Keynote Speaker, 5th IEEE International Conference on Autonomic Computing. Chicago, IL. June 2008.
- 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.
- Smoke and Mirrors: Shadowing Files at a Geographically Remote Location Without Loss of Performance. Hakim Weatherspoon, Lakshmi Ganesh, Tudor Marian, Mahesh Balakrishnan, and Ken Birman. Large-Scale Distributed Systems and Middleware (LADIS). September 15-17, 2008. Yorktown, NY.
- 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. 22nd European Conference on Object-Oriented Programming (ECOOP 2008). Cyprus. July 2008.
- Supporting Timeliness and Reliability via DDS and Ricochet. 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.

New Honors

- Appointed N. Rama Rao Professor of Computer Science, 2009
- IEEE Technical Committee on Distributed Processing Outstanding Achievement Award (2009)

Name: **Claire Cardie**
Title: Professor
Office: Upson Hall, Room 5161
Phone: 607/255-9206
Email: cardie@cs.cornell.edu

University Activities

- Charles and Barbara Weiss Director, Information Science
- Member, Information Science Curriculum Committee
- Member, Cornell Presidential Research Scholars Board
- Member, Provost's Advisory Group of Women in Science and Engineering (WISE)
- Member, College Scholar Advisory Board
- Member, Independent Major Advisory Board
- College Scholar Advisor

Professional Activities

- Councilor, Association for the Advancement of Artificial Intelligence (AAAI)
- Member, AAAI Conference Outreach Committee
- Board Member, Executive Committee of the Association for Computational Linguistics
- Editor (with John Wilkerson), Journal of Information Technology & Politics Special Volume: Text Annotation for Political Science Research
- Editorial Board Member, Machine Learning
- Editorial Board Member, Computational Linguistics
- 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
- Program Committee Member, Discourse Anaphora and Anaphor Resolution Colloquia (DAARC-2009)
- Program Committee Member, Joint Conference of the 47th Annual Meeting of the Association for Computational Linguistics and the 4th International Joint Conference on Natural Language Processing of the Asian Federation of Natural Language Processing (ACL-IJCNLP)
- Program Committee Member, Thirteenth Conference on Computational Natural Language Learning (CoNLL-2009)
- Program Committee Member, International Conference on Weblogs and Social Media (ICWSM-2009)
- Program Committee Member, NAACL HLT Student Research Workshop

- Program Committee Member, EACL Workshop on Language Technology and Resources for Cultural Heritage, Social Sciences, Humanities, and Education (LaTeCH-SHELT&R 2009)
- Reviewer, Human Language Technologies: The 2009 Annual Conference of the North American Chapter of the Association for Computational Linguistics (HLT-NAACL)
- Reviewer, National Science Foundation, CISE proposals
- Reviewer, Journal of Artificial Intelligence Research
- Panelist, NAACL HLT Student Research Workshop
- Organizing Committee Member, North American Computational Linguistics Olympiad (NACLO), Ithaca site, Cornell University

Publications

- Learning with Compositional Semantics as Structural Inference for Subsentential Sentiment Analysis. Yejin Choi and Claire Cardie. Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP 2008), 2008.
- The power of negative thinking: Exploiting Label Disagreement in the Min-cut Classification Framework. Mohit Bansal, Claire Cardie and Lillian Lee. Proceedings of the Conference on Computational Linguistics (COLING 2008): Companion volume: Posters, 2008.
- Topic Identification for Fine-Grained Opinion Analysis. Veselin Stoyanov and Claire Cardie. Proceedings of the Conference on Computational Linguistics (COLING 2008), 2008.
- Guest Editors' Introduction: Text Annotation for Political Science Research. Claire Cardie and John Wilkerson. Journal of Information Technology & Politics, 5:1, 2008.

Lectures

- "Finding and Extracting Opinions on the Web". Evergreen College, October, 2008.
- "What Were They Thinking? Finding and Extracting Opinions in the News". Computer Science Colloquium Series, Cornell University, November, 2009.
- ___ Center of Language Sciences (CLS), University of Rochester, November, 2008.

Other/Misc.

- Charles and Barbara Weiss Director of Information Science

Name: **Alan Demers**
Title: Principal Research Scientist
Office: Upson Hall, Room 4115A
Phone: (607)255-9207
Email: ademers@cs.cornell.edu

Publications

- Rule-Based Multi-Query Optimization. *EDBT 2009.* Saint Petersburg, Russia, March 2009 (with M. Hong, M. Riedewald, C. Koch and J. Gehrke).
- Scalability for Virtual Worlds. *ICDE 2009.* Shanghai, China, March 2009 (with N. Gupta, J. Gehrke, P. Unterbrunner and W. White).
- Dynamic Approaches to In-Network Aggregation. *ICDE 2009*. Shanghai, China, March 2009 (with O. Kennedy and C. Koch).
- From Declarative Languages to Declarative Processing in Computer Games. C*IDR Perspectives 2009*. Asilomar, CA, January 2009 (with B. Sowell, J. Gehrke, C. Koch and W. White).
- Better Scripts, Better Games. A*CM Queue 6:7.* November 2008. (with W. White, C. Koch and J. Gehrke). Also in *CACM 52:3*, March 2009.

Name: **Kit-Yee Daisy Fan**
Title: Senior Lecturer
Office: Upson Hall, Room 5141
Phone: 607/255-1181
Email: dfan@cs.cornell.edu

University Activities

- CS/IS field session in CATALYST Academy (summer program)
- CS/IS field session in CURIE Academy (summer program)
- 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

Professional Activities

- Treasurer, American Society for Engineering Education (ASEE) St. Lawrence Section
- Participant, Frontier in Education Conference (IEEE/ASEE), October 2008

Lectures

- "Polling technology for facilitating interactive lectures in engineering," presented at Teaching Effectiveness Workshop, Engineering Teaching Excellence Institute, Cornell, Ithaca, NY (January 2009). With Chris Schaffer.
- "Self-paced computer programming courses," presented in Innovation in Teaching Webcast Series, Cornell, Ithaca, NY (November 2008). With David Gries.

Name: **Johannes Gehrke**
Title: Prof Assoc
Office: Upson Hall, Room 4105B
Phone: 607/255-1045
Email: johannes@cs.cornell.edu

University Activities

- Chair, Graduate Student Admissions Committee. Cornell Department of Computer Science, Spring 2009.
- Member, Dean Search Committee. Cornell Faculty of Computer and Information Sciences, Spring 2009.
- Member, Visibility Committee. Cornell Department of Computer Science, Since Spring 2009

Professional Activities

- Machine Learning Journal. Member of the Editorial Board. Since 2003.
- Data Mining and Knowledge Discovery. Action Editor. Since 2003.
- Journal of Privacy Technology. Member of the Editorial Board. Since 2004.
- ACM Transactions on Knowledge Discovery from Data. Member of the Inaugural Editorial Board. Since 2005.
- The Journal of Privacy and Confidentiality. Associate Editor. Since 2006.
- Foundations and Trends in Databases. Associate Editor. Since 2006.
- The VLDB Journal. Associate Editor. Since 2007.
- 14th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD 2008). Las Vegas, NV, August 2008. Member of the Senior Program Committee.
- First Conference on the Foundations of Digital Games (FDG 2009), April 2009. Focus Area Chair in Databases.
- 27th ACM SIGMOD International Conference on Management of Data (SIGMOD 2008). Vancouver, Canada, June 2008. Program Committee Group Leader.
- 2008 IEEE International Conference on Data Mining (ICDM 2008). Pisa, Italy, December 2008. Member of the Best Paper Award Committee.
- 27th ACM SIGMOD International Conference on Management of Data (SIGMOD 2008). Vancouver, Canada, June 2008. Best Paper Award Committee Chair.
- ACM SIGMOD Jim Gray Doctoral Dissertation Award Committee. Co-Chair. (With Beng Chin Ooi.) Since 2008.
- Thirty-Fourth International Conference on Very Large Data Bases (VLDB 2008). Auckland, New Zealand, August 2008. Program Committee member (Core Database Technology).
- 28th ACM SIGMOD International Conference on Management of Data (SIGMOD 2009). Providence, RI, June 2009. Program Committee.

Publications

- Johannes Gehrke. Classification and Regression Trees. In *Encyclopedia of Data Warehousing and Mining, Second Edition*. Edited by John Wang. Information Science Publishing, August 2008.
- Namit Jain, Shailendra Mishra, Anand Srinivasan, Johannes Gehrke, Jennifer Widom, Hari Balakrishnan, Ugur Çetintemel, Mitch Cherniack, Richard Tibbetts, Stanley B. Zdonik: Towards a streaming SQL standard. *Proceedings of the VLDB Endowment*, Volume 1(2): 1379-1390 (2008)
- Felix Weigel, Biswanath Panda, Mirek Riedewald, Johannes Gehrke, Manuel Calimlim: Large-scale collaborative analysis and extraction of web data. *Proceedings of the VLDB Endowment*, Volume 1(2): 1476-1479 (2008)
- Walker White, Christoph Koch, Johannes Gehrke, and Alan Demers. Better Scripts, Better Games. ACM Queue, Volume 6, Issue 7. November 2008.
- Alin Dobra, Minos N. Garofalakis, Johannes Gehrke, and Rajeev Rastogi: Multi-query optimization for sketch-based estimation. *Information Systems* 34(2): 209-230 (2009)
- Walker White, Christoph Koch, Johannes Gehrke, and Alan Demers. Better Scripts, Better Games. Communications of the ACM, Volume 52, Issue 3 (March 2009): 42-47.
- Walker White, Ben Sowell, Johannes Gehrke, and Alan Demers: Declarative Processing for Computer Games. In *Proceedings of the 2008 Sandbox: An ACM SIGGRAPH Videogame Symposium (Sandbox 2008)*. Los Angeles, CA, August 2008.
- Benjamin Sowell, Alan Demers, Johannes Gehrke, Nitin Gupta, Haoyuan Li, and Walker White. Declarative Languages to Declarative Processing in Computer Games. In *Proceedings of the Fourth Biennial Conference on Innovative Data Systems Research (CIDR 2009)*, Asilomar, California, January 2009.
- Nitin Gupta, Alan Demers, Johannes Gehrke, Walker White, and Philipp Unterbrunner. Scalability for Virtual Worlds. In *Proceedings of the 25th International Conference on Data Engineering (ICDE 2009)*. Shanghai, China, April 2009.
- Rakesh Agrawal, Anastasia Ailamaki, Philip A. Bernstein, Eric A. Brewer, Michael J. Carey, Surajit Chaudhuri, AnHai Doan, Daniela Florescu, Michael J. Franklin, Hector Garcia-Molina, Johannes Gehrke, Le Gruenwald, Laura M. Haas, Alon Y. Halevy, Joseph M. Hellerstein, Yannis E. Ioannidis, Henry F. Korth, Donald Kossmann, Samuel Madden, Roger Magoulas, Beng Chin Ooi, Tim O'Reilly, Raghu Ramakrishnan, Sunita Sarawagi, Michael Stonebraker, Alexander S. Szalay, Gerhard Weikum: The Claremont report on database research. SIGMOD Record 37(3): 9-19 (2008)
- Minos N. Garofalakis, Johannes Gehrke, and Divesh Srivastava: Special issue: Best papers of VLDB 2007. VLDB Journal 18(2): 383-384 (2009).

Lectures

- Scaling Computer Games. Talk at Microsoft Research. Seattle, WA, July 2008.
- Scaling Games to Epic Proportions. Computer Science Distinguished Lecture Series, Department of Computer Science, University of Illinois at Urbana-Champaign. Urbana, IL, October 2008.
- Privacy: From Theory to Practice on the Map. Expert Group on Microdata Anonymization. Paris, France, October 2008.

- Complex Event Processing for Insider Threat Detection. Talk at the Institute for Information Infrastructure Protection, Quarterly Workshop. Ithaca, NY, October 2008.
- Collaborative Environments. Talk at the KDD Program Annual Workshops. Oak Ridge, TN, December 2008.
- Scaling Games to Epic Proportions. Colloquium at the University of Trondheim. Trondheim, Norway, December 2008.
- Declarative Processing for Computer Games. Distinguished Lecturer Series, Bren School of Information and Computer Sciences. Irvine, Ca, January 2009.
- Declarative Processing for Computer Games. Colloquium at the University of Washington, Department of Computer Science and Engineering. Seattle, WA, January 2009.
- Declarative Processing for Computer Games. Colloquium at Carnegie Mellon University, Department of Computer Science. Pittsburgh, PA, February 2009.
- Declarative Processing for Computer Games. Colloquium at RPI, Department of Computer Science. Troy, NY, February 2009.
- Large Data. Presentation at the CIS West Coast Advisory Board Meeting. San Francisco, CA, March 2009.
- Fault-Tolerant Systemic Listening. I3P Workshop on Insider Threats: Strategies for Staying Secure. Arlington, DC, May 2009.
- Database Technology for Simulating Relationships. AFOSR Systems and Software, Annual Workshop. Arlington, DC, May 2009.
- What Can Database Systems Do For Computer Games? Colloquium at Harvard University, Department of Computer Science. Boston, MA, April 2009.

Name: **Donald P. Greenberg**
Title: Director, Program of Computer Graphics; Jacob Schurman Professor of Computer Graphics
Office: 580 Rhodes Hall
Phone: 607-255-7444
Email: dpg5@cornell.edu

University Activities

- Director, Program of Computer Graphics Graduate Fields
- Architecture Science, Computer Science, Computing & Information Science, Structural Engineering, Johnson Graduate School of Management Professional Activities
- Computing & Information Science Council Provost's Committee on Digital Arts & Culture Cornell University Center for Advanced Computing (CAC) Advisory Committee

Publications

- Greenberg, D. P. (2008). Automated Vascular Geometric Analysis of Aortic Aneurysms. IEEE Computer Graphics and Applications (May/June). May 2009
- Goel, V., Greenberg, D. P., Greenberg, R. (2008). Mathematical Analysis of DICOM CT Datasets: Can Endograft Sizing be Automated for Complex Anatomy? Journal of Vascular Surgery.
- Vance, E., Greenberg, D. P. (2008). Extinct, Maybe, but Digitally in Flight (44th ed., vol. 54). The Chronicle of Higher Education. (Cited Research)
- A Novel Approach to Verify Existence 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

- Greenberg, D. P., First ACM Siggraph Asian Conference Keynote Speaker, "The Expanding Boundaries of Computer Graphics," Association for Computing Machinery (ACM), Singapore. (December 10, 2008).
- Greenberg, D. P., Hans Bethe House Talk, "Computer Graphics, From Animation to Physics, From Medicine to Ornithology, or Why you don't have to pick a major too early, A Personal Story," Hans Bethe House, Ithaca, NY. (November 10, 2008).
- Greenberg, D. P., OSA Frontiers in Optics 2009, "Problems in Physically-Based Simulations of Real-World Environments," Optical Society of America, San Jose, CA (to be given). (October 11, 2009).
- Greenberg, D. P., The University of Trinidad and Tobago Centre for Information Communications Technology Advisory Roundtable, "Disruptive Computer Science May 2009 Technologies," University of Trinidad and Tobago, Trinidad. (March 17, 2009).

- Greenberg, D. P., The University of Trinidad and Tobago Distinguished Lecture Series, "Computer Animation: From 2D to 3D, How We Got Here and Where We Are Going," The University of Trinidad and Tobago, Trinidad. (March 12, 2009).
- Greenberg, D. P., i3D 2009 Conference Keynote Speaker (Interactive 3D Graphics and Games), "A Perspective on Perspective or How We Interpret 3D from 2D," ACM Siggraph, Boston, MA. (March 1, 2009).

Individual Research Activities:

- Greenberg, Donald P. (Principal), "Beyond Polygons & Pixels: New Paradigms for Real-Time, Physically-Based Rendering," Sponsored by National Science Foundation, Federal, (approx. $2.75M)
- Greenberg, Donald P. (Principal), "Interactive Global Illumination," Sponsored by Autodesk, -($200 k)
- Greenberg, Donald P. (Principal), "Classrooms and Design Studios of the Future," Sponsored by Autodesk, -($150 k)
- Greenberg, Donald P. (Principal), "Material Databases," Sponsored by Autodesk, -($150k)
- Greenberg, Donald P. (Principal), Pratt, Kevin (Principal), Cupkova, Dana (Co-Principal), Torrance, Ken (Co-Principal), "Integrated Digital Design Environment for Sustainable Future," Sponsored by Cornell Center for a Sustainable Future's, $148,961.00.
- Greenberg, Donald P. (Principal), "Animation Research," Sponsored by Pixar, ($15k)
- Greenberg, Donald P. (Principal), Bala, Kavita (Principal), "Algorithms for Animation Production," Sponsored by DreamWorks, $35,000.00. (February 1,2009-Present).
- Greenberg, Donald P. (Principal), "Collaboration for Cluster Computing (Equipment)," Sponsored by Intel-Microsoft-Dell, approximately, (Equipment contribution approx. $152,731)
- Greenberg, Donald P. (Principal), "Physically-Based Simulation of Avian Flight," Sponsored by Cornell Ornithology Lab, (continuing)

Name: **David Gries**
Title: Professor
Office: Olin Hall, Room 167
Phone: 607/255-0393
Email: gries@cs.cornell.edu

University Activities

- Chair, Committee on Student Assessment, for Cornell Middle States Accreditation
- Chair, Independent Major Committee
- Chair, Engineering College Educational Policy Committee
- Member, Steering Committee for Cornell Middle States Accreditation
- Member, Core Curriculum Governing Board (CCGB)
- Member University Educational Policy Committee
- Member, FABIT
- Member, Bovay Steering Committee
- Member, CIT Lecture Capture Committee
- Member, University Committee on Integrity
- Member, E-Cornell Board
- Member, VideoNote Task Force
- Advisor, Hindu Student Council

Professional Activities

- Chair, ACM Karl V. Karlstrom Outstanding Educator Award Committee.
- Member, Committee to review Computer Science, University of North Carolina, Chapel Hill, NC, 14-15 Jan 2009.
- 3. Member, Advisory Board, NSF Grant 0722274 (Owen Astrachan) on Problem Based Learning in Computer Science.

Publications

- Forward in Bennedsen, Jens, Michael Caspersen, Michael Kolling (Eds) Reflections on the Teaching of Programming.
- LNCS 4821, Springer Verlag, 2008.

Lectures

- Teaching OO to beginners (Keynote Speaker), Educators' Symposium, OOPSLA 2008. Monday, 20 October 2008, Nashville, TN
- Panel: Discrete Mathematics/Structures: How Do We Deal With the Late Appreciation Problem? CCSNE 2009, SUNY Plattsburgh, 24 April 2009 (with Erkan, Eckman, and Heliotis).
- A Principled Approach to Teaching Java. 1-day Workshop, Arizona State University, 9 Feb 2009.

Name: **Joseph Halpern**
Title: Professor
Office: Upson Hall, Room 4144
Phone: (607)255-9562
Email: halpern@cs.cornell.edu

University Activities

- Chair, CS department recruiting committee
- Member, Statistics recruiting committee

Professional Activities

- Program committee member for Twelfth Conference on Theoretical Aspects of Rationality and Knowledge (2009)
- Twenty-First International Joint Conference on AI (2009)
- Twenty-Fifth Annual Conference on Uncertainty in Artificial Intelligence (2009) (area chair)
- General chair, Twelfth Conference on Theoretical Aspects of Rationality and Knowledge (2009)
- Invited panelist, Workshop on Decision Theory and Its Discontents, Chicago (April 2009)
- Editorial Board member, Games and Economic Behavior
- Editorial Board member, Journal of Logic and Computation
- Administrator, Computing Research Repository (CoRR)

Publications

- J. Y. Halpern, Computer science and game theory: A brief survey, in The New Palgrave Dictionary of Economics (S. N. Durlauf and L.E. Blume, eds.), Palgrave MacMillan, 2008.
- J. Y. Halpern, Joseph Y. Halpern, in Epistemology: 5 Questions (ed. V. F Hendricks and D. Pritchard), Automatic Press/VIP, 2008, pp. 155--166.
- J. Y. Halpern and V. Weissman, Using first-order logic to reason about policies, ACM Transactions on Information and System Security} 11:4, 2008.
- J. Y. Halpern and K. R. O'Neill, Secrecy in multi-agent systems, ACM Transactions on Information and System Security 12:1, 2008.
- A nonstandard characterization of sequential equilibrium, perfect equilibrium, and proper equilibrium, International Journal of Game Theory 38:1, 2009, pp. 37--39.
- J. Y. Halpern, Intransitivity and vagueness, Review of Symbolic Logic, 1:4, 2009, pp. 530--547.
- J. Y. Halpern, From qualitative to quantitative proofs of security properties using first-order conditional logic, AAAI-08 (Proceedings of the Twenty-Third AAAI Conference on Artificial Intelligence), 2008, pp. 454--459.
- I. Abraham, D. Dolev, and J. Y. Halpern, An almost-surely terminating polynomial protocol for asynchronous Byzantine agreement with optimal resilience, Procedings of the Twenty-Seventh Annual ACM Symposium on Principles of Distributed Computing}, 2008, (with I. Abraham and D. Dolev), pp. 405--414.

- I. A. Kash, E. J. Friedman, and J. Y. Halpern, The Lotus-eater attack, Procedings of the Twenty-Seventh Annual ACM Symposium on Principles of Distributed Computing}, 2008, p. 455.
- P. Grunwald and J. Y. Halpern, A game-theoretic analysis of updating sets of probabilities, Proceedings of the Twenty-Fourth Conference on Uncertainty in AI, 2008, pp. 240--247.
- J. Y. Halpern, Defaults and normality in causal structures, Proceedings of the Eleventh International Conference on Principles of Knowledge Representation and Reasoning (KR 2008), 2008, pp. 198-208.
- D. J. Martin and J. Y. Halpern, Shared winner determination in sponsored search auctions, Proc.~25th International Conf.~on Data Engineering, 2009, pp. 270--280.
- I. A. Kash, E. J. Friedman, and J. Y. Halpern, Learning in large games, Proceedings of the Eighth International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2009.
- I. A. Kash, E. J. Friedman, and J. Y. Halpern, Manipulating scrip systems: sybils and collusion, Proceedings of the First Conference on Auctions, Market Mechanisms, and Multiagent Systems (AMMA), 2009.
- J. Y. Halpern, Beyond Nash equilibrium: solution concepts for the 21st century, Proceedings of Twenty-Seventh Annual ACM Symposium on Principles of Distributed Computing, 2008, pp. 1--10. (Reprinted in Proceedings of the Eleventh International Conference on Principles of Knowledge Representation and Reasoning (KR 2008), 2008, pp. 6--14.)
- D. J. Martin, J. Y. Halpern, and J. Gehrke, System and Method for Scalable Sponsored Auctions, patent application filed August, 2008.

Lectures

- Beyond Nash equilibrium: solution concepts for the 21st century, Twenty-Seventh Annual ACM Symposium on Principles of Distributed Computing, Toronto (August, 2008) (invited talk).
- Eleventh International Conference on Principles of Knowledge Representation and Reasoning (KR 2008), Sydney, Australia (September, 2008) (invited talk).
- GAMES Summer School, Bertinoro, Italy (June, 2009) (invited talk)
- Causality, responsibility, and blame: a structural-model approach. Workshop on Theory and Practice of Provenance, San Francisco (February, 2009) (invited talk)
- Defaults and normality in causal structures, Eleventh International Conference on Principles of Knowledge Representation and Reasoning (KR 2008), Sydney, Australia (September, 2008)
- MICRAC Workshop on Causality in AI and Cognitive Psychology Toulouse, France (June 2009), (invited talk)
- From qualitative to quantitative proofs of security properties using first-order conditional logic, AAAI-08 (Proceedings of the Twenty-Third AAAI Conference on Artificial Intelligence), Chicago (July 2008)
- An almost-surely terminating polynomial protocol for asynchronous Byzantine agreement with optimal resilience, Twenty-Seventh Annual ACM Symposium on Principles of Distributed Computing}, Toronto (July 2008)
- Constructive Decision Theory University of Queensland, Australia, Economics Dept. Colloquium

(Sept., 2008)

New Honors

- 2009 ACM/AAAI Newell Award
- Invited to join the Center for Analytic Economics, Cornell

Name: **John Hopcroft**
Title: Professor
Office: Upson Hall, Room 5144
Phone: (607)255-1179
Email: jeh@cs.cornell.edu

University Activities

- University committee on program review
- Local Advisory Council
- Tau Beta Pi advisor

Professional Activities

- Member
    - Packard Foundation Science Advisory Board
    - National Academies' Vietnam Education Foundation Review Team
    - World Bank Chile Millennium Science Initiative
    - Technical Advisory Board, Microsoft Research Asia
    - Advisory Board IIIT Delhi
    - IEEE Simon Ramo Medal Committee
    - Engineering College Advisory Board, Seattle University
    - Chair, Talent Search Committee, KAUST
    - Chair, Section 34, National Academy of Science
- Consultant
    - Microsoft
    - KAUST
- Editorial Board Member
    - Algorithmica Journal of Computer and System Sciences
    - Journal of Frontiers of Computer Science and Technology
    - Program committee chair FAW 2009 Hefei, China

Publications

- On the Stability of Web Crawling and Web Search. **ISAAC 2008** (with Reid Anderson, Christian Borgs, Jennifer Chayes,Vahab Mirrokni, and Shang-Hua Teng)
- Robust Page Rank and Locally Computable Detection Features. AIRWeb 2008 (with Vahab Mirrokni Banaadaki, et al)

Lectures

- "Computer Science in the Information Age", Changsha, June 19, 2008
- "Computer Science in the Information Age", University of Chile, Santiago, August 7, 2008

- "Computer Science in the Information Age", Vietnam National University, Hanoi, August 19, 2008
- "Computer Science in the Information Age", Hanoi University of Technology, Hanoi, August 19, 2008
- "Computer Science in the Information Age", IIIT Hyderabad, Sept 29, 2008
- "Computer Science in the Future", Microsoft Chennai, India Oct 1, 2008
- "Research Directions Supporting the Information Age," Beijing Nobel Laureates Forum 2008, Beijing 2008
- "The Future of Computer Science", Beihang University, June 16, 2009
- "The Future of Computer Science", Institute of Software, Chinese Academy of Sciences, June 17, 2009
- "New Directions in Computer Science Research", Hefei University of Technology, June 24, 2009

New Honors

- Honorary professorship, Beijing Institute of Technology, 2008.
- Designated by Merrill Scholar Aaron Sidford as the faculty member who made the most important contribution to his education at Cornell 2008.
- ACM Karl V. Karlstrom Outstanding Educator Award 2008.
- Fellow of Society for Industrial and Applied Mathematics 2009.
- Member of the National Academy of Sciences 2009.
- Honorary degree, Saint Petersburg State University of Information Technologies, Mechanics & Optics, Saint Petersburg, Russia 2009

Name: **Dan Huttenlocher**
Title: Professor
Office: Upson Hall, Room 4130
Phone: 607/255-9188
Email: dph2@cornell.edu

Professional Activities

- Co-chair, IEEE Computer Vision and Pattern Recognition (CVPR) 2009, Miami. Editorial Board, Intl. J. Computer Vision.
- Advisory Board, IEEE Trans. Pat. Anal. Mach. Intel. (PAMI)

Publications

- The MIT-Cornell Collision and Why it Happened, Journal of Field Robotics, vol. 25, no. 10, October 2008 (with L. Fletcher, S. Teller, E. Olson, D. Moore, Y. Kuwata, J. How, J. Leonard, I. Miller, M. Campbell, A. Nathan, F. Kline).
- Team Cornell's Skynet: Robust Perception and Planning in an Urban Environment, Journal of Field Robotics, vol. 25, no. 8, pp 493-527, August 2008 (with I. Miller, M. Campbell, A. Nathan, F. Kline, P. Moran, N. Zych, B. Schimpf, S. Lupashin, E. Garcia, J. Catlin and M. Kurdziel).
- Landmark Classification in Large-Scale Image Collections, Proceedings of the IEEE International Conference on Computer Vision, 2009 (with D. Crandall and Y. Li).
- Mapping the World's Photos, Proceedings of the World Wide Web Conference (WWW), 2009 (with D. Crandall, L. Backstrom and J. Kleinberg).
- Learning for Optical Flow using Stochastic Optimization, Proceedings of European Conference on Computer Vision (ECCV), 2008 (with Y. Li).
- Sparse Long-Range Random Field and its Application to Image Denoising, Proceedings of European Conference on Computer Vision (ECCV), 2008 (with Y. Li).
- Long Term Arm and Hand Tracking for Continuous Sign Language TV Broadcasts, Proceedings of British Machine Vision Conference (BMVC), 2008 (with P. Buehler, M. Everingham and A. Zisserman).
- Feedback Effects between Similarity and Social Influence in Online Communities, Proceedings of Fourteenth ACM Conference on Knowledge Discovery and Data Mining (KDD) 2008 (with D. Crandall, D. Cosley, J. Kleinberg and S. Suri).

Lectures

- Mapping the World's Photos
  School of Computer and Communications Science, EPFL Lausanne, June 2009
  Computer Science Dept., Ecole Normale Superieure, Paris, June 2009
  Computer Science Dept., ETH Zurich, May 2009
- Pictorial Structure Models and Sign Language Recognition
  International Workshop on Computer Vision for Video, Barcelona, May 2009

- Social Influence and Similarity in Online Communities
  Computer Science Dept, Harvard, October 2008
- The Web as a Source of Research Data
  Conference Board NSF Workshop on Organizations and Innovation, July 2008
- Team Cornell and the DARPA Urban Challenge
  Princeton, September 2008

Name: **Doug James**
Title: Prof Assoc
Office:
Phone: 607/255-9215
Email: djames@cs.cornell.edu

Professional Activities

- Member, Advisory Board, ACM SIGGRAPH 2009
- Member, Program Committee, ACM SIGGRAPH 2009
- Member, Program Committee, ACM SIGGRAPH ASIA 2008
- 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*

Publications

- "Six-DoF haptic rendering of contact between geometrically complex reduced deformable models," *IEEE Transactions on Haptics,* 1(1):39–52, 2008 (with J. Barbič)
- "Optimizing Cubature for Efficient Integration of Subspace Deformations," *ACM Transactions on Graphics (SIGGRAPH ASIA Conference Proceedings)*, 27(5), December 2008, pp. 164:1-164:11 (with Steven An and Theodore Kim)
- "Staggered Projections for Frictional Contact in Multibody Systems," *ACM Transactions on Graphics (SIGGRAPH ASIA Conference Proceedings)*, 27(5), December 2008, pp. 164:1-164:11 (with D.M. Kaufman, S. Sueda, and D.K. Pai)
- "Fast Modal Sounds with Scalable Frequency-Domain Synthesis," *ACM Transactions on Graphics (ACM SIGGRAPH 2008)*, 27(3), August 2008, pp. 24:1-24:9 (with N. Bonneel, G. Drettakis, N. Tsingos and I. Viaud-Delmon).
- "Backward Steps in Rigid Body Simulation," *ACM Transactions on Graphics (ACM SIGGRAPH 2008)*, 27(3), August 2008, pp. 25:1-25:10 (with C.D. Twigg).
- "Wavelet Turbulence for Fluid Simulation," *ACM Transactions on Graphics (ACM SIGGRAPH 2008)*, 27(3), August 2008, pp. 50:1-50:6 (with T. Kim, N. Thuerey and M. Gross).
- "Simulating Knitted Cloth at the Yarn Level," *ACM Transactions on Graphics (ACM SIGGRAPH 2008)*, 27(3), August 2008, pp. 65:1-65:9 (with J. Kaldor and S. Marschner).

Lectures

- "Multi-Sensory Physics and User Interaction," *ACM SIGGRAPH 2008 Classes, "Real-Time Physics,"* Los Angeles, California, August 11-15, 2008.
- Invited Speaker, Computer Graphics Group Annual Retreat, MIT, September 19-20, 2008.

New Honors

- Fellow, Alfred P. Sloan Research (2006-2009)

- Recipient, NSF CAREER Award

Name: **Thorsten Joachims**
Title: Prof Assoc
Office: Upson Hall, Room 4153
Phone: (607)255-1372
Email: tj@cs.cornell.edu

University Activities

- Sabbatical
- Graduated Ph.D. Student: Thomas Finley

Professional Activities

- Action editor, Journal of Machine Learning Research
- Associate editor, Journal of Artificial Intelligence Research
- Co-Organizer, SIGIR08 Workshop "Beyond Binary Relevance"

Publications

- F. Radlinski, M. Kurup, T. Joachims, How Does Clickthrough Data Reflect Retrieval Quality? Proceedings of the ACM Conference on Information and Knowledge Management (CIKM), 2008.
- Chun-Nam John Yu, T. Joachims, R. Elber, J. Pillardy, Support Vector Training of Protein Alignment Models, Journal of Computational Biology, 15(7): 867-880, September 2008.
- Chun-Nam John Yu, T. Joachims, Training Structural SVMs with Kernels Using Sampled Cuts, Proceedings of the ACM Conference on Knowledge Discovery and Data Mining (KDD), 2008.
- T. Finley and T. Joachims, Training Structural SVMs when Exact Inference is Intractable, Proceedings of the International Conference on Machine Learning (ICML), 2008.
- Yisong Yue and T. Joachims, Predicting Diverse Subsets Using Structural SVMs, Proceedings of the International Conference on Machine Learning (ICML), 2008.
- F. Radlinski and R. Kleinberg and T. Joachims, Learning Diverse Rankings with Multi-Armed Bandits, Proceedings of the International Conference on Machine Learning (ICML), 2008.

Lectures

- Support Vector Machines for Structured Outputs.
  - Invited talk at MLG 2008.
  - Symposium of the Statistics SFB475
  - Universitaet Bonn
  - Erasmus University Rotterdam
- How does Clickthrough Data Reflect Reflect Retrieval Quality?
  - Yahoo! Research
  - Google
  - Dagstuhl Seminar on Interactive IR
- Search Engines that Learn
  - Fraunhofer Schlossgespraech

New Honors

- Fraunhofer-Bessel Award of the Humboldt Foundation
- ICML Best 10-Year Paper Award
- NSF Award IIS-0812091 "Information Genealogy”

Name: **Jon Kleinberg**
Title: Professor
Office: Upson Hall, Room 5134
Phone:
Email: kleinber@cs.cornell.edu

Publications

- ``US elections: Lies, damn lies and internet rumours,'' Guardian, 5 October 2008.
- ``The computer, once a tool for scientists, is becoming a collaborator,'' ComputerWorld, 28 October 2008.
- ``Web data predict flu,'' Nature, 20 November 2008.
- ``50 Best Brains in Science: 20 Under 40,'' Discover, December 2008.
- ``The Social Life of Routers: How a 1960s sociology experiment could hold the key to better Internet routing,'' Technology Review, December 2008.
- ``Go figure ...'', Guardian, 23 February 2009.
- ``Buzz Meter: Data Mining Sheds Light on What Makes News,'' Technology Review, March/April 2009.
- ``Connections do count,'' Philadelphia Inquirer, 16 Mar 2009.
- ``Flickr users make accidental maps,'' New Scientist, 27 April 2009.
- ``Cornell team maps out 35M Flickr photos,'' Guardian, 27 April 2009.
- ``The world's most photogenic sites, according to Flickr,'' Wired, 27 April 2009.
- ``Dumb Ways To Make Computers Smarter,'' Forbes, 11 June 2009.
- ``Extracting Meaning from Millions of Pages,” Technology Review, June 2009.
- 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).
- D. Crandall, L. Backstrom, D. Huttenlocher, J. Kleinberg. Mapping the World's Photos. Proc. 18th International World Wide Web Conference, 2009.
- C. Danescu-Niculescu-Mizil, G. Kossinets, J. Kleinberg, L. Lee. How Opinions are Received by Online Communities: A Case Study on Amazon.com Helpfulness Votes. Proc. 18th International World Wide Web Conference, 2009.
- S. Arbesman, J. Kleinberg, S. Strogatz. Superlinear Scaling for Innovation in Cities. Physical Review E 79(1), 2009.
- J. Kleinberg. The convergence of social and technological networks. Communications of the ACM, 51(11):66-72, 2008.
- G. Kossinets, J. Kleinberg, D. Watts. The Structure of Information Pathways in a Social Communication Network. Proc. 14th ACM SIGKDD Intl. Conf. on Knowledge Discovery and Data Mining, 2008.
- D. Crandall, D. Cosley, D. Huttenlocher, J. Kleinberg, S. Suri. Feedback Effects between Similarity and Social Influence in Online Communities. Proc. 14th ACM SIGKDD Intl. Conf. on Knowledge Discovery and Data Mining, 2008.

- J. Kleinberg. The Mathematics of Algorithm Design. In Princeton Companion to Mathematics, (T. Gowers and J. Barrow-Green, eds.), Princeton Univ. Press, 2008.
- Elliot Anshelevich, David Kempe, Jon M. Kleinberg: Stability of Load Balancing Algorithms in Dynamic Adversarial Systems. SIAM J. Comput. 37(5): 1656-1673 (2008)
- Jon M. Kleinberg, Mark Sandler, Aleksandrs Slivkins: Network Failure Detection and Graph Connectivity. SIAM J. Comput. 38(4): 1330-1346 (2008)
- Elliot Anshelevich, Anirban Dasgupta, Jon M. Kleinberg, Éva Tardos, Tom Wexler, Tim Roughgarden: The Price of Stability for Network Design with Fair Cost Allocation. SIAM J. Comput. 38(4): 1602-1623 (2008)
- T.-H. Hubert Chan, Kedar Dhamdhere, Anupam Gupta, Jon M. Kleinberg, Aleksandrs Slivkins: Metric Embeddings with Relaxed Guarantees. SIAM J. Comput. 38(6): 2303-2329 (2009)
- Alan M. Frieze, Jon M. Kleinberg, R. Ravi, Warren Debany: Line-of-Sight Networks. Combinatorics, Probability & Computing 18(1-2): 145-163 (2009)

Lectures

- ``The Flow of Information in Complex Networks,'' Kuwait Foundation Lecture, University of Cambridge, June 2009.
- ``Social Networks, Cascading Behavior and Search,'' Microsoft Cambridge Workshop on Networks, Auctions, and Pricing, June 2009.
- ``Social Networks, Cascading Behavior and Search,'' UCL ELSE Conference on Search, Mechanism Design, and the Internet, June 2009.
- ``Meme-tracking, Diffusion, and the Flow of On-Line Information,'' Invited Plenary Lecture at Intl. Conf. on Weblogs and Social Media, May 2009.
- ``Spatial Signatures of On-Line Behavior,'' Conference on Studying Society in a Digital World, April 2009.
- ``Global Information Networks,'' CCC Workshop on Computing Research that Changed the World, March 2009.
- ``Information Flow and Anonymization in Social Networks,'' ICES Distinguished Lecture, UT Austin, February 2009.
- ``Information Flow and Similarity in On-Line Social Networks,'' Microsoft Research, Silicon Valley, January 2009.
- ``Information Dynamics and Network Structure,'' Kavli Foundation Symposium on Computing Challenges, October 2008.
- ``Computational Perspectives on Large-Scale Social Network Data,'' Johns Hopkins Computer Science Distinguished Lecture Series, October 2008.
- ``Networks, Information, and Computing,'' Cornell Lynch-Weiss Lecture, September 2008.
- ``Tracking the Viral Spread of Political Messages,'' Cornell Entrepreneur Network, September 2008.
- ``Emerging Issues at the Intersection of Social and Technological Networks,'' NSF CISE Distinguished Lecture, September 2008.

- ``Social Processes, Information Flow, and Anonymized Network Data,'' Eastern Great Lakes Theory Workshop, September 2008.

New Honors

- ACM-Infosys Foundation Award in the Computing Sciences, 2009.
- Discover's ``50 Most Important, Influential, and Promising People in Science,'' 2008.

Other/Misc.

- National Academy of Engineering: elected 2008.
- 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.
- Smithsonian ``37 Under 36: America's Young Innovators in the Arts & Sciences,'' 2007
- IBM Outstanding Innovation Award, 2002.
- Cornell Association of C.S. Undergraduates, Faculty of the Year Award, 2002.
- Kenneth A. Goldman '71 Excellence in Teaching Award, Cornell College of Engineering, 2008.
- 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.

Name: **Robert Kleinberg**
Title: Prof Asst
Office: Upson Hall, Room 4138
Phone: (607)255-9200
Email: rdk2@cornell.edu

Professional Activities

- ACM-SIAM Symposium on Discrete Algorithms (SODA), 2009
- International Colloquium on Automata, Languages, and Programming (ICALP), 2009.
- Conference on Learning Theory (COLT), 2009.
- International Joint Conference on Artificial Intelligence (IJCAI), 2009.
- Workshop on Economics of Networks, Systems, and Computation (NetEcon), 2009.
- Workshop on Advertising Auctions (AdAuctions), 2009.
- Board of editors, "Theory of Computing"
- Co-organizer, Eastern Great Lakes Theory of Computation Workshop (EaGL), 2008.
- Cornell Computer Science curriculum committee, faculty recruiting committee.

Publications

- "Multiplicative updates outperform generic no-regret learning in congestion games" (STOC 2009), with G. Piliouras and E. Tardos
- "Online learning with global cost functions" (COLT 2009), with E. Even-Dar, S. Mannor, and Y. Mansour.
- "The K-armed dueling bandit problem" (COLT 2009), with Y. Yue, J. Broder, and T. Joachims.
- "Selling ad campaigns: online algorithms with cancellations" (EC 2009), with M. Babaioff and J. D. Hartline.
- "Load balancing without regret in the bulletin board model" (PODC 2009), with G. Piliouras and E. Tardos.
- "Online bipartite perfect matching with augmentations" (INFOCOM 2009), with K. Chaudhuri, C. Daskalakis, and H. Lin.
- "A multiplicative deformation of the Mobius function for the poset of partitions of a multiset", Contemporary Mathematics 479, 113-118. With P. Hersh.
  "Competitive collaborative learning", Journal of Computer and System Sciences 74, 1271-1288, special issue on learning theory, 2008. With B. Awerbuch.
- "Hat guessing games", SIAM Journal on Discrete Mathematics 22(2): 592-605, 2008.

Lectures

- "Multi-armed bandit problems in metric spaces"
  --- Invited talk, Information Theory and Applications Workshop, San Diego, CA, February 2009.
  --- CMU/Google Machine Learning Seminar Series, Pittsburgh, PA, November 2008.
  --- Invited talk, New York Academy of Sciences Machine Learning Symposium, New York, NY, October 2008.

- "A learning-theoretic refinement of the price of anarchy”
  --- MIT Theory of Computation Colloquium, February 2009.
  --- Google Market Algorithms Workshop, January 2009.

New Honors

- AFOSR grant: "Distance Geometry of Complex Metric Spaces"

Name: **Christoph Koch**
Title: Prof Assoc
Office: Upson Hall, Room 4105A
Phone: (607)255-4117
Email: koch@cs.cornell.edu

Professional Activities

- PC Chair of WebDB 2008
- Associate Editor of ACM Transactions on Internet Technology.

Publications

- Walker White, Christoph Koch, Johannes Gehrke, Alan Demers. “Better Scripts, Better Games". Communications of the ACM 52(3):42-47, 2009.
- Michael Benedikt and Christoph Koch. “XPath Leashed". ACM Computing Surveys 41(1), 2008.
- Dan Olteanu, Christoph Koch, and Lyublena Antova. “World-set Decompositions: Expressiveness and Efficient Algorithms”. Theoretical Computer Science 403 (2{3):265{284 (2008).
- Johannes Gehrke, Christoph Koch, Ben Sowell, and Walker White. Scalable Computer Games using Database Techniques. To appear in Proc. SIGMOD 2009, Providence, RI, USA. Tutorial.
- Jiewen Huang, Ljublena Antova, Christoph Koch, and Dan Olteanu. “MayBMS: A Probabilistic Database Management System”. To appear in Proc. SIGMOD 2009, Providence, RI, USA. Demo paper.
- Mingsheng Hong, Mirek Riedewald, Christoph Koch, Johannes Gehrke, and Alan Demers. “Rule-Based Multi-Query Optimization”. In Proc. EDBT 2009, St. Petersburg, Russia.
- Michaela G□otz and Christoph Koch. “A Compositional Framework for Complex Queries over Uncertain Data”. In Proc. ICDT 2009, St. Petersburg, Russia.
- Christoph Koch. ”A Compositional Query Algebra for Second-Order Logic and Uncertain Databases”. In Proc. ICDT 2009, St. Petersburg, Russia.
- Oliver Kennedy, Alan Demers, and Christoph Koch. “ynamic approaches to in-network aggregation” In Proc. ICDE 2009.
- Dan Olteanu, Jiewen Huang, and Christoph Koch. “azy versus Eager Query Plans for Tuple-Independent Probabilistic Databases” In Proc. ICDE 2009.
- Lyublena Antova and Christoph Koch. “On APIs for Probabilistic Databases”. In Proc. 2nd Workshop on Management of Uncertain Data (MUD), Aug. 24, 2008, Auckland, New Zealand.
- Christoph Koch and Dan Olteanu. “Conditioning Probabilistic Databases”. In Proceedings of the 34th International Conference on Very Large Data Bases (VLDB), Auckland, New Zealand, 2008.

Lectures

- “MayBMS: A System for Managing Large Uncertain and Probabilistic Databases". Microsoft Research, Redmond, WA, July 2, 2008.
- “MayBMS: A System for Managing Large Uncertain and Probabilistic Databases". Computer Science & Engineering, University of Washington, Seattle, WA, July 3, 2008.

- “MayBMS: A System for Managing Large Uncertain and Probabilistic Databases". Departmental Colloquium, CISE, University of Florida, Gainesville, FL, Nov. 10, 2008.
- “Database Research at Cornell". Presented to the Microsoft SQL Server Group, Redmond, WA, July 2, 2008.
- “MayBMS: A Probabilistic Database Management System". Presented at University of California at Irvine, April 24, 2009.
- “MayBMS: A Probabilistic Database Management System". Presented at the University of California at San Diego, May 1, 2009.

Name: **Dexter Kozen**
Title: Professor
Office: Upson Hall, Room 5143
Phone: 607/255-9209
Email: kozen@cs.cornell.edu

Professional Activities

- Logic in Computer Science (LICS), 2007
- Int. Colloq. Automata, Languages, and Programming (ICALP), 2009
- Editorships
    - J. Relational Methods in Computer Science
    - Theory of Computing Systems
    - Logical Methods in Computer Science

Publications

- Dexter Kozen and Wei-Lung (Dustin) Tseng, The Boehm-Jacopini Theorem is False, Propositionally,Proc. 9th Int. Conf. Mathematics of Program Construction (MPC'08), ed. P. Audebaud and C. Paulin-Mohring, Springer Lect. Notes in Comput. Sci., vol. 5133, July 2008, 177-192.
- 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. Accepted for publication, Logical Methods in Computer Science.
- Dexter Kozen, Nonlocal Flow of Control and Kleene Algebra with Tests, Proc. 23rd IEEE Symp. Logic in Computer Science (LICS'08), Pittsburgh, June 2008, 105-117.
- Dexter Kozen, Optimal Coin Flipping, Computing and Information Science, Cornell University, Technical report http://hdl.handle.net/1813/12869, June 2009.
- Dexter Kozen, Lexicographic Flow, Technical report http://hdl.handle.net/1813/13018, Computing and Information Science, Cornell University, June 2009.
- Nikos Karampatziakis and Dexter Kozen, Learning Prediction Suffix Trees with Winnow, Proc. 26th Int. Conf. Machine Learning (ICML'09), ed. L. Bottou and M. Littman, Montreal, June 2009, 489-496.

Lectures

- 3/08 Workshop on Modal Fixpoint Logics, Amsterdam
- 4/08 9th Int. Workshop Coalgebraic Methods in Computer Science, Budapest
- 6/08 23rd Symp. Logic in Computer Science (LICS), Pittsburgh
- 9/08 British Logic Colloquium, Nottingham, UK
- 5/09 Open Lectures, Warsaw

New Honors

- Fellow, American Association for the Advancement of Science, 2008

Name: **Lillian Lee**
Title: Professor
Office: Upson Hall, Room 4152
Phone: 607-255-8119
Email: llee@cs.cornell.edu

University Activities

- Director of undergraduate studies, computer science (involves membership in the College [of Engineering] Curriculum Governing Board (CCGB)), Spring 2009
    - Member, CCGB committee on humanities and social sciences electives
    - Member, CCGB committee on minors
    - Member, Engineering Co-op Faculty Advisory Committee
- Chair, ad hoc committee on the CS curriculum
- Member, CS 2110 committee
- Member, department visibility committee
- Member, Committee on Academic Freedom and Professional Status of the Faculty

Professional Activities

- Organizing-committee member, ACL Special Interest Group on Linguistic Data and Corpus-Based Approaches to NLP (SIGDAT
- NAACL nominating committee
- Associate editor,: Journal of Artificial Intelligence Research (JAIR)
- Member, editorial board, Machine Learning
- Program committee member: NAACL HLT 2009; IJCAI 09, WikiAI 09, NAACL-HLT workshop on unsupervised and minimally supervised learning of lexical semantics; ACL-IJCNLP 2009
- Journal referee: IEEE Transactions on Audio, Speech and Language Processing
- Co-organizer (with Claire Cardie and Jennifer Wofford), North American Computational Linguistics Olympiad, Ithaca site, 2009 (competition for high-school students)

Publications

- Without a "doubt"? Unsupervised discovery of downward-entailing operators. Cristian Danescu-Niculescu-Mizil, Lillian Lee, and Richard Ducott. Proceedings of NAACL HLT, 2009.
- How opinions are received by online communities: A case study on Amazon.com helpfulness votes. Cristian Danescu-Niculescu-Mizil, Gueorgi Kossinets, Jon Kleinberg, and Lillian Lee. Proceedings of WWW, 2009.
- Clusters, language models, and ad hoc information retrieval. Oren Kurland and Lillian Lee. ACM Transactions on Information System, 2009.
- *Opinion mining and sentiment analysis*.Bo Pang and Lillian Lee. Monograph: Now publishers (2008). Also Foundations and Trends in Information Retrieval 2(1--2):1--135, 2008
- The power of negative thinking: Exploiting label disagreement in the min-cut classification framework. Mohit Bansal, Claire Cardie, and Lillian Lee. Proceedings of COLING: Companion volume: Posters, 2008.

- Using very simple statistics for review search: An exploration. Bo Pang and Lillian Lee. Proceedings of COLING: Companion volume: Posters, 2008.

Lectures

- A tempest: Or, On the flood of interest in sentiment analysis, opinion mining, and the computational treatment of subjective language
    - Invited talk at AAAI 2008
    - Invited talk at ICWSM 2009
    - Invited talk at New Directions in Text Analysis, held by the Institute for Quantitative Social Science, 2009
    - Invited talk at UT Austin

New Honors

- Kendall S. Carpenter Advising Award, 2009
- Faculty Fellow, Institute for the Social Sciences, Fall 2008

Name: **Steve Marschner**
Title: Associate Professor
Office: 5159 Upson Hall
Phone: 607-255-8367
Email: srm2@cs.cornell.edu

University Activities

- Gave research presentation to CIS advisory board meeting, March 2009.
- Served as Interim Director of Undergraduate studies for CS, Fall 2008.

Professional Activities

- Served as panelist for National Science Foundation.
- Served on the Committee of Visitors reviewing the CCF organization within NSF CISE.

Publications

- "Capturing Hair Assemblies Fiber by Fiber," by Wenzel Jakob, Jonathan T. Moon, and Steve Marschner. SIGGRAPH Asia 2009.

Lectures

- "The Optics of Entertainment: Computing the appearance of everyday materials for the movies," invited talk to the Cornell High Energy Synchrotron Source (CHESS) Users meeting 2008.
- "Rendering Materials with Complex 3D Structure", Max-Planck Institute for Informatics, Saarbruecken, Germany, June 2008.
- "Modeling and simulating scattering in hair for the purposes of computer graphics," invited presentation to the Spring Seminar of the New York Society of Cosmetic Chemists, April 2009.

Name: **Andrew Myers**
Title: Prof Assoc
Office: Upson Hall, Room 4133
Phone: (607)255-8597
Email: myers@cs.cornell.edu

Professional Activities

- Lead, IARPA STONESOUP study on software assurance
- Program Chair, 2009 IEEE Symposium on Security and Privacy (Oakland)
- Editorial board, Journal of Computer Security
- Editorial board, ACM Transactions on Information and System Security
- Program Committee, 2009 ACM Symposium on Operating Systems Principles (SOSP)
- Program Committee, 2009 IEEE Symposium on Computer Security Foundations (CSF)
- Program Committee, 2009 ACM SIGPLAN Workshop on Types in Language Design and Implementation (TLDI)

Publications

- "A stateless approach to connection-oriented protocols," ACM Transactions on Computer Systems, 2008. (with A. Shieh, E.G. Sirer)
- "Quantifying information flow with beliefs", Journal of Computer Security, 2009. (with M. R. Clarkson, F. B. Schneider)
- "Masked types for sound object initialization," ACM Symposium on Principles of Programming Languages (POPL) , January 2009. (with X. Qi)
- "Sharing classes between families," ACM Conference on Programming Language Design and Implementation (PLDI), June 2009. (with X. Qi)

Lectures

- "STONESOUP: Securely Taking On New Executable Stuff Of Unknown Provenance," final report for IARPA STONESOUP study, College Park, MD, October 2008.
- "Fabric: A Higher-Level Abstraction for Secure Distributed Programming," keynote talk for IBM PL Day, at IBM Thomas J. Watson Research Center, Hawthorne, NY, May 2009.

New Honors

- 2009 Most Influential POPL Paper Award (for POPL 1999).
- 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 0.7.1: a secure remote voting system
  (http://www.cs.cornell.edu/projects/civitas)
- Swift 0.95: a framework for automatically partitioning secure web applications
  (http://www.cs.cornell.edu/jif/swift)
- Jif 3.3 : Java + information flow
  (http://www.cs.cornell.edu/jif)
- Polyglot 2.4 : an extensible compiler front end framework
  (http://www.cs.cornell.edu/Projects/polyglot)
- J\mask 0.9: masked types for sound object initialization
  (http://www.cs.cornell.edu/Projects/jmask)

Name: **Rafael Pass**
Title: Prof Asst
Office: Upson Hall, Room 5139
Phone: (607)255-5578
Email: rafael@cs.cornell.edu

University Activities

- Cornell Boom Faculty contact
- Cornell Ph.D Admission committee

Professional Activities

- 29th Annual International Cryptology Conference (CRYPTO 2009) in Santa Barbara, CA, USA, August 2009.
- 6th Theory of Cryptography Conference (TCC'09), 2009

Publications

- *Non-malleability Amplification.* (STOC'09) H. Lin and R. Pass.
- *A Unified Framework for Concurrent Security: Universal Composability from Stand-alone Non-malleability.* (STOC'09) H. Lin, R. Pass and M. Venkitasubramaniam.
- *Black-box Constructions of Two-party Protocols from One-way Functions.* (TCC'09) R. Pass and H. Wee.
- *Adaptive One-way Functions and Applications.* (Crypto'08) O. Pandey, R. Pass and V. Vaikuntanathan.

Lectures

- AFOSR presentation, Concurrent Security, 2009
- MIT, Non-malleability Amplification, 2009
- Cornell, Game Theory with Costly Computation, 2009
- Weizmann, Game Theory with Costly Computation, 2009
- KTH, Game Theory with Costly Computation, 2009
- I3P presentation (at Cornell), Towards new definitions of concurrent security, 2008
- World Congress of Game Theory, Iterated Regret Minimization: A New Solution Concept, 2008
- Dagstuhl, Algorithmic Rationality: Game Theory with Costly Computation, 2008
- CRYPTO 2008, Adaptive One-way Functions and Applications, 2008

Name: **Fred B. Schneider**
Title: Samuel B. Eckert Professor of Computer Science
Office: Upson Hall, Room 4115C
Phone: 607/255-9221
Email: fbs@cs.cornell.edu

University Activities

- Member, University Committee on Academic Programs and Policies (thru June 30, 2012)
- Member, CS Department New Building Committee.
- Member, CS Department Faculty Recruiting Committee.

Professional Activities

- Chief Scientist, NSF TRUST Science and Technology Center.
- Editorial: *Distributed Computing*, *IEEE Security and Privacy* (Associate Editor-in-Chief), *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: PCAST Technical Advisory Group on Networking and Information Technology; Department of Commerce, Information Security and Privacy Advisory Board; Board of Directors, Computing Research Association; Defense Science Board; Computing Community Consortium Council.

Publications

- Network Neutrality versus Internet Trustworthiness. Editorial. *IEEE Security and Privacy* 6, 4 (July/August 2008), 3–4
- Device driver safety through a reference validation mechanism. *Proceedings of the 8th USENIX Symposium on Operating Systems Design and Implementation* OSDI '08, (San Diego, CA, December 2008), 241–254. With Dan Williams, Patrick Reynolds, Kevin Walsh, and Emin Gun Sirer.
- The monoculture risk put into context. *IEEE Security and Privacy* 7, 1 (January/February 2009), 14–17. And Ken Birman.
- Security is not a commodity: The road forward for cybersecurity research. Computing Research Initiatives for the 21st Century, Computing Community Consortium. February 2009. With Stefan Savage. http://www.cra.org/ccc/initiatives
- Accountability for Perfection. Editorial. *IEEE Security and Privacy* 7, 2 (March/April 2009), 3–4.
- The PC Overload Problem. *Communications of the ACM*, 53, 5 (May 2009). With Ken Birman.

Lectures

- The Ratings Game: Should CRA Join? CRA Board Meeting. Snowbird, Utah. July 2008.
- Nexus Project: Current Status. NICAR PI meeting. Washington, DC. September 2008.
- Learning to Love a Monoculture. Keynote talk. I3P meeting. Ithaca, NY. October 2008.

- Living with and Loving a Monoculture. CS Department Brown Bag Seminar. Cornell University. Ithaca, NY. November 2008.
- A Map for Security Science. Keynote speaker. NSF/IARPA/NSA Workshop on the Science of Security. Oakland, California. November 2008.
- Learning to Love a Monoculture. CERT Seminar Series Commemorating CERT's 20th Year. Carnegie Mellon University, Pittsburgh, PA. February 2009.
- TRUST Center Scientific Agenda. National Science Foundation Site Visit, Berkeley, CA. February 2009.
- A Map for Security Science. Keynote speaker. NY-Area Security Day. Rutgers University, New Brunswick, NJ. May 2009.
- Monoculture risks. AFOSR Principle Investigators Meeting. Washington DC. June 2009.

New Honors

- Appointed Samuel B. Eckert Professor of Computer Science, Feb. 1, 2009.

Name: **Bart Selman**
Title: Professor
Director of Graduate Studies
Director of the Intelligent Information Systems Institute
Office: Upson Hall, Room 4148
Phone: (607)255-5643
Email: selman@cs.cornell.edu

University Activities

- Director of Graduate Studies ('09)
- Director of the Intelligent Information Systems Institute (IISI)
- Member, Executive Board, Institute for Computational Sustainability
- Member, Ph.D. Admissions committee ('08-'09)
- Chair, Ph.D. Admissions committee ('07-'08)
- Member, Cornell University Lectures Committee ('06-'09)

Professional Activities

- Chair Elect, Section Section on Information, Computing and Communication, American Assoc. for the Advancement of Science(AAAS, '09-'11).
- Member, ACM Dissertation Awards Committee (2006-2010). Committee Chair ('09-'10).
  co-Chair, AAAI Presidential Panel concerning Future Directions in AI: Societial Impact and Responsibilities
- Chair, Learning and Intelligent Optimization (LION 3), Trento,Italy, 2009.
- Program committees AAAI-07, SAT-08, AAAI-08, UAI-09, and IJCAI-09.

Publications

- Integrating Systematic and Local Search Paradigms: A New Strategy for MaxSAT. Lukas Kroc, Ashish Sabharwal, Carla P. Gomes, and Bart Selman. 21st Int. Joint Conf. on Artificial Intelligence (IJCAI-09), Pasadena, CA, 2009.
- Relaxed DPLL Search for MaxSAT.Lukas Kroc, Ashish Sabharwal, and Bart Selman
  12th Int. Conf. on Theory and Appl. of Satisfiability Testing (SAT-09), Swansea, Wales, U.K., 2009.
- Incomplete Algorithms for Satisfiability. Henry Kautz, Ashish Sabharwal, and Bart Selman Handbook of Satisfiability (inv. chapter), IOS Press, 2009.
- Model Counting.Carla Gomes, Ashish Sabharwal, and Bart Selman. Handbook of Satisfiability (inv. chapter), IOS Press, 2009.
- Message-Passing and Local Heuristics as Decimation Strategies for Satisfiability.Lukas Kroc, Ashish Sabharwal, and Bart Selman 24th Annual ACM Symposium on Applied Computing (SAC-09), 2009.
- Computational science: A hard statistical view.(Invited News and Views article.)
  Bart Selman, Nature 451, 639-640, 2008.

- Counting Solution Clusters in Graph Coloring Problems Using Belief Propagation.Lukas Kroc, Ashish Sabharwal, and Bart Selman 22nd Ann. Conf. on Neural Info. Proc. Syst. (NIPS-08), Vancouver, BC, Canada, 2008.
- Leveraging Belief Propagation, Backtrack Search, and Statistics for Model Counting. Lukas Kroc, Ashish Sabharwal, and Bart Selman 5th Int. Conf. on the Integration of AI and OR Techniques (CPAIOR-08), Paris, France, 2008.
- Satisfiability Solvers. Carla Gomes, Henry Kautz, Ashish Sabharwal, and Bart Selman.
- Handbook of Knowledge Representation (inv. chapter), Elsevier, 2008.
- From Sampling to Model Counting. Carla Gomes, Joerg Hoffmann, Ashish Sabharwal, and Bart Selman. 20th Int. Joint Conference on Artificial Intelligence (IJCAI-07), Hyderabad, India, 2007.
- Survey Propagation Revisited. Lukas Kroc, Ashish Sabharwal, and Bart Selman. 23rd Conf. on Uncertainty in Artificial Intelligence (UAI-07). Vancouver, BC, Canada, 2007.
- Counting CSP Solutions Using Generalized XOR Constraints. Carla Gomes, Willem-Jan van Hoeve, Ashish Sabharwal, and Bart Selman. 22nd Conf. on Artificial Intelligence (AAAI-07), Vancouver, BC, Canada, 2007.
- Sampling and Soundness: Can We Have Both? Carla P. Gomes, Joerg Hoffmann, Ashish Sabharwal, Bart Selman. 6th International Semantic Web Conference (ISWC-07), Busan, Korea, 2007.
- Short XORs for Model Counting: From Theory to Practice. Carla P. Gomes, Joerg Hoffmann, Ashish Sabharwal, and Bart Selman. 10th Int. Conf. on Theory and Applications of Satisfiability Testing (SAT-07). Lisbon, Portugal, 2007.

Lectures

- "The Synthesis of Probabilistic and Logical Inference Methods", Colloquium, Microsoft Research New England, Cambridge, MA, April 2008.
- "Satisfied by Message Passing: Probabilistic Techniques for Combinatorial Problems," (inv. tutorial with Lukas Kroc and Ashish Sabharwal), LION-3, Trento, Italy, Jan., 2008
- "Planning as Satisfiability: A Survey", NSF Workshop on Symbolic Computation for Constraint Satisfaction Problems, Washington, DC, Nov. 2008.
- "The Synthesis of Probabilistic and Logical Inference Methods", Colloquium, Helsinki University of Technology (TKK), Helsinki, Finland, Nov. 2008.
- "The Synthesis of Probabilistic and Logical Inference Methods", Colloquium, Washington University, St. Louis, Nov. 2008.
- "The Synthesis of Probabilistic and Logical Inference Methods", Colloquium, Univerity of Texas, Austin, TX, Sept. 2008.
- "Satisfied by Message Passing: Probabilistic Techniques for Combinatorial", (inv. tutorial, with Lukas Kroc and Ashish Sabharwal) 23rd Conf. on Artificial Intelligence (AAAI-08), Tutorial Forum, Chicago, IL, July 2008.
- "Combinatorial Problems (series of three lectures; Finding Solutions, Counting and Sampling Solutions, and The Next Level of Complexity)", 2nd Asian-Pacific School on Statistical Physics and

Interdisciplinary Applications, Collective Dynamics and Information Systems Program (KITPC-08), Kavli Institute of Theoretical Physics, Chinese Academy of Sciences, Beijing, China, March 2008

- "Beyond Traditional SAT Reasoning: QBF, Model Counting, and Solution Sampling", (inv. tutorial with Ashish Sabharwal) 22nd Conference on Artificial Intelligence (AAAI-07), Tutorial Forum, Vancouver, BC, Canada, July 2007
- "Quantified Boolean Formula (QBF) Reasoning," (with Carla Gomes and Ashish Sabharwal) Tutorial prepared for DARPA, Washington, DC, Feb. 2007
- "The Challenge and Promise of Automated Reasoning," Colloquium, Dept. of Comp. Sci., University of Rochester, Rochster, NY, Nov. 2007.
- "The Challenge and Promise of Automated Reasoning," Distinguished Lecturer Seminar Series, Dept. Comp. Sci., The University of Illinois at Chicago, Chicago, IL, Oct. 2007.

Honors

- Elected to Chair, Section on Information, Computing and Communication, American Association for the Advancement of Science (AAAS, Chair Elect '09, Chair '10).
- Outstanding Paper Award, 21st Natl. Conf. on Artificial Intelligence (AAAI-06), 2006.
- Distinguished Paper Award at the 10th International Conference on the Theory and Practice of Constraint Programming (CP-2004), 2004.Fellow of the American Association for the Advancement of Science (2003).
- Fellow of the American Association for Artificial Intelligence (2001). Alfred P. Sloan Research Fellow (1999-2000).
- NSF Faculty Early Career Development Award (1998-2002).Stephen '57 and Marilyn Miles, Excellence in Teaching Award, College of Engineering, Cornell University (2002).
- Selected most influential Cornell Professor by Merrill Presidential Scholar (Cornell Outstanding Educator Award, 2001).
- Elected to the Executive Council of the American Association for Artificial Intelligence, the policy making body for AAAI (1999-2002).
- Best Paper Award, 13th Natl. Conf. on Artificial Intelligence (AAAI-96), 1996.
- Best Paper Award, 10th Natl. Conf. on Artificial Intelligence (AAAI-92), 1992.
- Best Paper Award, 1st Intl. Conf. on Knowl. Repr. and Reasoning (KR-89), 1989.
- Best Paper Award, 7th Biennial Conf. of the Canadian Soc. for the Comput. Studies of Intelligence (CSCSI-88), 1988.

Name: **David Shmoys**
Title: Professor
Office: Frank H T Rhodes Hall, Room 231
Phone: (607)255-9146
Email: shmoys@cs.cornell.edu

University Activities

- computed university final exam schedules
- Department of Computer Science, Computational Biology recruiting committee

Professional Activities

- Vice-Chair, IEEE Technical Committee Mathematical Foundations of Computing
- Served on 2008 APPROX program committee
- Served on 2008 INFORMS Nicholson prize committee
- Serving on 2009 INFORMS Nicholson prize committee
- MPS, Council Member for Publications
- SIGACT/ACM, Executive Committee Awards Coordinator
- Communications of the ACM, coordinator for research contributions for theoretical computer science
- SIAM J. on Discrete Math, Editorial Board
- Mathematics of Operations Research, Editorial Board

Publications

- "A constant approximation algorithm for the one-warehouse-multi-retailer Problem," with R. Levi, R. Roundy, and M. Sviridenko, *Management Science*, 54(4), 2008, 763-776.
- "A constant approximation algorithm for the a priori traveling salesman problem", with Kunal Talwar, *Proceedings of the 13th MPS Conference on Integer Programming and Combinatorial Optimization*, 2008, 331-343.
- "Primal-dual schema for capacitated covering problems", with Tim Carnes, *Proceedings of the 13th MPS Conference on Integer Programming and Combinatorial Optimization*, 2008, 288-302.
- “Fault-tolerant facility location”, with Chaitanya Swamy. *ACM Transactions on Algorithms* 4(4): (2008)
- “Sum-of-ratios optimization with a capacity constraint”, with P. Rusmevichientong, and Z. J. Max Shen, to appear in *Operations Research Letters,* June 2009.

Lectures

- “Primal-dual approximation algorithms for capacitated covering problems,” Technical University of Eindhoven, October 2008.
- “Approximation algorithm for stochastic optimization problems,” (4-hour tutorial), New Algorithmic Paradigms in Optimization, ETH-Zurich, July 2008.

- “A constant approximation algorithm for the *a priori* TSP”, New Algorithmic Paradigms in Optimization, Ascona, July 2008.

Name: **Eva Tardos**
Title: Professor
Office: Upson Hall, Room 4130
Phone: 607/255-0984
Email: eva@cs.cornell.edu

University Activities

- Chair, Computer Science Dept

Professional Activities

- Editor-in-chief, *SIAM Journal on Computing,* 2004-2009.
- 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, Informatick, Saarbrücken, Germany.
- Member, Scientific Advisory Panel, Field's Institute, Toronto, Canada.
- Member, SIGACT Executive Committee 20031-2009.

Publications

- *Parallel Imaging Problem*, Thanh Nguyen and E. Tardos, in the Proceedings of the European Symposium on Algorithms, 2008. 684-695
- *Strategic Network Formation with Structural Holes*, Jon Kleinberg, Sid Suri and Eva Tardos, in the proceedings of the ACM Conference on Electronic Commerce 2008. 284-293.
- *Multiplicative Updates Outperform Generic No-Regret Learning in Congestion Games,* Robert Kleinberg, Georgios Piliouras, and Eva Tardos. In the proceedings of the ACM Symposium on Theory of Computing, 2009. 533-542
- *Approximating the Smallest k-Edge Connected Spanning Subgraph by LP-Rounding*. Michel Goemans, Hal Gabow, Eva Tardos, and David Williamson, *Networks*, Volume 53, Issue 4, 2009, Pages: 345-357.
- *The Price of Stability for Network Design with Fair Cost Allocation*. Elliot Anshelevich, Anirban Dasgupta, Jon M. Kleinberg, Éva Tardos, Tom Wexler, Tim Roughgarden: *SIAM J. Comput*. 38(4): 1602-1623 (2008)
- *Near-Optimal Network Design with Selfish Agents*. Elliot Anshelevich, Anirban Dasgupta, Éva Tardos, Tom Wexler: *Theory of Computing* 4(1): 77-109 (2008)

Lectures

- The price of anarchy and learning in congestion games, *Building Bridges, August 2008.*
- Games in Networks: the price of anarchy, stability, and learning. Department of Computational and Applied Mathematics Special Lecture, Rice University, October 2008.
- *Price of anarchy and learning,* Bonn Workshop on Combinatorial Optimization, November 2008.

- *Price of anarchy and learning in congestion game,* Computer Science Distinguished colloquium, Princeton December 2008.
- *Multiplicative update learning in congestion games,* Computer Science Theory Seminar, Princeton December 2008.
- *Games in Networks: the price of anarchy, stability, and learning (a sequence of four talks)*, The Operations Research Seminar *at* Zinal, Switzerland, January 2009.
- *Learning outcomes in (congestion) games,* Bellairs Workshop on Algorithmic Game Theory, March 2009
- *Ad Auction Nash Equilibria with Conservative Bidders,* Andras Frank 60, Budapest June, 2009.
- *Quality of Learning Outcomes in (Congestion) Games,* Séminaire Parisien de théorie des jeux, Paris June 2009.
- *Quality of Learning Outcomes in (Congestion) Games,* ELSE Workshop on Search, Mechanism Design and the Internet, at University College London, June 2009.

New Honors

- Elected to the National Academy of Engineering
- Dantzig Prize (2006)
- Fellow, American Academy of Arts and Sciences
- Fellow, Association of Computing Machinery
- Fellow, INFORMS
- Fellow, SIAM
- 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)

Name: **Charlie Van Loan**
Title: Professor
Office: Upson Hall, Room 5153
Phone: (607)255-5418
Email: cv@cs.cornell.edu

Professional Activities

- **NSF Workshop on Future Directions in Tensor-Based Computation and Modeling** Feb 20-21 (Organizer)

Publications

- C.D. Moravitz Martin and C.F. Van Loan. A Jacobi-Type Method for Computing Orthogonal Tensor Decompositions. *SIAM J. Matrix Anal. Appl.*. Volume 30, No.3 (2008).

Lectures

- November 10 U Connecticut : Tensor Computations and Numerical Multilinear Algebra
- Feb 21: National Science Foundation:Tensor Networks and Large Scale Eigenvalue Computations
- April 22: Cornell Bring a Child to Work Day: Those Fabulous Hexagons

New Honors

- SIAM Fellow Merrill Presidential Award (Faculty mentor for Adam Elmachtoub)

Name: **Robbert VanRenesse**
Title: Principal Research Scientist
Office: Upson Hall, Room 4119A
Phone: 607/255-1021
Email: rvr@cs.cornell.edu

Professional Activities

- 23rd International Symposium on DIStributed Computing (DISC 2009) (Program Committee member)
- 8th Symposium on Operating Systems Design and Implementation (OSDI 2008) (Program co-chair.)

Publications

- Robbert van Renesse. Programming Models: Client-Server, Process Groups and Peer-to-Peer. Wiley Encyclopedia of Computer Science and Engineering. Benjamin W. Wah (ed.). Wiley. January 2009.
- Jong Hoon Ahnn, Ken Birman, Krzysztof Ostrowski, and Robbert van Renesse. Using Live Distributed Objects for Office Automation. ACM/IFIP/USENIX 9th International Middleware Conference. September 2008.
- Yee Jiun Song and Robbert van Renesse. Bosco: One-Step Byzantine Asynchronous Consensus. 22nd International Symposium on Distributed Computing (DISC 08). September 2008.
- Robbert van Renesse, Dan Dumitriu, Valient Gough, and Chris Thomas. Efficient Reconciliation and Flow Control for Anti-Entropy Protocols. Large-Scale Distributed Systems and Middleware (LADIS 2008). September 2008.
- Robbert van Renesse, Rodrigo Rodrigues, Mike Spreitzer, Christopher Stewart, Doug Terry, and Franco Travostino. Challenges Facing Tomorrow's Datacenter: Summary of the LADiS Workshop. Large-Scale Distributed Systems and Middleware (LADIS 2008). September 2008.
- Ken Birman, Gregory Chockler, and Robbert van Renesse. *Toward a cloud computing research agenda*. SIGACT News. Idit Keidar (ed.). ACM. June 2009.

Lectures

- "On Elections and Undecided States," European Research Council Symposium, April 28, 2009
- "Trials and Tribulations in Scaling Distributed Systems," Microsoft Asia 10th Anniversary Workshop, Nov 3, 2008, Beijing.
- "Refining Consensus," Peking University, Nov 5, 2008, Beijing.
- "Trials and Tribulations in Scaling Distributed Systems," Asia-Pacific Regional Workshop on Internet Services and Cloud Computing, Nov 6, 2008, Beijing.

Name: **Hakim Weatherspoon**
Title: Prof Asst
Office: Upson Hall, Room 4105C
Phone: (607)254-1257
Email: hweather@cs.cornell.edu

Professional Activities

- Co-PC Chair for ACM SIGOPS International Workshop on Large-Scale Distributed Systems and Middleware (LADIS) 2009
- ACM Symposium on Operating Systems Principles (SOSP), Scholarship Committee 2007
- USENIX Symposium on Operating Systems Design and Implementation (OSDI) 2008
- USENIX Conference on File and Storage Technologies (FAST) 2008
- USENIX Workshop on Hot Topics in System Dependability (HotDep) 2008
- IEEE International Symposium on Network Computing and Applications (NCA) 2008
- IEEE Workshop on Decentralized Self Management for Grids, P2P, and User Communities (SELFMAN) 2008
- IEEE International Conference on Distributed Computing Systems (ICDCS) 2009
- International Workshop on Peer-to-Peer Systems (IPTPS) 2009
- Workshop on Architecting Dependable Systems (WADS) 2009
- International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS) 2009

Publications

- Smoke and Mirrors: Mirroring Files at a Geographically Remote Location Without Loss of Performance, Hakim Weatherspoon, Lakshmi Ganesh, Tudor Marian, Mahesh Balakrishnan, and Ken Birman. Appears in *Proceedings of the 8th USENIX Conference on File and Storage Technologies (FAST '09)*, February 2009. San Francisco, CA.
- Smoke and Mirrors: Shadowing Files at a Geographically Remote Location Without Loss of Performance, Hakim Weatherspoon, Lakshmi Ganesh, Tudor Marian, Mahesh Balakrishnan, and Ken Birman. Appears in *Large-Scale Distributed Systems and Middleware (LADIS '08)*, September 15-17, 2008. Yorktown, NY.

Lectures

- Smoke and Mirrors: Mirroring Files at a Geographically Remote Location Without Loss of Performance, Hakim Weatherspoon, Lakshmi Ganesh, Tudor Marian, Mahesh Balakrishnan, and Ken Birman. Appears in *Proceedings of the 8th USENIX Conference on File and Storage Technologies (FAST '09)*, February 2009. San Francisco, CA.

New Honors

- Black Engineer of the Year, Modern Day Technology Leader (2009)

Name: **Walker White**
Title: Research Associate
Office:
Phone: (607)255-2969
Email: wmwhite@cs.cornell.edu

Professional Activities

- Program Committee, FDG 2009
- Program Committee Co-Chair, 12th Annual Legacy of R.L. Moore Conference
- Faculty Advisor, Digital Gaming Alliance

Publications

- Marcos Vaz Salles, Tuan Cao, Benjamin Sowell, Alan Demers, Johannes Gehrke, Christoph Koch, and Walker White, An Evaluation of Checkpoint Recovery for Massively Multiplayer Online Games. In Proc. of the 2009 VLDB Conf. on Very Large Databases (VLDB 2009).
- Walker White, Christoph Koch, Johannes Gehrke, and Alan Demers Better Scripts, Better Games. In ACM Queue, January 2009 (Also in Communications of the ACM, March 2009).
- Nitin Gupta, Alan Demers, Johannes Gehrke, Philipp Unterbrunner, and Walker White, Scalability for Virtual Worlds. In Proc. of the 2009 ICDE Conf. on Data Engineering (ICDE 2009).
- Benjamin Sowell, Alan Demers, Johannes Gehrke, Nitin Gupta, Haoyuan Li, and Walker White, From Declarative Languages to Declarative Processing in Computer Games. In Proc. of the 2009 CIDR Conf. on Innovative Data Systems Research (CIDR 2009).

Lectures

- Database Research in Computer Games. Tutorial Session at 2009 ACM SIGMOD Int. Conf. on Management of Data (SIGMOD 2009).
- Creating and Managing an Academic Games Program. Panel Session at 4th Annual Foundations of Digital Games (FDG 2009).
- Moderator, Researchers Roundtable, Austin Games Developer Conference (AGDC 2008)

Name: **Ramin Zabih**
Title: Professor of Computer Science and Radiology
Office: 4158 Upson Hall
Phone: 607-255-8413
Email: rdz@cs.cornell.edu

Professional Activities

- Editor-in-chief, IEEE Transactions on Pattern Analysis and Machine Intelligence
- Area chair, International Conference on Computer Vision, 2009

Publications

- Special issue on Discrete Optimization in Computer Vision, *Computer Vision and Image Understanding*, October 2008

Lectures

- Keynote speaker, British Machine Vision Conference, August 2008
- Keynote speaker, IAPR Workshop on Graph-based Representations in Pattern Recognition, May 2009
- Harvard Statistics Colloquium, May 2009
- MIT Vision Group, February 2009
- Satellite Symposium, Human Brain Modeling Conference, June 2009