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EDUCATION

Graduate

2002 - 2007. Ph.D., Cognitive Psychology / Quantitative, University of California, Los Angeles
Advisors: Keith Holyoak, John Hummel
Thesis topic: Feature-Based vs. Relational Category Learning: A Dual Process View

Undergraduate

1994 - 1998. B.A. (Honors), Psychology, Computer Science, Cognitive Science, Princeton University

POSITIONS

2009 - Assistant Professor, Human-Computer Interaction Institute, Carnegie Mellon University
2007 - 2009 Postdoctoral fellow, Human-Computer Interaction Institute, Carnegie Mellon University
2006 - 2008 Visiting researcher, Palo Alto Research Center
1999 - 2001 Senior interaction designer, Sapient Corporation
1998 - 1999 Senior engineer, Sapient Corporation

REFEREED PUBLICATIONS AND PROCEEDINGS

1. Zhu, H., Kraut, R.E., Kittur, A. (*in press*). Organizing without formal organization: Group identification, goal setting and social modeling in directing online production. *CSCW 2012: Proceedings of the ACM Conference on Computer-Supported Cooperative Work*. New York: ACM Press. Total submission acceptance rate: 27%
2. Zhu, H., Kraut, R.E., Kittur, A. (*in press*). Effectiveness of shared leadership in online communities. *CSCW 2012: Proceedings of the ACM Conference on Computer-Supported Cooperative Work*. New York: ACM Press. Total submission acceptance rate: 27% **Best paper nomination**
3. Forte, A., Kittur, A., Larco, V., Zhu, H., Bruckman, A., Kraut, R.E. (*in press*). Coordination and beyond: Social functions of groups in open content production. *CSCW 2012: Proceedings of the ACM Conference on Computer-Supported Cooperative Work*. New York: ACM Press. Total submission acceptance rate: 27%
4. Kittur, A., Khamkar, S., Kraut, R.E. (*in press*). CrowdWeaver: Visually managing complex crowd work. *CSCW 2012: Proceedings of the ACM Conference on Computer-Supported Cooperative Work*. New York: ACM Press. Total submission acceptance rate: 27%
5. Rzeszotarski, J., Kittur, A. (*in press*). Predicting discarded work at the word level in Wikipedia. *CSCW 2012: Proceedings of the ACM Conference on Computer-Supported Cooperative Work*. New York: ACM Press. Total submission acceptance rate: 27%
6. Poldrack R.A., Kittur A., Kalar D., Miller E., Seppa C., Gil Y., Parker D.S., Sabb F.W., Bilder R.M. (*in press*). The Cognitive Atlas: Towards a knowledge foundation for cognitive neuroscience. *Frontiers in Neuroinformatics*.

7. Kittur, A., Smus, B., Khamkar, S., Kraut, R.E. (2011). CrowdForge: Crowdsourcing complex work. *UIST 2011: Proceedings of the ACM Symposium on User Interface Software and Technology*. New York: ACM Press. Acceptance rate: 25%
8. Rzeszotarski, J., Kittur, A. (2011). Instrumenting the crowd: Using implicit behavioral measures to predict task performance. *UIST 2011: Proceedings of the ACM Symposium on User Interface Software and Technology*. New York: ACM Press. Acceptance rate: 25%
9. Halfaker, A., Song, B., Stuart, D. A., Kittur, A., Riedl, J. (2011). NICE: Social translucence through UI intervention. *WikiSym 2011: The International Symposium on Wikis and Open Collaboration*. New York: ACM Press. Acceptance rate: 40%
10. Halfaker, A., Kittur, A., Riedl, J. (2011). Don't bite the newbies: Revertings effect on the quantity and quality of Wikipedia work. *WikiSym 2011: The International Symposium on Wikis and Open Collaboration*. New York: ACM Press. Acceptance rate: 40%
11. Rogstadius, J., Kostakos, V., Kittur, A., Smus, B., Laredo, J., Vukovic, M. (2011). An assessment of intrinsic and extrinsic motivation on task performance in crowdsourcing markets. *ICSWM 2011: Proceedings of the International AAAI Conference on Weblogs and Social Media*. Acceptance rate: 24%
12. Chau, D., Kittur, Hong, J., Faloutsos, C. (2011). Making Sense of Large Network Data: Combining Rich User Interaction and Machine Learning. *CHI 2011: Proceedings of the ACM Conference on Human-factors in Computing Systems*. New York: ACM Press. Acceptance rate: 26%
13. Cranshaw, J., Kittur, A. (2011). The Polymath Projects: Lessons from an experiment in large-scale online collaboration in mathematics. *CHI 2011: Proceedings of the ACM Conference on Human-factors in Computing Systems*. New York: ACM Press. Acceptance rate: 26%
14. Zhu, H., Kraut, R. E., Wang, Y., Kittur, A. (2011). Identifying Shared Leadership in Wikipedia. *CHI 2011: Proceedings of the ACM Conference on Human-factors in Computing Systems*. New York: ACM Press. Acceptance rate: 26%
15. Cranshaw, J., Toch, E., Hong, J., Kittur, A., and Sadeh, N. (2010). Bridging the Gap Between Physical Location and Online Social Networks. *UbiComp 2010: Proceedings of the 12th International Conference on Ubiquitous Computing*. New York: ACM Press. Acceptance rate: 19%
16. Balakrishnan, A., Fussell, S., Kiesler, S., Kittur, A. (2010). Pitfalls of Information Access with Visualizations in Remote Collaborative Analysis. *CSCW 2010: Proceedings of the ACM Conference on Computer-Supported Cooperative Work*. New York: ACM Press. Acceptance rate: 20%
17. Kittur, A., & Kraut, R. E. (2010). Beyond Wikipedia: Conflict and coordination in online production groups. *CSCW 2010: Proceedings of the ACM Conference on Computer-Supported Cooperative Work*. New York: ACM Press. Acceptance rate: 20%
18. Halfaker, A., Kittur, A., Kraut, R. E., Riedl, J. (2009). Quality, Experience and Ownership in WikiWork. *WikiSym 2009: The International Symposium on Wikis and Open Collaboration*. New York: ACM Press. Acceptance rate: 34% **Best paper nomination**
19. Kittur, A., Pendleton, B., Kraut, R. E. (2009). Herding the Cats: The Influence of Groups in Coordinating Peer Production. *WikiSym 2009: The International Symposium on Wikis and Open Collaboration*. New York: ACM Press. Acceptance rate: 34%
20. Kittur, A., Lee, B., Kraut, R. E. (2009). Coordination in Collective Intelligence: The Role of Team Structure and Task Interdependence. *CHI 2009: Proceedings of the ACM Conference on Human-factors in Computing Systems*. New York: ACM Press. Acceptance rate: 24%

21. Kittur, A., Suh, B., Chi, E. (2009). What's in Wikipedia? Mapping Topics and Conflict Using Collaboratively Annotated Category Links. *CHI 2009: Proceedings of the ACM Conference on Human-factors in Computing Systems*. New York: ACM Press. Acceptance rate: 24%
22. Kittur, A., Kraut, R. E. (2008). Harnessing the Wisdom of Crowds in Wikipedia: Quality Through Coordination. *CSCW 2008: Proceedings of the ACM Conference on Computer-Supported Cooperative Work*. New York: ACM Press. Acceptance rate: 23%, **Best paper nomination**
23. Kittur, A., Chi, E., Suh, B. (2008). Can You Ever Trust a Wiki? Impacting Perceived Trustworthiness in Wikipedia. *CSCW 2008: Proceedings of the ACM Conference on Computer-Supported Cooperative Work*. New York: ACM Press. Acceptance rate: 23%, **Best note award**
24. Kittur, A., Chi, E., Suh, B. (2008). Crowdsourcing User Studies With Mechanical Turk. *CHI 2008: Proceedings of the ACM Conference on Human-factors in Computing Systems*. New York: ACM Press. Acceptance rate: 18%
25. Suh, B., Chi, E., Kittur, A., Pendleton, B. (2008). Lifting the Veil: Improving Accountability and Social Transparency in Wikipedia with WikiDashboard. *CHI 2008: Proceedings of the ACM Conference on Human-factors in Computing Systems*. New York: ACM Press. Acceptance rate: 18%
26. Chi, E., Pirolli, P., Suh, B., Kittur, A., Pendleton, B. A., Mytkowicz, T. (2008). Augmented Social Cognition. *Proceedings of AAAI Spring Symposium on Social Information Processing*. AAAI Press.
27. Collier, B, Burke, M., Kittur, A., Kraut, R.E. (2008). Retrospective Versus Prospective Evidence For Promotion: The Case Of Wikipedia. *Academy of Management (OCIS) Proceedings*. Anaheim.
28. Suh, B., Chi, E., Pendleton, B. A., Kittur, A. (2007). Us vs. Them: Understanding Social Dynamics in Wikipedia with Revert Graph Visualizations. *VAST 2007: IEEE Symposium on Visual Analytics Science and Technology*.
29. Kittur, A., Suh, B., Pendleton, B. A., Chi., E. (2007). He Says, She Says: Conflict and Coordination in Wikipedia. *CHI 2007: Proceedings of the ACM Conference on Human-factors in Computing Systems*. New York: ACM Press. Acceptance rate: 25%
30. Kittur, A., Chi, E., Pendleton, B. A., Suh, B., Mytkowicz, T. (2007). Power of the Few vs. Wisdom of the Crowd: Wikipedia and the Rise of the Bourgeoisie. *Alt.CHI, 2007*. San Jose, CA. Acceptance rate: 25%
31. Kittur, A., Holyoak, K. J., & Hummel, J. E. (2006). Using Ideal Observers in Higher-order Human Category Learning. *Proceedings of the Twenty Eighth Annual Meeting of the Cognitive Science Society*. Vancouver, Canada. Acceptance rate (paper + presentation): 26%
32. Kittur, A., Hummel, J. E., & Holyoak, K. J. (2006). Ideals Aren't Always Typical: Dissociating Goodness-of-Exemplar From Typicality Judgments. *Proceedings of the Twenty Eighth Annual Meeting of the Cognitive Science Society*. Vancouver, Canada. Acceptance rate (paper + presentation): 26%
33. Green, C., & Kittur, A. (2006). Retrieval-Induced Forgetting in a Multiple-Trace Memory Model. *Proceedings of the Twenty Eighth Annual Meeting of the Cognitive Science Society*. Vancouver, Canada. Acceptance rate (paper + poster): 72%
34. Kittur, A., Hummel, J.E., & Holyoak, K.J. (2004). Feature- vs. Relation-Defined Categories: Probab(alistic)ly Not the Same. *Proceedings of the Twenty Sixth Annual Meeting of the Cognitive Science Society*. Chicago, IL. Acceptance rate (paper + presentation): 31%
35. Green, C., & Kittur, A. (2004). A Multiple-Trace Memory Model Exhibiting Realistic Retrieval Dynamics. *Proceedings of the Twenty Sixth Annual Meeting of the Cognitive Science Society*. Chicago, IL. Acceptance rate (paper + poster): 72%

36. Hummel, J.E., Holyoak, K.J., Green, C., Doumas, L.A.A., Devnich, D., Kittur, A., & Kalar, D.J. (2004). A Solution to the Binding Problem for Compositional Connectionism. In S.D. Levy & R. Gayler: *Compositional Connectionism in Cognitive Science: Papers from the AAAI Fall Symposium*. Menlo Park, CA: AAAI Press.
37. Lee, M. K., Borchelt, D. R., Kim, G., Thinakaran, G., Slunt, H. H., Ratovitski, T., Martin, L. J., Kittur, A., Gandy, S., Levey, A. I., Jenkins, N., Copeland, N., Price, D. L., & Sisodia, S. S. (1997). Hyperaccumulation of FAD-linked presenilin 1 variants in vivo. *Nature Medicine*, 3, 756-60.

REFEREED WORKSHOP PAPERS, PRESENTATIONS AND POSTERS

1. Kittur, A., Smus, B., Kraut, R. E. (2011). CrowdForge: A Framework for Crowdsourcing Complex Work. *CHI 2011 Extended Abstracts*.
2. Collier, B, Burke, M., Kittur, A., Kraut, R.E. (2010). Promoting Good Management: Governance, Promotion, and Leadership in Open Collaboration Communities. *Proceedings of the International Conference on Information Systems*, St. Louis, MI.
3. Miller, E., Seppa, C., Kittur, A., Sabb, F., Poldrack, R. A. (2010). The Cognitive Atlas: Employing Interaction Design Processes to Facilitate Collaborative Ontology Creation. *WWW 2010, Workshop on the Future of the Web for Collaborative Science*.
4. Chau, D., Kittur, A., Faloutsos, C., Hong, J. (2010). Supporting Sensemaking in Large Network Data. *27th Army Science Conference (Demo)*. Orlando, FL.
5. Chau, D., Kittur, A., Faloutsos, C., Hong, J. (2009). SHIFTR: A Fast and Scalable System for Ad Hoc Sensemaking of Large Graphs. *KDD 2009 (Demo)*. Paris, France.
6. Kittur, A., Chau, D., Hong, J., Faloutsos, C. (2009). Supporting Ad Hoc Sensemaking: Integrating Cognitive, HCI, and Data Mining Approaches. *CHI 2009, Workshop on Sensemaking*. Boston, MA.
7. Chi, E., Kittur, A., Mytkowicz, T., Pendleton, B., Suh, B. (January 2007). Augmented social cognition: Understanding social foraging and social sensemaking. *HCIC, 2007*. Fraser, CO.
8. Kittur, A., Holyoak, K. J. (November 2006). Dissociating typicality and goodness judgments: Category-based differences. *Poster presented at the 47th Annual Meeting of the Psychonomic Society, 2006*. Houston, TX.
9. Kittur, A., Hummel, J. E., Holyoak, K. J. (November 2005). Differential Effects of Working Memory Load on Encoding and Use of Relational Concepts. *Poster presented at the 46th Annual Meeting of the Psychonomic Society, 2005*. Toronto, Canada.
10. Kittur, A., Holyoak, K. J., Hummel, J. E. (November 2005). Ideals and Typicality in Relational Categories: A Double Dissociation. *Poster presented at the 46th Annual Meeting of the Psychonomic Society, 2005*. Toronto, Canada.
11. Kittur, A., Green, C., & Bjork, R.A. (July 2004). A Need Based Model of Human Memory Retrieval. *Poster presented at the American Psychological Association Annual Meeting, 2004*. Honolulu, HI.

PRESS

[“Mathematics becomes more sociable”](#). NewScientist, about the Polymath Projects, May, 2011.

Press relating to CrowdForge and crowdsourcing science journalism (mybossisarobot.com):

[“I, reporters”](#). The Economist, February, 2011.

[“Silicon supervisor gets the job done online”](#). NewScientist, February, 2011.

[“Can This Journalist Be Replaced by Software and Mechanical Turk?”](#). Technology Review, February, 2011.

[“Carnegie Mellon Researchers Find Crowds Can Write as Well as Individuals”](#). The Chronicle of Higher Education, February, 2011.

[“Content Farms 2.0: Can Robots Help Write the News?”](#). GigaOm, February, 2011.

[“News just in - crowdsourced articles are better than single-author efforts”](#). News.com.au, February, 2011.

[“CMU’s CrowdForge taps the collective power of millions”](#). PopCity, February, 2011.

[“Crowd workers are not online Shakespeares, but Carnegie Mellon research shows they can write”](#). ScienceBlog, February, 2011.

[“CrowdForge Experiment Success through Carnegie Mellon University”](#). The Daily CrowdSource, February 2011.

[“Many hands do the work”](#). News Observer, February, 2011.

ACM TechNews, February, 2011.

[“Wikipedia – not the devil”](#). The Current, February, 2011

[“What social networks reveal about interaction”](#). Irish Times, about Wikipedia and Wikidashboard.

[“Three Principles for Clinical Research.”](#) NIMH Director’s Blog, about the Cognitive Atlas.

[“Wikipedia Opens Semi-Protected Articles to Editors.”](#) NPR To The Point Interview, June, 2010.

[“Who writes Wikipedia articles?”](#) Discovery News, March, 2010 (also reported in MSNBC)

[“Volunteers log off as Wikipedia ages”](#). Wall Street Journal, November, 2009 (also reported in ACM TechNews, OPA Intelligence Report, Galileu, and more)

[“Experimenting on Mechanical Turk”](#). Slashdot.org, October, 2009 (cited from [IT World](#), also cited in GenomeWeb.)

[“Can You Trust Crowd Wisdom?”](#). Technology Review, September 2009 (also reported in ACM TechNews, Tech News World)

[“Tool Shows the Arguments Behind Wikipedia Entries.”](#) Slashdot.org, February 2009.

[“Who’s Messing with Wikipedia?”](#) Technology Review, February 2009.

“CMU Does Research on Cloud Computing”. ACM TechNews, December 2008.

[“Amazon’s Mechanical Turk Used for Fraudulent Activities”](#). ReadWriteWeb, August 2008.

[“The Wisdom of the Chaperones”](#). Slate, February 2008.

“Wikimedia Pegs Future on Education, Not Profit”. San Francisco Chronicle, 2008.

[“The More the Wikier”](#). Nature News, February 2007.

“How Companies Can Make the Most of User-Generated Content”. McKinsey Quarterly, 2007.

INVITED TALKS

“Combining Minds: Making Sense of Information Together”, Stanford, 2011.

“Combining Minds: Making Sense of Information Together”. Tepper Business School, CMU, 2011.

“Combining Minds: Making Sense of Information Together”. Yahoo!, 2010.

“Combining Minds: Making Sense of Information Together”. HP, 2010.

“Crowdsourcing Complex Cognition”. Crowdsourcing & Translation Workshop, University of Maryland, 2010.

“Collaboratively Constructing Information Landscapes”. Google, 2010.

“Understanding Wikipedia: Social Collaborative Knowledge Building”. University of Pittsburgh School of Information Science, 2010.

“Combining Minds: Coordination and Social Sensemaking”. MIT CSAIL, 2010.

“Higher Order Distributed Cognition”. University of Pittsburgh Learning Research and Development Center, 2008.

“Understanding Large-Scale Social Collaborative Knowledge Building”. CMU HCII, 2007.

“The dynamics of decision making: Categorization, memory, and social collaboration”. CMU Dynamic Decision Making Lab, 2007.

“Conflict and power in collaborative knowledge systems: Understanding Wikipedia”. PARC ISL, 2007.

“Harnessing Social Collaboration”. UCLA CogFog, 2007.

“Understanding Collaborative Knowledge Systems: Wikipedia”. NASA Ames, 2006.

“Differences between relational and feature-based categories”. UCLA Cognitive Forum, 2006.

“Relation and Feature-Based Category Learning: A Dual-System View”. NASA Ames, 2005.

GRANTS, AWARDS AND FELLOWSHIPS

2011 - 2013	NSF SoCS: “Programming With Crowds: Models and Tools for General Purpose Crowdsourcing”. PI. 3 years, \$373k
2010 - 2012	Microsoft External Research Award: “Collaborative Knowledge Mapping”. PI. 2 years, \$248k
2011	NSF SoCS REU. PI. \$16k
2011	NSF VOSS REU. PI. \$12k
2010	Google Research Award: “Improving Online Search and Shopping Through Social Sensemaking”. PI. \$90k
2010	Future of Work Center Award: “Coordination in Crowd Sourcing and Distributed Collaboration”. PI. 1 year, \$70k
2010	CrowdFlower grant. PI. \$10k
2010	NSF VOSS REU. PI. \$16k
2010 - 2013	NSF SoCS: “Information Farming: Intelligent Interfaces for an Online Production Community”. PI. 3 years, \$750k
2009 – 2012	NSF VOSS: “Coordination in virtual organizations”. PI. 3 years, \$387k
2008 - 2013	NIH R01: “The Cognitive Atlas: Developing an Interdisciplinary Knowledge Base Through Social Collaboration”. Co-PI. 5 years, \$1.25M
2009	Best paper nomination, WikiSym
2008	Best note award, CSCW
2008	Best paper nomination, CSCW
2008	Research Institute for the Science of Socio-technical Systems Fellowship
2006, 2007	Palo Alto Research Center Summer Intern Fellowship
2005	UCLA Graduate Division Travel Award
2003 - 2006	National Science Foundation Graduate Research Fellowship
2003	UCLA Graduate Summer Research Mentor Fellowship
2002, 2007	Edwin Pauley Distinguished Fellowship
2002	UCLA Distinguished Achievement Fellowship

PEER REVIEW ACTIVITIES

ICWSM 2010 (Senior Program Committee, 2010, 2011)
CSCW 2008+ (Program Committee, 2008, 2011)
CHI 2007+ (Program Committee, 2009, 2011)
WikiSym 2009+ (Program Committee, 2009, 2010, 2011)
CrowdConf 2010 (Program Committee, 2010)
Hypertext 2010 (Program Committee, 2010)
ICIS 2010+
UIST 2009+
OSS 2009
Cognitive Science Society 2004 - 2006
Human Computer Interaction
International Journal of Human-Computer Studies
International Journal of Electronic Commerce
Journal of Computer Mediated Communication
Psychonomic Bulletin & Review
Transactions on Computer-Human Interaction

SERVICE

Dissertation Committees: Thomas LaToza, Ian Li, Leongwee Teo, Aruna Balakrishnan, Vamshi Ambati, Brian Lim. Polo Chau
2011 Hiring Committee, HCII, CMU
2011 Methods Redesign Committee, HCII, CMU
2010 - 2011 Ph.D. Admissions Committee, HCII, CMU
2009 Curriculum Committee, HCII, CMU
2008 FIRST LEGO Robotics Tournament (Judge, grades 6-8), National Robotics Engineering Center
2008 Chain Reaction Contraption Contest (Judge, grades 9-12), Carnegie Science Center
2006 - 2007 Diversity committee, Department of Psychology, UCLA
2004 - 2005 Cognitive forum speaker series organizer, Department of Psychology, UCLA

TEACHING EXPERIENCE

2011 Sensemaking: Cognitive, Social, and Technical Perspectives, CMU
2009 - 2010 Social Web, CMU
2009 HCI Methods, CMU
2011 Guest Lecturer, Case Studies: Measuring Social Media Content and Community Activity, CMU
2008, 2009 Guest Lecturer, Computer-Mediated Communication, CMU
2010 Guest Lecturer, The Social Web, University of Pittsburgh
2010 Guest Lecturer, Analysis of Social Media, CMU
2010 Guest Lecturer, Cognitive Science Perspectives in HCI, CMU
2006 Teaching Assistant, Psychology Research Methods, UCLA
2004, 2006 Teaching Assistant, Neural Network Laboratory, UCLA
2001 Instructor, Information Architecture Course, Sapient Corporation
1997 Developer, Computational modeling course development, Princeton University

INDUSTRY EXPERIENCE

1999 - 2001 Senior Information Designer, Sapient Corporation

- Designed novel information architectures for web-based projects, including the first commercial use of faceted tagging and prototypes of handheld wireless applications
- Clients include Hallmark, EXPN, wine.com, Thomas Weisel Partners, Scudder Capital, Conoco, Concentra, Prudential, Risk Management Solutions, Unibanco, AAA California
- Managed teams of up to 6 information designers, directed multidisciplinary projects involving >40 people including visual, information, content designers as well as software engineers

1998 - 2000 Senior Engineer, Sapient Corporation

- Implemented content management systems, ecommerce functionality, performance tuning, personalization engines, data migration, build and release processes
- Developed binding estimates and plans for sub-teams of 3-5 engineers

1999 - 2003 Founder, Co-Principal, Palm Tree Studios

- Managed and executed user research, information design, and visual design
- Clients include Williams Sonoma, Stryker Medical, OnTheSnow.com, City of Portland Triathlon, C3 Investments, Chemocentryx, Musselman Triathlon, Triathlon Informer, Neurocare CNY

REFERENCES

Dr. Keith J. Holyoak
 Professor of Psychology, University of California, Los Angeles
holyoak@lifesci.ucla.edu

Dr. John E. Hummel
 Professor of Psychology, University of Illinois, Urbana-Champaign
jhummel@psych.ucla.edu

Dr. Russell Poldrack
 Professor of Psychology, University of California, Los Angeles
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Dr. Ed H. Chi
 Senior Research Scientist, Palo Alto Research Center
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Dr. Stuart K. Card
 Senior Research Fellow, Palo Alto Research Center
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Dr. Robert Kraut
 Herbert A. Simon Professor of Human-Computer Interaction, HCII, CMU
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Dr. John Levine
 Professor of Psychology, University of Pittsburgh
jml@pitt.edu