

Michael D. Ekstrand, Ph.D

CURRICULUM VITAE

People and Information Research Team (PIReT)
Dept. of Computer Science
Boise State University
1910 University Drive
Boise, ID 83725-2055

michaelekstrand@boisestate.edu
<https://md.ekstrandom.net>
+1 (208) 426-5761

E D U C A T I O N

- Ph.D (2014), Computer Science, University of Minnesota, Minneapolis, MN. Thesis: *Towards Recommender Engineering: Tools and Experiments for Identifying Recommender Differences*. Advisers: John T. Riedl and Joseph A. Konstan
- B.S. (2007), Computer Engineering (With Distinction), Iowa State University, Ames, IA.

E M P L O Y M E N T H I S T O R Y

2016–present	Assistant Professor, Dept. of Computer Science, Boise State University Co-founder, People and Information Research Team (PIReT)
2014–2016	Assistant Professor, Dept. of Computer Science, Texas State University
2008–2014	Graduate Research Assistant, GroupLens Research, Dept. of Computer Science, University of Minnesota
Su 2012, F 2013	Instructor, University of Minnesota
Summer 2010	Research Intern, Autodesk Research , Toronto, CA
2007–2008, S 2011	Teaching Assistant, University of Minnesota
2005–2007	Undergraduate Research Assistant, Scalable Computing Laboratory, Ames Lab, Iowa State University

T E A C H I N G H I S T O R Y

Boise State University

Spring 2017	CS 597 (Recommender Systems); 13 students
Fall 2016	CS 410 / CS 510 (Databases); 28 students

Texas State University

Spring 2016	CS 3320 (Internet Software Development); 48 students CS 5369Q/4379Q (Recommender Systems); 26 students
Fall 2015	CS 4332 (Introduction to Database Systems); 39 students
Spring 2015	CS 5369Q/4379Q (Recommender Systems); 28 students CS 4350 (Unix Systems Programming); 32 students
Fall 2014	CS 4332 (Introduction to Database Systems); 50 students

In addition, I have supervised several independent study students.

Coursera

I co-created the Recommender Systems specialization on Coursera, along with its two previous single-class versions, with Joseph A. Konstan.

University of Minnesota

Fall 2013	CSCI 5980-1 (Introduction to Recommender Systems), co-taught with Joseph A. Konstan; also offered as a MOOC on Coursera.
-----------	--

Summer 2012	CSCI 1902 (Structure of Computer Programming II)
Spring 2011	CSCI 5125 (Collaborative and Social Computing), as teaching assistant
2007–2008	CSCI 1902 (Structure of Computer Programming II), as teaching assistant (3 terms)

M.S. Students Supervised

- Vaibhav Mahant (M.S. 2016, Texas State University; thesis: *Improving Top-N Evaluation of Recommender Systems*)
- Sushma Channamsetty (M.S. 2016, Texas State University; thesis: *Recommender Response to User Profile Diversity and Popularity Bias*)
- Mohammed Imran R Kazi (M.S. 2016, Texas State University; thesis: *Exploring Potentially Discriminatory Biases in Book Recommendation*)
- Shuvabrata Saha (M.S. 2016, Texas State University; co-advised with Dr. Apan Qasem; thesis: *A Multi-objective Autotuning Framework For The Java Virtual Machine*)

P U B L I C A T I O N S

Author formatting key: **myself**, advised student, other Boise State student. Citation counts from Microsoft Academic via Microsoft Cognitive Services.

Journal Publications

- Michael D. Ekstrand** and Michael Ludwig. 2016. Dependency Injection with Static Analysis and Context-Aware Policy. *Journal of Object Technology* 15, 1 (February 2016), pp 1:1–31. DOI:10.5381/jot.2016.15.5.a1.
- Joseph A. Konstan, J.D. Walker, D. Christopher Brooks, Keith Brown, and **Michael D. Ekstrand**. 2015. Teaching Recommender Systems at Large Scale: Evaluation and Lessons Learned from a Hybrid MOOC. *Transactions on Computer-Human Interaction* 22, 2, Article 10 (April 2015), 23 pages. DOI: 10.1145/2728171.
- Justin J. Levandoski, **Michael D. Ekstrand**, Michael J. Ludwig, Ahmad Eldawy, Mohamed F. Mokbel, and John T. Riedl. 2011. RecBench: Benchmarks for Evaluating Performance of Recommender System Architectures. *Proceedings of the VLDB Endowment* 4, 11 (August 2011), 911–920. Acceptance rate: 18%.
- Michael D. Ekstrand**, John T. Riedl, and Joseph A. Konstan. 2011. Collaborative Filtering Recommender Systems. *Foundations and Trends® in Human-Computer Interaction* 4, 2 (February 2011), pp 81–173. DOI:10.1561/1100000009.

Refereed Conference Publications

These are full papers published in peer-reviewed conference proceedings.

- Michael D. Ekstrand** and Vaibhav Mahant. 2017. Sturgeon and the Cool Kids: Problems with Top-N Recommender Evaluation. In *Proceedings of the 30th International Florida Artificial Intelligence Research Society Conference*.
- Michael D. Ekstrand**, Daniel Kluver, F. Maxwell Harper, and Joseph A. Konstan. 2015. Letting Users Choose Recommender Algorithms: An Experimental Study. In *Proceedings of the Ninth ACM Conference on Recommender Systems (RecSys '15)*. ACM. DOI:10.1145/2792838.2800195. Acceptance rate: 21%.
- Michael D. Ekstrand**, F. Maxwell Harper, Martijn C. Willemsen, and Joseph A. Konstan. 2014. User Perception of Differences in Recommender Algorithms. In *Proceedings of the Eighth ACM Conference on Recommender Systems (RecSys '14)*. ACM. DOI:10.1145/2645710.2645737. Acceptance rate: 23%.
- Joseph A. Konstan, J.D. Walker, D. Christopher Brooks, Keith Brown, and **Michael D. Ekstrand**. 2014. Teaching Recommender Systems at Large Scale: Evaluation and Lessons Learned from a Hybrid

MOOC. In *Proceedings of the First ACM Conference on Learning @ Scale (ACM L@S '14)*. ACM. DOI: 10.1145/2556325.2566244. Acceptance rate: 37%.

Tien T. Nguyen, Daniel Kluver, Ting-Yu Wang, Pik-Mai Hui, **Michael D. Ekstrand**, Martijn C. Willemsen, and John Riedl. 2013. Rating Support Interfaces to Improve User Experience and Recommender Accuracy. In *Proceedings of the Seventh ACM Conference on Recommender Systems (RecSys '13)*. ACM. DOI:10.1145/2507157.2507188. Acceptance rate: 24%.

Daniel Kluver, Tien T. Nguyen, **Michael Ekstrand**, Shilad Sen, and John Riedl. 2012. How Many Bits per Rating?. In *Proceedings of the Sixth ACM Conference on Recommender Systems (RecSys '12)*. ACM, pp 99–106. DOI:10.1145/2365952.2365974. Acceptance rate: 20%.

Justin J. Levandoski, Mohamed Sarwat, Mohamed F. Mokbel, and **Michael D. Ekstrand**. 2012. RecStore: An Extensible And Adaptive Framework for Online Recommender Queries Inside the Database Engine. In *Proceedings of the 15th International Conference on Extending Database Technology (EDBT '12)*. ACM, 86–96. DOI:10.1145/2247596.2247608. Acceptance rate: 23%.

Michael D. Ekstrand, Michael Ludwig, Joseph A. Konstan, and John T. Riedl. 2011. Rethinking The Recommender Research Ecosystem: Reproducibility, Openness, and LensKit. In *Proceedings of the Fifth ACM Conference on Recommender Systems (RecSys '11)*. ACM, 133–140. DOI: 10.1145/2043932.2043958. Acceptance rate: 27% (20% for oral presentation, which this received).

Michael Ekstrand, Wei Li, Tovi Grossman, Justin Matejka, and George Fitzmaurice. 2011. Searching for Software Learning Resources Using Application Context. In *Proceedings of the 24th Annual ACM Symposium on User Interface Software and Technology (UIST '11)*. ACM, 195–204. DOI: 10.1145/2047196.2047220. Acceptance rate: 25%.

Michael D. Ekstrand, Praveen Kannan, James A. Stemper, John T. Butler, Joseph A. Konstan, and John T. Riedl. 2010. Automatically Building Research Reading Lists. In *Proceedings of the Fourth ACM Conference on Recommender Systems (RecSys '10)*. ACM, 159–166. DOI:10.1145/1864708.1864740. Acceptance rate: 19%.

Michael D. Ekstrand and John T. Riedl. 2009. rv you're dumb: Identifying Discarded Work in Wiki Article History. In *Proceedings of the 5th International Symposium on Wikis and Open Collaboration (WikiSym '09)*. ACM, 10 pp. DOI:10.1145/1641309.1641317. Acceptance rate: 36% (Selected as Best Paper).

Short Papers

These are short research papers published in conference proceedings. They are also peer-reviewed.

Sushma Channamsetty and **Michael D. Ekstrand**. 2017. Recommender Response to Diversity and Popularity Bias in User Profiles. Short paper in *Proceedings of the 30th International Florida Artificial Intelligence Research Society Conference*.

Michael Ekstrand and John Riedl. 2012. When Recommenders Fail: Predicting Recommender Failure for Algorithm Selection and Combination. Short paper in *Proceedings of the Sixth ACM Conference on Recommender Systems (RecSys '12)*. ACM, 233–236. DOI:10.1145/2365952.2366002. Acceptance rate: 32%.

Other Publications

Workshop papers, position papers, posters, workshops, demos, and other publications. These have typically undergone some review, but are not fully-refereed scientific publications.

Michael D. Ekstrand and Maria Soledad Pera. 2017. The Demographics of Cool: Popularity and Recommender Performance for Different Groups of Users. In *RecSys 2017 Poster Proceedings*.

Michael D. Ekstrand. 2017. Challenges in Evaluating Recommendations for Children. In *Proceedings of the International Workshop on Children & Recommender Systems (KidRec) at RecSys 2017*

- Michael D. Ekstrand** and Amit Sharma. 2017. The FATREC Workshop on Responsible Recommendation. In *Proceedings of the 11th ACM Conference on Recommender Systems*.
- Michael D. Ekstrand** and Martijn C. Willemsen. 2016. Behaviorism is Not Enough: Better Recommendations through Listening to Users. In *Proceedings of the Tenth ACM Conference on Recommender Systems (RecSys '16)*. ACM. DOI:10.1145/2959100.2959179. Acceptance rate: 36% (Past, Present, and Future track).
- Jennifer D. Ekstrand and **Michael D. Ekstrand**. 2016. First Do No Harm: Considering and Minimizing Harm in Recommender Systems Designed for Engendering Health. In *Proceedings of the Workshop on Recommender Systems for Health at RecSys '16*.
- Michael D. Ekstrand**. 2014. Building Open-Source Tools for Reproducible Research and Education. In *Sharing, Re-use and Circulation of Resources in Cooperative Scientific Work*, a workshop at ACM CSCW 2014.
- Martijn Willemsen, Dirk Bollen, and **Michael Ekstrand**. 2011. UCERSTI 2: Second Workshop on User-Centric Evaluation of Recommender Systems and Their Interfaces. Workshop at the *Fifth ACM Conference on Recommender Systems (RecSys '11)*. ACM, 395–396. DOI:10.1145/2043932.2044020.
- Michael D. Ekstrand**, Michael Ludwig, Jack Kolb, and John T. Riedl. 2011. LensKit: a modular recommender framework. Demo presented at the *Fifth ACM Conference on Recommender Systems (RecSys '11)*. ACM, 349–350. DOI:10.1145/2043932.2044001.

R E S E A R C H F U N D I N G

Internal Grants

- 2014: Texas State University Research Enhancement Program (competitive internal research grant), \$8000: *Temporal Analysis of Recommender Systems*.

I N V I T E D T A L K S

- November 21, 2016: ‘Recommending for People’ colloquium at the University at Albany Dept. of Computer Science.
- October 27, 2016: ‘Introduction to Recommender Systems’ at the Clearwater Developer Conference.
- September 20, 2015: ‘Challenges in Scaling Recommender Systems Research’ at the Workshop on Large-Scale Recommender Systems at RecSys '15 in Vienna, Austria.
- September 19, 2015: ‘Levelling Up your Academic Career’ at the Doctoral Symposium at RecSys '15 in Vienna, Austria.
- 2012: ‘Flexible Recommender Experiments with LensKit’ at the RecSys Challenge Workshop at RecSys '12 in Dublin, Ireland.
- 2012: ‘The MovieLens Data Set’ (invited talk) at the RecSys Challenge Workshop at RecSys '12 in Dublin, Ireland.

S O F T W A R E

I have built several open-source software packages in the course of my research and other work. Open-source software distribution is a key piece of my research dissemination strategy. My more significant development efforts include:

- *LensKit*, a toolkit for building, researching, and studying recommender systems. LensKit has been used in over 20 published papers. <http://lenskit.org>
- *Grapht*, a dependency injection framework for Java with novel configuration and static analysis capabilities. <http://grapht.grouplens.org>
- *Goanna* (now defunct), a graphical tool for visualizing InfiniBand networks and compute clusters. Written while at the Scalable Computing Laboratory.

S E R V I C E

Professional Service

- General chair, ACM RecSys 2018
- Track co-chair, 2018 *Conference on Fairness, Accountability, and Transparency* Systems track
- Distinguished Reviewer, *ACM Transactions on Interactive Intelligent Systems* (2017–present)
- Steering committee member, *ACM Conference on Recommender Systems*, 2017–present
- Steering committee member, *Conference on Fairness, Accountability, and Transparency*, 2017–present
- Organizer, FATREC Workshop on Responsible Recommendation at RecSys 2017
- Publicity co-chair, ACM RecSys 2016
- Program committee, ACM WWW Track on Behavior Analysis and Personalization (2016, 2017)
- External advisor, CrowdRec (EU Framework Programme collaborative research project, 2014–2016)
- Program committee, ACM RecSys (2014, 2015, 2016) and poster session (2016)
- Program committee, FLAIRS Special Track on Recommender Systems (2015, 2016, 2017)
- Proceedings co-chair, ACM CHI 2012–2013
- Demos co-chair, ACM RecSys 2012
- Reviewer for numerous conferences and journals, including:
 - ACM conferences CHI (2015, 2013, 2016, 2017), CSCW (2015, 2017), IUI (2017), SAC Recommender Systems track (2013, 2017), UIST (2012, 2016), WikiSym (2012)
 - Workshops at ACM RecSys: IntRS (2016–2017), LSRS (2016), KidRec (2017)
 - ICWSM 2012
 - ACM journals TIST, TOIS, TWEB, TKDD, and TIIS
 - IEEE journals TDSC, TKDE
 - International Conference on Service-Oriented Computing (2016)
 - *PLOS ONE* (2016)
 - *User Modeling and User-Adapted Interaction*
 - *Information Retrieval Journal*
 - *ACM Computing Surveys* (2014, 2015)
 - *User Modeling*
 - *Artificial Intelligence Review* (Springer)
 - Hindawi journals *Advances in Multimedia*, *Advances in Artificial Intelligence*
 - *International Journal of Artificial Intelligence Tools* (2016)
 - JMLR Open Source (2016)
 - *IBM Journal of Research and Development* (2016)

Department and University Service

- Boise State CS Dept. Graduate Recruiting Committee (2017–)
- Texas State CS Dept. Undergraduate Committee (2014–2016)
- Texas State CS Dept. Written Comp Exam Grading (2014–2016)
- UMN CS Graduate Student Association secretary (2009–2010)

Community Service

- Judge, 2015 Travis Elementary School Science Fair