

Matthew Ryan Mitsui

Rutgers University
57 US Highway 1, New Brunswick, NJ 08901-8554
Tel: +1-609-247-5294
mmitsui@rutgers.edu; <http://www.linkedin.com/in/matthewmitsui>

EDUCATION Rutgers University Graduate School of New Brunswick, NJ Expected 5/2018
Ph.D., Computer Science

Rutgers University School of Arts and Sciences, New Brunswick, NJ 5/2011
B.S., Computer Science, B.A., Philosophy, GPA: 3.936

RELEVANT PROJECTS

Information Seeking Intentions

School of Communication & Information Research Project, Fall 2015 – present

- Integrated eye tracking, video capture, and browser logging hardware and software technologies to support the collection of search behavior in a lab setting
- Collecting data from 48 participants in 2-hour lab sessions, across 4 task types
- Co-designed a novel questionnaire and interface for inquiring to participants about their information seeking intentions

Collaborative Information Seeking in Classrooms

School of Communication & Information Research Project, Spring 2015 – Fall 2015

Improved existing software framework to support the analysis of live, multi-user, long-term collaborative search behavior

Marked progress and deadlines with 2 collaborators

Designed a scalable, flexible software infrastructure as a code base for future user studies

Mentored an undergraduate student in development for the code base

Educational Collaborative Information Seeking

School of Communication & Information Research Project, Summer 2014 – Fall 2014

- Capturing users' assessments of information quality in a collaborative setting
- Designing applications and backend database support for a lab study
- Marking progress and deadlines with an overseas collaborator

Essay Writing in Individual Exploratory Search

School of Communication & Information Research Project, Summer 2014

- Co-designed a live study to capture user search behavior in exploratory search tasks
- Extracting user profile features from search session data, clickthrough data, and query logs
- Mining user similarities and differences with clustering techniques
- Presented the results in a paper

Stance and Rationale in Online Arguments

Computer Science Independent Study/Research In Computer Science, Fall 2013 – Spring 2014

- Co-designed the experimental layout of a human annotation task for detecting the stance and rationale of arguments
- Programmed the Mechanical Turk interface for the experiment
- Co-analyzed results with distributional statistics and text classification
- Integrated data and analysis into a co-authored paper

PUBLICATIONS Mitsui, M. and Shah, C. 2017. Query Generation as Result Aggregation for Knowledge Representation. In Proceedings of the 50th Hawaii International Conference on System Sciences (HICSS). January 4-7, 2017. Waikoloa, HI.

Rha, E., **Mitsui, M.**, Belkin, N., and Shah, C. 2016. Exploring the Relationships Between Search Intentions and Query Reformulations. In the proceedings of the Association for Information Science and Technology (ASIST) Annual Meeting. October 14-18, 2016. Copenhagen, Denmark.

Mitsui, M., Shah, C., and Belkin, N. 2016. Extracting Information Seeking Intentions for Web Search Sessions. In *Proceedings of the 39th International ACM SIGIR conference on Research and Development in Information Retrieval (SIGIR '16)*. ACM, New York, NY, USA, 841-844.

Mitsui, M. and Shah, C. 2016. Coagmento 2.0: A System for Capturing Individual and Group Information Seeking. In *Proceedings of the 16th ACM/IEEE-CS on Joint Conference on Digital Libraries (JCDL '16)*. ACM, New York, NY, USA, 233-234.

Knight, S. and **Mitsui, M.** 2015. Temporal Analysis in Epistemic SCIS Tasks. In Proceedings of the 2015 Workshop on Evaluation on Collaborative Information Retrieval and Seeking (ECol 15). ACM, New York, NY, USA, 15-16.

Mitsui, M. 2015. Query Recommendation as Query Generation. In Proceedings of the BCS-IRSG 6th Symposium on Future Directions in Information Access (FDIA 2015). Greece, August-September 2015. Electronic Workshops in Computing.

Mitsui, M. and Shah, C. 2015. A Subtopic Diversification Approach to Query Recommendation in Exploratory Search. In the 9th Annual Machine Learning Symposium. New York, NY, USA, March 2015. New York Academy of Sciences.

Ghosh, D., Muresan, S., Wacholder, N., Aakhus, M., and **Mitsui, M.** 2014. Analyzing Argumentative Discourse Units in Online Interactions. In *Proceedings of the First Workshop on Argumentation Mining*, pages 39-48, Baltimore, Maryland, June 2014. Association for Computational Linguistics.

WORK EXPERIENCE

Rutgers University, School of Communication & Information

Research Fellow, July 2014 – present

- Investigating individual and collaborative user search behavior in exploratory search tasks
- Co-designing live studies to capture search behavior
- Co-analyzing data with significance testing, time-series analysis, clustering, and other machine learning techniques

Rutgers Perceptual Science IGERT

Ph.D. Student and Stipend Fellow, September 2011 – August 2012

- Engaged in required, multidisciplinary coursework and collaborated with students of different disciplines on course projects
- Attended weekly presentations given by professors in fields like Computer Science and Psychology

Rutgers DIMACS Research Experience for Undergraduates

SVG and Python Programmer, June 2010 – July 2010

- Programmed interactive animations for graph algorithms in SVG
- Met with advisor on regular basis to acquire new assignments
- Officially worked for DIMACS June 2010 – July 2010
- Will program an analogous iPad app
- Will publish a paper on the work (still working with advisor outside of the DIMACS program)

National Security Agency

Computer Science Internship Program, June – August 2011

- Participated in an exciting 12-week intensive hands-on summer program at NSA for high achieving students of Computer Science
- Contributed to NSA's mission through an assigned project
- Completed project with a short presentation and technical paper

**TEACHING
EXPERIENCE**

Rutgers University, Department of Computer Science

Academic Year Teaching Assistant (Fall 2012-Spring 2013: Undergrad Algorithms, Fall 2013-Spring 2014: Systems Programming), September 2012 – June 2014

Rutgers University, Department of Computer Science

Peer Leader for Introduction to Computer Science, January – May 2011

**TECHNICAL
SKILLS**

*Programming
Languages*

Python (incl. NumPy, pandas, gensim, NLTK, luigi, and scikit-learn packages), R, PHP, Java (incl. JOGL and Android extensions), C, C++ (incl. OpenGL and Qt extensions), MySQL, MATLAB, CSS, JavaScript (incl. jQuery), Bootstrap, HTML, SQLite

Applications

Weka, Mechanical Turk, GitHub, Eclipse, Sequel Pro, MAMP, Morae Recorder/Observer/Manager, PyCharm, PHPStorm, Qt Creator, Qt Designer, Asana, Etherpad, Screenium, Trello, FileZilla

Hardware

GazePoint GP3 Eye Tracker, Mirametrix S2 Eye Tracker, Logitech HD Pro Webcam, Olympus VN-7000 Digital Voice Recorder

Relevant

Coursework

Natural Language processing (2 semesters), Machine Learning, Intro to Artificial Intelligence, Formal Languages and Automata, Numerical Analysis, Digitally Mediated Storytelling, Principles of Programming Languages, Computer Graphics I and II, Video Game Design and Programming, Design and Analysis of Computer Algorithms, Operating System Design, Internet Technology, Software Engineering
Operating Systems Mac OS X 10.4-12, Windows XP and 7, Linux (Fedora, Ubuntu)

**PROFESSIONAL
DEVELOPMENT
AND SERVICE**

Reviewer for iConference (2017)

Participant in the Autumn School for Information Retrieval and Information Foraging (ASIRF 2016)

Reviewer for the International Journal of Human-Computer Studies (2016)

Reviewer for CSCW (2016)

Student Volunteer the ACM Recommender Systems Conference (RecSys 2016)

Student Volunteer the Special Interest Group on Information Retrieval Conference (SIGIR 2016)

Reviewer for iConference (2016)

Student Volunteer at the Conference on Human Information Interaction and Retrieval (CHIIR 2016)

Student Volunteer at the International Conference on the Theory of IR (ICTIR 2015)

Participant at the European Summer School of Information Retrieval (ESSIR 2015)

Participant at the Lisbon Machine Learning School (LxMLS 2013)