James R. Wright

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Education

2010–2016	Doctor of Philosophy (Computer Science) Dissertation: Modeling Human Behavior in Strategic Settings ACM SIGecom Doctoral Dissertation Award (Honorable Mention) University of British Columbia, Canada
2007–2010	Master of Science (Computer Science) Thesis: Beyond Equilibrium: Predicting Human Behaviour in Normal Form Games University of British Columbia, Canada
1995–2000	Bachelor of Science (Computing Science) Simon Fraser University, Canada

Research Interests

My primary research interest is in using data-driven machine learning models to predict human strategic behavior; that is, behavior in interactions where each participant's rewards depend partially on the actions of other participants. My long-term research agenda is to build a general theory for optimally designing algorithms for mediating interactions involving humans or other realistically bounded agents rather than idealized, perfectly rational game theoretic agents.

Publications

Competitive Peer-Reviewed Conferences

1. **Learning in the Repeated Secretary Problem.**
   Daniel G. Goldstein, R. Preston McAfee, Siddarth Suri, and James R. Wright.
   EC-17: ACM Conference on Economics and Computation, 2017.
   (Abstract version)

2. **Deep Learning for Predicting Human Strategic Behavior.**
   Jason Hartford, James R. Wright, and Kevin Leyton-Brown.
   NIPS 2016: Thirtieth Annual Conference on Neural Information Processing Systems, 2016.
   Oral presentation.

3. **Level-0 Meta-Models for Predicting Human Behavior in Games.**
   James R. Wright and Kevin Leyton-Brown.
   EC-14: ACM Conference on Economics and Computation, pages 857–874, 2014.

4. **Behavioral Game-Theoretic Models: A Bayesian Framework For Parameter Analysis.**
   James R. Wright and Kevin Leyton-Brown.

AAMAS-2012: International Conference on Autonomous Agents and Multiagent Systems, pages 921–928, 2012.
Best student paper (runner up).

5. **Beyond Equilibrium: Predicting Human Behavior in Normal Form Games.**
James R. Wright and Kevin Leyton-Brown.
AAAI-10: AAAI Conference on Artificial Intelligence, pages 901–907, 2010.

Journals

1. **Predicting Human Behavior in Unrepeated, Simultaneous-Move Games.**
James R. Wright and Kevin Leyton-Brown.
Games and Economic Behavior, Volume 106, pages 16–37, November 2017.
(supersedes Wright & Leyton-Brown [2010, 2012])

Under Submission

1. **Learning in the Repeated Secretary Problem.**
Daniel G. Goldstein, R. Preston McAfee, Siddarth Suri, and James R. Wright.
Under review by *Management Science*.
(Full version of Goldstein et al. [2017])

2. **Models of Level-0 Behavior for Predicting Human Behavior in Games.**
James R. Wright and Kevin Leyton-Brown.
Under review by *Journal of Artificial Intelligence Research*.
(supersedes Wright & Leyton-Brown [2014])

3. **Incentivizing Evaluation via Limited Access to Ground Truth: Peer-Prediction Makes Things Worse.**
Xi Alice Gao, James R. Wright, and Kevin Leyton-Brown.
Under review by *Artificial Intelligence Journal*.
(supersedes Gao, Wright, and Leyton-Brown [2016])

Other Venues

1. **Incentivizing Evaluation via Limited Access to Ground Truth: Peer-Prediction Makes Things Worse.**
Xi Alice Gao, James R. Wright, and Kevin Leyton-Brown.
Workshop on Algorithmic Game Theory and Data Science at ACM Conference on Economics and Computation, 2016.

2. **Mechanical TA: Partially Automated High-Stakes Peer Grading.**
James R. Wright, Chris Thornton, and Kevin Leyton-Brown.
SIGCSE-15: ACM Technical Symposium on Computer Science Education, pages 96–101, 2015.

3. **Linear Solvers for Nonlinear Games: Using Pivoting Algorithms to Find Nash Equilibria in n-Player Games.**
James R. Wright, Albert Xin Jiang, and Kevin Leyton-Brown.
SIGecom Exchanges, volume 10, number 1, pages 9–12, 2011.

Invited Talks

INFORMS-2017 **Deep Learning for Human Strategic Modeling.**
At *INFORMS Annual Meeting*,
Houston, Texas. 2017.

CODE-2017 **Bayesian Models of Learning in the Repeated Secretary Problem.**
At *2017 Conference on Digital Experimentation (CODE@MIT)*,
Boston, Massachusetts. 2017.

EC-17 **Learning in the Repeated Secretary Problem.**
At *ACM Conference on Economics and Computation (ACM-EC)*,
Boston, Massachusetts. 2017.

IFORS-2017 **Deep Learning for Human Strategic Modeling.**
At *21st Conference of the International Federation of Operations Research Societies*,
Québec City, Québec. 2017.

Simons **Endogenous Cognitive Hierarchy.**
At *Simons Institute Survey Seminar*,
Berkeley, California. 2015.

UBC **Guest lecture for CMPT 430.**
University of British Columbia. January, 2015.

ISMP-2015 **Level-0 Meta-Models for Predicting Human Behavior in Games.**
At *22nd International Symposium on Mathematical Programming*,
Pittsburgh, Pennsylvania. 2015.

SIGCSE-15 **Mechanical TA: Partially Automated High-Stakes Peer Grading.**
At *ACM Technical Symposium on Computer Science Education*,
Kansas City, Missouri. 2015.

UBC **Guest lecture for CMPT 532L.**
University of British Columbia. 2014.

SFI **Evaluating Set-Valued Predictions.**
At *Combining Information Theory and Game Theory*,
Santa Fe Institute, New Mexico. 2012.

AAMAS-2012 **Behavioral Game-Theoretic Models: A Bayesian Framework For Parameter Analysis.**
At *11th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2012)*, Valencia, Spain. 2012.

GAMES-2012 **Beyond Equilibrium: Predicting Human Behavior in Normal Form Games.**
At *4th World Congress of the Game Theory Society (GAMES-2012)*,
Istanbul, Turkey. 2012.

UBC **Guest lecture for PSYC 417A.**
University of British Columbia. February 2012.

LANL **Beyond Equilibrium: Predicting Human Behavior in Normal Form Games.**
At *Design and Control of Systems of Goal-Directed Agents; From Game Theory to Game Engineering*,
Los Alamos National Laboratory, New Mexico. 2010.

AAAI-10 **Beyond Equilibrium: Predicting Human Behavior in Normal Form Games.**
At *Twenty-Fourth AAAI Conference on Artificial Intelligence*,
Atlanta, Georgia. 2010.

Google **Beyond Equilibrium: Predicting Human Behavior in Normal Form Games.**
At Google,
Mountain View, California. 2010.

BQGT **Beyond Equilibrium: Predicting Human Behavior in Normal Form Games.**
At *Behavioral and Quantitative Game Theory Conference on Future Directions*,
Newport Beach, California. 2010.

Awards

2017 **ACM SIGecom Doctoral Dissertation Award (Honorable Mention)**
ACM Special Interest Group on E-commerce

2010–2013 **UGF: University Graduate Fellowship**
University of British Columbia, Canada
Declined in 2010–2012 to hold NSERC
(Total value: $80,000)

2010–2012 **NSERC Canada Graduate Scholarship (Ph.D.)**
Natural Sciences and Engineering Research Council of Canada
(Total value: $105,000)

2008–2009 **NSERC Canada Graduate Scholarship (M.Sc.)**
Natural Sciences and Engineering Research Council of Canada
(Total value: $17,500)

2000 **Computing Science Graduation Award**
(for top graduating student in department)
Simon Fraser University, Canada
(Total value: $600)

1996 and 1999 **Honour Roll**
Simon Fraser University, Canada

1996–2000 **Open Scholarship**
Simon Fraser University, Canada
(Full tuition support)

1995–1996 **Taduesz Specht Memorial Scholarship in Science**

Simon Fraser University, Canada
(Total value: $3000)

Service

2017	Co-organizer: 2017 New York Computer Science and Economics Day (NYCE Day)
2015–ongoing	Member: NSF PI Forum on Peer Assessment
2014–2015	Student representative: Faculty Recruiting Committee
2010	Volunteer: AAAI Conference on Artificial Intelligence

Editorial Activity

2017	Program Committee, 27th International World Wide Web Conference.
2017	Program Committee, Thirty-Second AAAI Conference on Artificial Intelligence.
2017	Program Committee, 18th ACM Conference on Economics and Computation.
2017	Reviewer, Thirty-First Annual Conference on Neural Information Processing Systems.
2017	Reviewer, Journal of Artificial Intelligence Research.
2016	Program Committee, Thirty-First AAAI Conference on Artificial Intelligence.
2016	Reviewer, Econometrica.
2016	Reviewer, Journal of Artificial Intelligence Research.
2016	Reviewer, 12th Conference on Web and Internet Economics.
2016	Reviewer, Artificial Intelligence Journal.
2016	Reviewer, Journal of Economic Behavior and Organization.
2015	Reviewer, Games and Economic Behavior.
2015	Reviewer, Thirtieth AAAI Conference on Artificial Intelligence.
2015	Reviewer, Journal of Economic Behavior and Organization.
2015	Reviewer, ACM Transactions on Economics and Computation.
2013	Reviewer, Journal of Machine Learning Research.
2012	Reviewer, Games and Economic Behavior.
2011	Reviewer, Artificial Intelligence Journal.
2011	Reviewer, International Joint Conferences on Artificial Intelligence.
2011	Reviewer, Twenty-Fifth AAAI Conference on Artificial Intelligence.
2010	Reviewer, Journal of Autonomous Agents and Multiagent Systems.

2009 Reviewer, ACM Conference on Electronic Commerce.

2009 External Reviewer, International Joint Conferences on Artificial Intelligence.

Research Employment

2016–2018 Postdoctoral Researcher
Microsoft Research, New York City, USA

2015 Visiting Graduate Student
One of 16 graduate students selected to participate in the Economics and Computation Program, along with 45 faculty.
Simons Institute, University of California, Berkeley, California

2008–2016 Graduate Researcher
Advisor: Kevin Leyton-Brown
University of British Columbia, Vancouver, Canada

2000 Undergraduate Research Assistant
Supervisor: Binay Bhattacharya
Simon Fraser University, Burnaby, Canada

1998 Undergraduate Research Assistant
Supervisors: Jim Delgrande and Arvind Gupta
Simon Fraser University, Burnaby, Canada

Teaching

My duties as an instructional assistant for the various massively open online courses listed below included constructing new content (problem sets and exams), cross-checking new video comment for slide typos and misstatements, and monitoring and responding to student questions in online forums.

As an instructional assistant for Computers and Society, I led the design and implementation effort of the Mechanical TA peer grading system. I also constructed exams, and assisted with curriculum development.

As a teaching assistant for Multiagent Systems, I constructed quizzes, exams, and assignments, and assisted in the day-to-day operation of the class.

2014 Instructional Assistant, Coursera/University of British Columbia
Game Theory II (Massively Open Online Course), Kevin Leyton-Brown.

2014 Instructional Assistant, Coursera/University of British Columbia
Game Theory (Massively Open Online Course), Kevin Leyton-Brown.

2014 Teaching Assistant, University of British Columbia
Multiagent Systems (graduates), Kevin Leyton-Brown.

2014 Instructional Assistant, University of British Columbia
Computers and Society (advanced undergraduates), Kevin Leyton-Brown.

2013 Instructional Assistant, University of British Columbia
Game Theory II (Massively Open Online Course), Kevin Leyton-Brown.

2013 (twice)	Instructional Assistant, Coursera/University of British Columbia Game Theory (Massively Open Online Course), Kevin Leyton-Brown.
2013	Teaching Assistant, University of British Columbia Multiagent Systems (graduates), Kevin Leyton-Brown.
2013	Instructional Assistant, University of British Columbia Computers and Society (advanced undergraduates), Kevin Leyton-Brown.
2009	Teaching Assistant, University of British Columbia Multiagent Systems (graduates), Kevin Leyton-Brown.
2008	Teaching Assistant, University of British Columbia Computers and Society (advanced undergraduates), Kurt Eiselt.
2007	Teaching Assistant, University of British Columbia Advanced Software Engineering (advanced undergraduates), Eric Wohlstadter.

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