Stephan Bongers

Ph.D. Candidate, Informatics Institute
Science Park 904, 1098 XH Amsterdam, The Netherlands
srbongers@gmail.com
http://www.stephanbongers.com

Education

- **University of Amsterdam** — Amsterdam, The Netherlands
  Ph.D. Candidate in Artificial Intelligence (current) — *since May 2015*
  - PhD candidate at the Amsterdam Machine Learning Lab (AMLab)
  - Research the connection between dynamical systems and causal models including feedback loops and confouders.
  - Advisors: Prof. Max Welling and Dr. Joris M. Mooij
- **Utrecht University** — Utrecht, The Netherlands
  M.Sc. Mathematics — *Sept 2011 - Jan 2014*
  - Graduated with a 3.97/4.0 GPA
  - Thesis: Geometric quantization of symplectic and Poisson manifolds.
  - Advisor: Dr. Urs Schreiber (Radboud University Nijmegen)
- **Utrecht University** — Utrecht, The Netherlands
  B.Sc. Mathematics, B.Sc. Physics and Astronomy — *Sept 2005 - Aug 2011*
  - Graduated with a 3.29/4.0 GPA
  - Thesis: The Impact of Relative ITS-TPC Alignment and Calibration on High-Pt Physics in the ALICE Experiment.
  - Advisor: Prof. Raimond Snellings (National Institute for Subatomic Physics)

Professional Experience

- **Accenture** — Amsterdam, The Netherlands
  Data Scientist — *Mar 2014 - May 2015*
  - Implemented a statistical model to perform web and app clickstream analysis in Hadoop.
  - Developed and designed an end-to-end reporting solution.

Publications and Preprints

- S. Bongers and J.M. Mooij, From Random Differential Equations to Structural Causal Models: the stochastic case, *under review.*
- P.K. Rubenstein, S. Bongers, J.M. Mooij and B. Schölkopf, From Deterministic ODEs to Dynamic Structural Causal Models, *under review.*
- S. Bongers, J. Peters, B. Schölkopf, J.M. Mooij, Structural Causal Models: Cycles, Marginalizations, Exogenous Reparametrizations and Reductions, *(preprint).*
- S. Magliacane, T. van Ommen, T. Claassen, S. Bongers, P. Versteeg and J.M. Mooij, Causal Transfer Learning, *(preprint).*

- P.K. Rubenstein*, S. Weichwald*, S. Bongers, J.M. Mooij, D. Janzing, M. Grosse-Wentrup and B. Schölkopf, Causal Consistency of Structural Equation Models, UAI 2017, *equal contribution.

Presentations and Invited Talks

- **Marginalization and Reduction of Structural Causal Models**
  - CMStatistics 2016 (ERCIM 2016) (Talk) - Seville, Spain (Dec 2016)
  - What if? Workshop at NIPS 2016 (Poster) - Barcelona, Spain (Dec 2016)

Workshops and Summer Schools

- **Machine Learning Summer School 2017** — Tübingen, Germany
  Summer student; poster presentation — *Jun 19-30, 2017*
- **Bioinformatics and Systems Biology Research School** — Wageningen, The Netherlands
  Quantitative and Predictive Modelling — *Jun 22-26, 2015*
- **Villa de Leyva Summer School 2015** — Villa de Leyva, Colombia
  Geometric, algebraic and topological methods for quantum field theory — *Jul 4-22, 2011*
- **CERN Summer School 2010** — Geneva, Switzerland
  Summer student — *Jul 6-Aug 27, 2010*
  - Project: Integration and testing of next to leading order (NLO) Monte Carlo generators in the ALICE offine framework AliRoot
  - Advisor: Dr. Andreas Morsch (CERN)

Scholarships, Grants and Awards

First prize with UvA team in the CRM Causal Inference Challenge 2015
International Center for Pure and Applied Mathematics (CIMPA) grant 2011
A.F. Monnafonds grant 2011
CERN Summer Student scholarship 2010

Event Organization

- **31st Conference on Uncertainty in Artificial Intelligence** — Amsterdam, The Netherlands
  Volunteer — *Jul 12-16, 2015*

Student Supervision

- **David Woudenberg (Master thesis, jointly with Joris Mooij)** — University of Amsterdam
  Discovering Causal Links In Mass Cytometry Data — *Graduation: Jul 8, 2016*

Skills

- **Teaching Assistent:** Machine Learning 2, 2017 (University of Amsterdam); Mathematical Principles of Pattern Recognition, 2016 (University of Amsterdam); Machine Learning 1, 2015 (University of Amsterdam); Molecular Modelling and Mathematics, 2011, 2013 (Utrecht University); Advanced Mechanics, 2013 (Utrecht University)
- **Programming Skills:** Python, MATLAB, C++ (some experience)
- **Research Interests:** Causal Inference, Graphical Models, (Bayesian) Deep Learning

Academic References

- Max Welling, University of Amsterdam, `m.welling@uva.nl`
- Joris M. Mooij, University of Amsterdam, `j.m.mooij@uva.nl`