Christian Kroer

RESEARCH INTERESTS	Overall: artificial intelligence, algorithms, game theory, and operations research. Specific: equilibrium computation and characterization, mechanism design, auction theory, combinatorial optimization, convex optimization, application of all the above to fields like biology, security, and privacy.

EDUCATION

Carnegie Mellon University

Ph.D. Computer Science **May 2012 –**

IT University of Copenhagen
M.Sc. IT - Software Development and Technology **August 2009 – April 2012**

Aalborg University, Aalborg, Denmark
BA. Human centered informatics **September 2006 – June 2009**

PUBLICATIONS

Extensive-form Game Abstraction with Bounds. Christian Kroer and Tuomas Sandholm. *ACM Conference on Economics and Computation*, (EC), 2014.

Power napping with loud neighbors: optimal energy-constrained jamming and anti-jamming. Bruce DeBruhl, Christian Kroer, Anupam Datta, Tuomas Sandholm, and Patrick Tague *7th ACM Conference on Security & Privacy in Wireless and Mobile Networks*, (WiSec), 2014.

Symbolic Configuration for Interactive Container Ship Stowage Planning. Christian Kroer, Martin K. Svendsen, Rune M. Jensen, Joseph Kiniry, and Eilif Leknes. *Computational Intelligence*, 2014.

Robust Optimization of Recommendation Sets with the Maximin Utility Criterion. Paolo Viappiani and Christian Kroer. *3rd International Conference on Algorithmic Decision Theory*, (ADT). 2013.

Computational Bundling for Auctions. Christian Kroer and Tuomas Sandholm. *CMU Tech Report*, 2013.

Optimization and Elicitation with the Maximin Utility Criterion. Paolo Viappiani and Christian Kroer. *6th Multidisciplinary Workshop on Advances in Preference Handling*, (ECAI Workshop). 2012.

SAT and SMT Based Interactive Configuration for Container Vessel Stowage. Christian Kroer and Martin K. Svendsen. *Master's Thesis*, (IT-University of Copenhagen). 2012.

Automated Planning for Liner Shipping Fleet Repositioning. Kevin Tierney, Amanda Coles, Andrew Coles, Christian Kroer, Adam Britt and Rune M. Jensen. *International Conference on Automated Planning and Scheduling*, (ICAPS). 2012.

Feature Filtering for Instance Specific Algorithm Configuration. Christian Kroer and Yuri Malitsky. *IEEE International Conference on Tools in Artificial Intelligence*, (ICTAI). 2011.

EMPLOYMENT

Carnegie Mellon University

Research assistant **May 2012 –**

I am part of the Electronic Marketplaces lab at CMU, where we do research on computational economics and optimization. I am advised by Professor Tuomas Sandholm.

Aalborg University

Research assistant **February 2012 – April 2012**

Temporary position as research assistant with Assistant Professor Paolo Viappiani, working on techniques for preference elicitation.

IT University of Copenhagen

Teaching assistant   September 2011 – June 2012

See description under teaching experience.

Netmester A/S, Copenhagen, Denmark

Systems developer   January 2010 – August 2011

Backend development for web solutions in .Net, worked mainly with C#.

TEACHING
EXPERIENCE

Carnegie Mellon University

Artificial Intelligence, teaching assistant, 2014. Undergraduate AI course.

Electronic Negotiation Task, teaching assistant, 2014. A short, intensive, project-based course, where students design an electronic market design solution.

IT University of Copenhagen

Intelligent Systems Programming, teaching assistant, 2012. AI course with a focus on applications to decision optimization.

Algorithm Design, teaching assistant, 2011. Sole TA, included giving small lectures reiterating important points covered in normal classes.

COMMUNITY

Reviewing ACM Transactions on Economics and Computation

Service CMU Immigration Course coordinator 2013

PROGRAMMING
SKILLS

Strong experience: C#, Java, Python, C/C++
Medium experience: Matlab, Scala
Familiar with: SQL, XSLT

LANGUAGES

Fluent in reading, writing and speaking: Danish, English

Rudimentary skills: Norwegian, Swedish, German

REFEREES

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Joseph Kiniry
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Galois, Inc.
http://www2.imm.dtu.dk/~jkin
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