

Joel Uckelman

- CONTACT INFORMATION Institute for Logic, Language and Computation Tel: +31 (0)20 525 8243
University of Amsterdam Fax: +31 (0)20 525 5206
Science Park 904 Email: j.d.uckelman@uva.nl
1098 XH Amsterdam <http://www.illc.uva.nl/~juckelma>
The Netherlands
- PERSONAL INFORMATION Date of Birth: 5 February 1979
Nationality: American
- RESEARCH INTERESTS Preference representation, social choice, voting systems, resource allocation, logical modeling, modal logic, epistemic logic, game theory, artificial intelligence, multiagent systems.
- EDUCATION **University of Amsterdam**, The Netherlands **2005–2009**
PhD in Computer Science, Institute for Logic, Language and Computation
- Thesis: *More Than the Sum of Its Parts: Compact Preference Representation Over Combinatorial Domains*
 - Advisor: Dr. Ulle Endriss
 - Promotor: Prof. Krzysztof Apt
 - Committee: Prof. J.F.A.K. van Benthem, Prof. G. Dari-Mattiacci, Prof. J. Lang, Prof. B. Löwe, Prof. F. Rossi, Prof. M.J. Wooldridge
 - Defended on 11 December 2009
- University of Wisconsin–Madison**, United States **2001–2005**
MA in Philosophy
- Thesis: *Vagueness and the Three-Valued Logics NU and QNU*
 - Advisor: Prof. Michael Byrd
 - Primary focus: modal logic
- Iowa State University**, Ames, Iowa, United States **1997–2001**
BA in Philosophy and History
- With Distinction, 3.87 GPA, Phi Beta Kappa
- FELLOWSHIPS & AWARDS European Commission Marie Curie Early Stage Research Fellowship **2006–2009**
Research Training Site GLoRiClass (“Games in Logic Reaching Out for Classical Game Theory”)
Best Paper, Augustana College Undergraduate Philosophy Conference, Spring 1999.
- PUBLICATIONS [1] Stéphane Airiau, Ulle Endriss, Umberto Grandi, Daniele Porello, and Joel Uckelman. Aggregating dependency graphs into voting agendas in multi-issue elections. In *Proceedings of the 22nd International Joint Conference on Artificial Intelligence (IJCAI-2011)*, July 2011. Poster Paper. Forthcoming.
- [2] Jon Stewart and Joel Uckelman. `lightgrep`: A multipattern regular expression search tool for digital forensics. In *Advances in Digital Forensics VII*. Springer, 2011. Forthcoming.
- [3] Jon Stewart and Joel Uckelman. `lightgrep`: A multipattern regular expression search tool for digital forensics. In *Proceedings of the 2nd Annual Northeast Digital Forensics Exchange*, September 2010. Extended abstract.
- [4] Joel Uckelman and Ulle Endriss. Compactly representing utility functions using weighted goals and the max aggregator. *Artificial Intelligence*, 174(15):1222–1246, 2010.
- [5] Joel Uckelman. Alice and Bob will fight: The problem of electing a committee in the presence of candidate interdependence. In Jérôme Lang and Patrice Perny, editors, *Proceedings of the 5th Multidisciplinary Workshop on Advances in Preference Handling (MPREF-2010)*, pp. 73–78, August 2010.

- [6] Joel Uckelman. Alice and Bob will fight: The problem of electing a committee in the presence of candidate interdependence. In Helder Coelho, Rudi Struder, and Michael Wooldridge, editors, *Proceedings of the 19th European Conference on Artificial Intelligence (ECAI-2010)*, pp. 1023–1024, August 2010. Short Paper.
- [7] Joel Uckelman, Yann Chevaleyre, Ulle Endriss, and Jérôme Lang. Representing utility functions via weighted goals. *Mathematical Logic Quarterly*, 55(4):341–361, 2009.
- [8] Joel Uckelman and Ulle Endriss. Preference modeling by weighted goals with max aggregation. In Gerhard Brewka and Jérôme Lang, editors, *Proceedings of the 11th International Conference on Principles of Knowledge Representation and Reasoning (KR-2008)*, pp. 579–587, September 2008.
- [9] Joel Uckelman and Andreas Witzel. Logic-based preference languages with intermediate complexity. In *Proceedings of the 4th Multidisciplinary Workshop on Advances in Preference Handling (MPREF-2008)*, pp. 123–127, Chicago, 2008. AAAI Press.
- [10] Joel Uckelman and Ulle Endriss. Winner determination in combinatorial auctions with logic-based bidding languages. In *Proceedings of the 7th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS-2008)*, pp. 1617–1620. IFAAMAS, May 2008. Short Paper.
- [11] Joel Uckelman and Ulle Endriss. Preference representation with weighted goals: Expressivity, succinctness, complexity. In *Proceedings of the AAAI Workshop on Preference Handling for Artificial Intelligence (AiPref-2007)*, pp. 85–92, Vancouver, British Columbia, July 2007.
- [12] Sara L. Uckelman and Joel Uckelman. Modal and temporal logics for abstract space-time structures. *Studies in History and Philosophy of Modern Physics*, 38(3):673–681, 2007.

TEACHING

Compact Preference Representation

Master of Logic project leader, University of Amsterdam, May 2007

Introduction to Logic in Computer Science

Teaching assistant, University of Amsterdam, Fall 2006

Introductory Logic

Teaching assistant, UW-Madison Dept. of Philosophy, Fall 2001, Summer 2002, Spring 2003

Reason in Communication

Teaching assistant, UW-Madison Dept. of Philosophy, Spring 2002

Introduction to Philosophy

Teaching assistant, UW-Madison Dept. of Philosophy, Fall 2002, Spring 2004

Introduction to Philosophy for Juniors and Seniors

Teaching assistant, UW-Madison Dept. of Philosophy, Fall 2003

TALKS & LECTURES

Talks

- “**lightgrep**: A Multipattern Regular Expression Search Tool for Digital Forensics”, 7th IFIP WG 11.9 International Conference on Digital Forensics, February 2011.
- “Alice and Bob Will Fight: The Problem of Electing a Committee in the Presence of Candidate Interdependence”, MPREF 2010, August 2010.
- “Preference modeling by weighted goals with max aggregation”, KR 2008, September 2008
- “Logic-based preference languages with intermediate complexity”, MPREF 2008, July 2008
- “Winner Determination for Bidding Languages using Weighted Formulas”, Amsterdam, invited talk, MARA 2008, June 2008
- “Some Logic-Based Preference Representation Languages for Auctions and Voting”, invited talk, Tilburg social choice seminar, March 2008
- “Computation with Preferences for Voting and Auctions”, Amsterdam, February 2008
- “Preference Representation with Weighted Goals”, Schloss Dagstuhl, October 2007
- “Preference representation with weighted goals: Expressivity, succinctness, complexity”, AiPref 2007, July 2007

- “Preference Representation with Weighted Goals: Some Properties and an Application to Voting”, Amsterdam, April 2007
- Commentator on “Reasons and Beliefs: Update in Cooperative Agency”, PALMYR IV, Amsterdam, December 2006
- “How Hard is it to Find Nash Equilibria?”, Amsterdam, July 2006

Guest Lectures

- “Preference Representation with Weighted Formulas”, Computational Social Choice course, Amsterdam, March 2007

PROFESSIONAL ACTIVITIES

Organizational

- Organizer for the New Directions in Preference Representation workshop, December 2009
- Organizer for the Logic Tea seminar series, 2006–2008
- Assisted with COMSOC 2006, FotFS VI, LOFT 2008 conferences

Refereeing

- Program committee member for M-PREF 2010
- Reviewer for KR 2008, 2010; EC 2008; COMSOC 2008 conferences
- Served on Master of Logic committees for Brammert Ottens and Sara Ramezani
- Served on Master of AI committee for David Persons

Book Publishing

- Technical Assistant for *Texts in Logic and Games* book series, 2007–present
Created TLG L^AT_EX style, handled all typesetting for 5 volumes totaling 2098 pages.
- Technical Assistant for *The Cabal Seminar* reprints, 2008–present
Coordinated retyping and proofreading of classic descriptive set theory articles, handled various typesetting tasks for volumes II–IV.
- Assembled proceedings for Dagstuhl Seminar 07431 “Computational Issues in Social Choice”, 2007.

TECHNICAL SKILLS

C, C++, Java, Perl, Bash, PHP, Python, Prolog, PostScript, SQL, L^AT_EX, SVG, CPLEX, GTK+, Qt, DNS, Postfix, qmail, Mailman, HTML, Apache, JUnit, launch4j, NSIS, Bugzilla, phpBB, Lex, Yacc, CVS, Subversion, UNIX/Linux system administration

OTHER WORK

Open-source software, developer

- VASSAL: A cross-platform boardgame engine written in Java 2006–present
- niMH: A re-implementation of the MH mail client in Python 2004
- PhpWiki: A Wiki implementation written in PHP 2001–2004

Open-source software, sole developer

- mkhexgrid: A hex grid generator 2006–present
- Bones: A secure dice server with web and email interfaces 2006–present
- Board: A cross-platform boardgame engine 2001–2006

Contributed patches to OpenJDK and ImageMagick

MISCELLANEOUS

Hobbies: abstract and historical strategy games, history

Erdős number: ≤ 4

REFERENCES

Dr. Ulle Endriss

ILLC, University of Amsterdam
Postbus 94242
1090 GE Amsterdam
The Netherlands
ulle.endriss@uva.nl

Prof. Jérôme Lang

LAMSADE, Université Paris-Dauphine
Place du Maréchal de Lattre de Tassigny
75775 Paris Cedex 16
France
lang@lamsade.dauphine.fr

Prof. Krzysztof Apt

CWI & ILLC, University of Amsterdam
Science Park 123
1098 XG Amsterdam
The Netherlands
k.r.apt@cwi.nl