

Rune Møller Jensen

Born: February 13, 1971

Citizenship: Denmark

ACADEMIC POSITIONS

- 2004- **Postdoctoral Fellow**, Computer Science Dept, Carnegie Mellon University.
2003-2004 **Assistant Professor**, IT University of Copenhagen.

EDUCATION

- 1999-2003 **Carnegie Mellon University**, Computer Science Dept.
PhD Thesis Advisors: Prof. Manuela M. Veloso and Prof. Randal E. Bryant.
PhD Thesis Title: *Efficient BDD-Based Planning for Non-Deterministic, Fault-Tolerant, and Adversarial Domains.*
- 1994-1999 **Technical University of Denmark**, Computer Science Dept.
MS Thesis Title: *OBDD-based Universal Planning in Multi-Agent, Non-Deterministic Domains.*
- 1992-1994 **University of Copenhagen**
BS level studies in Mathematics and Cognitive Psychology.

GRANTS

- 2000-2003 Full graduate fellowship, the Danish Research Agency, Ministry of Research, Denmark.
- 1997-1998 Travel grants: *The McKinsey Award, Rektors Rejselegat, DTUs Rejselegat, Selmar Tranes Fond, Hedegaard Nielsens Fond, Ib Henriksens Fond, and Knud Højgaards Fond.*
- 1993-1994 Full scholarship for research in Cognitive Psychology, Human Frontier Science.

PROFESSIONAL ACTIVITIES

Research Community

- 2005 Program committee member of the Twentieth National Conference on Artificial Intelligence (AAAI-05), Program committee member of the 15th International Conference on Automated Planning & Scheduling (ICAPS-05).
- 2004 Mentor of the Doctoral Consortium of the 14th International Conference on Automated Planning & Scheduling (ICAPS-04).
- 2002-2003 Publicity and Sponsoring Chair of the 13th International Conference on Automated Planning & Scheduling (ICAPS-03).
- 2002 Program Committee member of the 6th International Conference on Artificial Intelligence Planning and Scheduling (AIPS-02) workshop: *Planning via Model Checking*.
- 2001-2004 Reviewer for JAIR (Journal of Artificial Intelligence Research), AIJ (Artificial Intelligence Journal), IEEE Transactions on Software Engineering, Journal of Universal Computer Science, and The Journal of Information and Computation

CMU Academic Community

- 2004 Member of CORAL. CORAL is a research group headed by Prof. Manuela M. Veloso on intelligent agents that Cooperate, Observe, Reason, Act, and Learn.
- 2002-2003 Doctoral Review Committee member.
- 1999-2001 Organizer of the CORAL Seminars.

ITU Academic Community

- 2003-2004 Co-founder of the Verification, Configuration, and Scheduling (VeCoS) research group at ITU, the VeCoS Seminar, and the VeCoS Lab.

Teaching

- S2004 Course Responsible Lecturer: Introduction to Algorithms and Data Structures, IT-University of Copenhagen. Course Responsible Lecturer: Software Products, IT University of Copenhagen.
- F2003 Lecturer: IT-Platforms and Organisation, IT University of Copenhagen.
- 1999-2002 Invited lecturer, Planning and Execution, graduate course, Carnegie Mellon University, Computer Science Dept..

SOFTWARE PROJECTS

- 2004- *ASET*: a planning and execution simulation environment for domain knowledge learning. Part of the DARPA JAGUAR project.
- 2004 *CLab*: a C++ library for fast backtrack-free and complete interactive product configuration.
- 1999-2003 *BIFROST*: experimental planning system for research on BDD-based non-deterministic planning algorithms.
- 1999 *UMOP*: a BDD-based multi-agent planning system for non-deterministic domains.
- 1998 *Interleaving planning and execution*: an integration of the Prodigy Planner and the Robosoccer Simulator.

INTERNSHIPS

- 2001 IT University of Copenhagen, Summer internship on Substitution BDDs, supervised by Prof. Henrik Reif Andersen.
- 2000 IT University of Copenhagen, Summer internship on Difference Decision Diagrams and AI-planning, supervised by Prof. Henrik Reif Andersen.

PUBLICATIONS

Journal Articles

1. R.M. Jensen, M.M. Veloso, and R.E. Bryant. *Fault Tolerant Planning: Moving Toward Probabilistic Uncertainty Models in Symbolic Non-Deterministic Planning*. Submitted to Journal of Artificial Intelligence Research, 2004.
2. R.M. Jensen, M.M. Veloso, and R.E. Bryant. *State-Set Branching: Leveraging OBDDs for Heuristic Search*. Submitted to Artificial Intelligence Journal, 2004.
3. R.M. Jensen and M.M. Veloso. *OBDD-based Universal Planning for Synchronized Agents in Non-Deterministic Domains*. Journal of Artificial Intelligence Research, Volume 13, pages 189-226, 2000.
4. C. Bundesen, S. Kyllingsbæk, K.J. Houmann and R.M. Jensen. *Is Visual Attention Attracted by One's Own Name?*. Perception & Psychophysics, 59(5), pages 714-720, 1997.

Conference Papers

5. R.M. Jensen, M.M. Veloso, and S. Shchukin. *ASET: Representing Indeterminate Durative Tasks for Symbolic Fault Tolerant Planning in Multi-Agent Domains*. Submitted to ICAPS-05, 2004.
6. T. Hadzic, S. Sathiamoorthy, R.M. Jensen, H.R. Andersen, J. Møller and H. Hulgaard. *Fast Backtrack Free Product Configuration using Precompiled Solution Space Representations*. In Proceedings of the International Conference on Economic, Technical and Organisational aspects of Product Configuration Systems, 2004.
7. R.M. Jensen, M.M. Veloso, and R.E. Bryant. *Fault Tolerant Planning: Toward Probabilistic Uncertainty Models in Symbolic Non-Deterministic Planning*. In Proceedings of the 14th International Conference on Automated Planning & Scheduling (ICAPS-04), pages 325-335, 2004.
8. R.M. Jensen, M.M. Veloso, and R.E. Bryant. *Guided Symbolic Universal Planning*. In Proceedings of the 13th International Conference on Automated Planning & Scheduling (ICAPS-03), pages 123-132, 2003.
9. R.M. Jensen, R.E. Bryant, and M.M. Veloso. *SetA*: An efficient BDD-Based Heuristic Search Algorithm*. In Proceedings of 18th National Conference on Artificial Intelligence (AAAI-02), pages 668-673, 2002.
10. R.M. Jensen, M.M. Veloso and M.H. Bowling. *OBDD-Based Optimistic and Strong Cyclic Adversarial Planning*. In Proceedings of the 6th European Conference on Planning (ECP-01), pages 265-276, 2001.
11. R.M. Jensen and M.M. Veloso. *OBDD-based Universal Planning for Multiple Synchronized Agents in Non-Deterministic Domains*. In Proceedings of the 5th International Conference on Artificial Intelligence Planning and Scheduling (AIPS-00), AAAI Press, pages 167-176, 2000.

Workshop Papers

12. S. Subbarayan, R.M. Jensen, T.Hadzic, H.R. Andersen, J. Møller, and H. Hulgaard, *Comparing Two Implementations of a Complete and Backtrack-Free Interactive Configurator*, CP-04 Workshop on CSP Techniques with Immediate Application, 2004.
13. R.M. Jensen, M.M. Veloso, and R.E. Bryant. *Synthesis of Fault Tolerant Plans for Non-Deterministic Domains*. In Proceedings of ICAPS'03 Workshop on Planning under Uncertainty and Incomplete Information, pages 64-73, 2003.
14. M.H .Bowling, R.M. Jensen, and M.M. Veloso. *A formalization of equilibria for multiagent planning*. Workshop of the 18th National Conference on Artificial Intelligence (AAAI-02) on Planning with and for Multiagent Systems, 2002.
15. R.M. Jensen, R.E. Bryant, and M.M. Veloso. *An Efficient BDD-based A* Algorithm*. Workshop of the 6th International Conference on Artificial Intelligence Planning and Scheduling (AIPS-02) on Planning via Model Checking, 2002.

16. R.M. Jensen and M. M. Veloso. *OBDD-based Deterministic Planning using the UMOP Planning Framework*. Workshop of the 5th International Conference on Artificial Intelligence Planning and Scheduling (AIPS-00) on Model-Theoretic Approaches to Planning, 2000.
17. R.M. Jensen. *Specification and Verification of Complex Robotics Tasks*. Workshop of the 10th European Summer School in Logic, Language and Information (ESSLI-98) on Duration Calculus, 1998.
18. R.M. Jensen and M.M. Veloso. *Interleaving Deliberative and Reactive Planning in Dynamic Multi-Agent Domains*. AAAI Fall Symposium on Integrated Planning for Autonomous Agent Architectures, 1998.

Book Chapters

19. M.H. Bowling, R.M. Jensen and M. M. Veloso. *Multiagent Planning in the Presence of Multiple Goals*. To appear in *Intelligent Planning*, Wout van Wezel, Rene Jorna, Alex Meystel eds., Wiley, Intelligent Series.
20. R.M. Jensen and M.M. Veloso. *OBDD-based Universal Planning: Specifying and Solving Planning Problems for Synchronized Agents in Non-Deterministic Domains*. In *Artificial Intelligence Today, Recent Trends and Developments*. M.J. Wooldrige and M. Veloso (Eds.), Springer-Verlag, pages 212-248, 1999.

Technical Reports

21. R.M. Jensen and H.R. Andersen, *Substitution and Flip BDDs*, Technical Report ITU-TR-2003-41, IT University of Copenhagen, 2003
22. R.M. Jensen, *DES Controller Synthesis and Fault Tolerant Control*, Technical Report ITU-TR-2003-40, IT University of Copenhagen, 2003
23. R.M. Jensen, R.E. Bryant, and M.M. Veloso. *SetA* Applied to Channel Routing*. Technical Report CMU-CS-02-172, Computer Science Department, Carnegie Mellon University, 2002.
24. R.M. Jensen. *A Comparison Study between the CUDD and BuDDy OBDD Package Applied to AI-Planning problems*. Technical Report CMU-CS-02-173, Computer Science Department, Carnegie Mellon University, 2002.
25. R.M. Jensen, R.E. Bryant, and M.M. Veloso. *State-Set Branching: Leveraging OBDDs for Heuristic Search*. Technical Report CMU-CS-02-174, Computer Science Department, Carnegie Mellon University, 2002.

Dissertations

26. R.M. Jensen. *OBDD-based Universal Planning in Multi-Agent, Non-Deterministic Domains*. Master's Thesis, Technical University of Denmark, IAU99F02, 1999.
27. R.M. Jensen. *Efficient BDD-Based Planning for Non-Deterministic, Fault-Tolerant, and Adversarial Domains*, PhD Thesis, Computer Science dept., Carnegie Mellon University, CMU-CS-03-139, 2003.

REFERENCES

Prof. Manuela M. Veloso, Computer Science Dept., Carnegie Mellon University, 5000 Forbes Ave., Pittsburgh, PA 15213-3891, Phone: 412 268 1474, Email: mmv@cs.cmu.edu.

Prof. Randal E. Bryant, Dean, School of Computer Science, Carnegie Mellon University, 5000 Forbes Ave., Pittsburgh, PA 15213-3891, Phone: 412 268 8821, Email: bryant@cs.cmu.edu.

Prof. Reid Simmons, Computer Science Dept., Carnegie Mellon University, 5000 Forbes Ave., Pittsburgh, PA 15213-3891, Phone: 412 268 2621, Email: reids@cs.cmu.edu.