

ROBBY J. M. GOETSCHALCKX

EMPLOYMENT

- ⊙ April 2016 – Current: Eduworks Corporation
Software Engineer
 - Using Natural Language Processing and Machine Learning for the development of educational software.
- ⊙ December 2015: Oregon State University:
Faculty Research Assistant
 - Supervisors: Prasad Tadepalli, Alan Fern
 - Working on the Active Transfer Learning project, assisting in supervision of graduate students. Focus on multi-task learning, active learning, active tutoring.
- ⊙ December 2012 – November 2015: Oregon State University:
Post-Doctoral Researcher
 - Supervisors: Prasad Tadepalli, Alan Fern
 - Working on the Active Transfer Learning project, assisting in supervision of graduate students. Focus on multi-agent planning, hierarchical policy learning, multi-task learning, active learning, active tutoring.
- ⊙ Sept. 2011 – Aug. 2012: University of Waterloo / University of Toronto:
Post-doctoral Fellow
 - Supervisors: Jesse Hoey (UW), Pascal Poupart (UW), Alex Mihailidis (UofT)
 - Continuation of the work on Machine Learning for autonomous post-stroke rehabilitation from my position in Dundee, now working closer together with the people from the University of Toronto and the Toronto Rehab Institute. Fundamental research in Bayesian Machine Learning for sequential decision problems is combined with research into practical and feasible solutions for the specific field of stroke rehabilitation.
- ⊙ Feb. 2010 – June 2011: University of Dundee:
Post-doctoral Research Assistant
 - Supervisors: Jesse Hoey, Stephen McKenna
 - DyNaMo Project, an EU / Mexican government project, FONCICYT 95185
 - The project involves the development of a haptic-robotic device used in stroke rehabilitation. In the project we researched and developed a POMDP model for the system, allowing a policy which balances information gathering on the characteristics of the person who suffered a stroke with quick and successful rehabilitation.

EDUCATION

Katholieke Universiteit Leuven (Belgium):

- ⊙ Ph.D. Computer Science, 2009
thesis title: The Use of Domain Knowledge in Reinforcement Learning
Advisors: Hendrik Blockeel, Maurice Bruynooghe
Specialisation: Machine Learning, Reinforcement Learning
- ⊙ Advanced Studies: Master of Artificial Intelligence, 2004
Cum Laude
thesis title: Phase transition in Answer set Programming
Supervisors: Marc Denecker, Maarten Mariën

- ⊙ Licentiate Informatica (decreed equivalent to Master's degree in informatics), 2003
Cum Laude
Specialisation: AI, theoretical computer science
thesis title: The Smallest Universal Turing Machine
Supervisor: Bart Demoen

PUBLICATIONS

Selected list of publications:

- ⊙ Goetschalckx, R., Fern, A., Tadepalli, P.
Multitask Coactive Learning.
Proceedings of the Twenty-Fourth International Joint Conference on Artificial Intelligence (IJCAI). 2015.
- ⊙ Hamidi, M., Tadepalli, P., Goetschalckx, R., Fern, A.
Active Imitation Learning of Hierarchical Policies.
Proceedings of the Twenty-Fourth International Joint Conference on Artificial Intelligence (IJCAI). 2015.
- ⊙ Judah, K., Farn, A., Tadepalli, P., Goetschalckx, R.
Imitation Learning with Demonstrations and Shaping Rewards.
Proceedings of the Twenty-Eighth AAAI Conference (AAAI). (2014).
- ⊙ Goetschalckx, R., Poupart, P., Hoey, J.
Continuous Correlated Beta Processes.
Proceedings of the Twenty-second International Joint Conference on Artificial Intelligence (IJCAI). (2011).
- ⊙ Kan, P., Huq, R., Hoey, J., Goetschalckx, R., Mihailidis, A.
The Development of an Adaptive Upper-limb Stroke Rehabilitation Robotic System.
Journal of NeuroEngineering and Rehabilitation. (2011).
- ⊙ R. Goetschalckx, O. Missura, J. Hoey, T. Gaertner.
Games with Dynamic Difficulty Adjustment through the Use of POMDPs.
Proceedings of the ICML 2010 Workshop on Machine Learning and Games. (2010).
- ⊙ Sanner, S., Goetschalckx, R., Driessens, K., and Shani, G.
Bayesian Real-time Dynamic Programming.
Proceedings of the 21st International Joint Conference on AI (IJCAI-09). (2009).
- ⊙ Goetschalckx, R., Sanner, S., Driessens, K.
Cost-sensitive Parsimonious Linear Regression.
Proceedings of the 8th IEEE International Conference on Data Mining. ICDM. Pisa, Italy (pp. 809–814). IEEE Computer Society. (2008).
- ⊙ Tuyts, K., Croonenborghs, T., Ramon, J., Goetschalckx, R., Bruynooghe, M.
Multi-agent Relational Reinforcement Learning.
Proceedings of the First International Workshop on Learning and Adaptation in Multi-Agent Systems. First international workshop on Learning and Adaptation in Multi Agent Systems held at the 4th International Conference on Autonomous Agents and Multi-Agents Systems. Utrecht, The Netherlands, (pp. 123–132). (2005).