

CURRICULUM VITÆ

(as of May 2020)

Ubbo Visser

Associate Professor

Department for Computer Science

4091 Woodridge Rd University of Miami, 1365 Memorial Drive

Miami, FL, 33133, USA Coral Gables, 33124-4245, USA

+1 305 798 4180

+1 305 284 2254

Email: visser@cs.miami.edu

Web: <http://www.cs.miami.edu/~visser>

PERSONAL

1. Name: Ubbo Visser
2. Home Phone: 305 798 4180
3. Office Phone: 305 284 2254
4. Home address: 4091 Woodridge Rd, Miami, FL, 33133
5. Current Academic Rank: Associate Professor
6. Primary Department: Computer Science
7. Secondary or Joint Appointments: None
8. Citizenship: German
9. Visa Type: Permanent resident

HIGHER EDUCATION

10. Institutional:
 - Universität Bremen (GER), **Habilitation**¹ in Computer Science, December 2003
 - Universität Münster (GER), **PhD** in Geoinformatics, December 1995
 - Universität Münster (GER), **MSc** in Geography, Major: Ecology, October 1988
11. Non-Institutional:
 - None
12. Certification, licensure:
 - None

EXPERIENCE

13. Academic (only senior positions):

¹Highest degree in German academic education, awarded after passing the tenure process, qualifies for full professorship.

- University of Miami, **Associate Professor**, June 2012 - present.
Department of Computer Science. Research on knowledge representation and reasoning for autonomous agents (software and robotic) and Semantic Web.
- University of Miami, **Research Associate Professor**, August 2010 - May 2012.
Department of Computer Science. Research on knowledge representation and reasoning for autonomous agents and semantic web.
- University of Miami, **Visiting Associate Professor**, August 2008 - August 2010.
Department of Computer Science. Research on knowledge representation and reasoning for autonomous agents and semantic web.
- Universität Bremen, **Privatdozent** (Status after **successfully passing the tenure procedure**, qualified for Full Professorship), January 2004 - July 2008.
Department of Computer Science and Center for Computing Technologies. Research on knowledge representation and reasoning for autonomous agents and semantic web.
- Universität Bremen, **Assistant Professor**, November 1998 - December 2003.
Department of Computer Science and Center for Computing Technologies. Research on knowledge representation and reasoning for autonomous agents and semantic web.
- Universität Bremen, **Senior Researcher & Managing Director**, July 1997 - October 1998.
Department of Computer Science and Center for Computing Technologies. Research on knowledge representation and reasoning for autonomous agents and semantic web. Managing Director of the area 'Intelligent Systems' at the Center for Computing Technologies. Management and budgeting of a group of 15 researchers.
- Queensland University of Technology, **Post-Doctoral Fellow**, July 1996 - July 1997.
Neurocomputing Research Centre, School of Computer Science. Research on knowledge-based systems and artificial neural networks.
- Queensland University of Technology, **Visiting Researcher**, January 1996 - June 1996.
Scholarship from German Ministry for Science and Education (BMBF), Neurocomputing Research Centre, School of Computer Science. Research on knowledge-based systems and artificial neural networks.
- Universität Münster, **Senior researcher**, January 1991 - December 1995.
Institute for Agricultural Informatics (University of Münster, founded in 01/91). Research on expert systems and artificial neural networks. Software development for a plant protection expert system.

14. Non-academic:

- Model Accuracy LLC (2014), **Co-Founder**, AI-based software for offshore sailing navigators www.modelaccuracy.com.
- aitement GmbH (2006), **Co-Founder, CEO and Consultant**, March 2007 - 2011.
AI-based technologies for autonomous multi-agent systems for online sports games (www.bundesliga.de (Bundesliga Manager), www.topleague.de).
- proPlant GmbH (1995) **Co-Founding** team member, decided to stay in academics. AI-based techniques for intelligent plant protection in agriculture.
- conterra GmbH (1994), **Co-Founding** team member, decided to stay in academics. AI-based techniques for mobile geographical applications.

15. Military:

- None

PUBLICATIONS

16. Books and monographs published:

- [1] Ubbo Visser, Fernando Ribeiro, Takeshi Ohashi, and Frank Dellaert, editors. *RoboCup 2007: Robot Soccer World Cup XI*, volume 5001 of *Lecture Notes in Artificial Intelligence*. Springer Berlin / Heidelberg / New York, 2008.
- [2] Ubbo Visser. *Intelligent Information Integration for the Semantic Web*, volume 3159 of *Lecture Notes in Artificial Intelligence*. Springer Berlin / Heidelberg / New York, 2005.

17. Juried or refereed articles:

(a) Juried or refereed journal articles

- [3] Pedro Peña and Ubbo Visser. ITP: Inverse Trajectory Planning for Human Pose Prediction. *Künstliche Intelligenz (German AI Journal)*, 34(2):17, June 2020.
- [4] Hande Küçük McGinty, Ubbo Visser, and Stephan Schürer. How to develop a drug target ontology: Knowledge acquisition and representation methodology (knarm). In *Bioinformatics and Drug Discovery*, pages 49–69. Springer, 2019.
- [5] Yu Lin and Saurabh Mehta and Hande Küçük McGinty and John Paul Turner and Dusica Vidovic and Michele Forlin and Amar Koleti and Dac-Trung Nguyen and Lars Juhl Jensen and Rajarshi Guha and Stephen L. Mathias and Oleg Ursu and Vasileios Stathian and Jianbin Duan and Nooshin Nabizadeh and Caty Chung and Christopher Mader and Ubbo Visser and Jeremy J. Yang and Cristian G. Bologna and Tudor Oprea and Stephan C. Schürer. Drug Target Ontology to Classify and Integrate Drug Discovery Data. *Journal of Biomedical Semantics*, 8(50):1–16, November 2017.
- [6] Andreas Seekircher and Ubbo Visser. An Adaptive LIPM-based Dynamic Walk using Model Parameter Optimization on Humanoid Robots. *Künstliche Intelligenz (KI), Special Issue RoboCup*, 30(3):1–12, July 2016.
- [7] Alison Callahan, Saminda W. Abeyruwan, Hassan Al-Ali, Adam R. Ferguson, Phillip G. Popovich, Nigam Shah, Ubbo Visser, John L. Bixby, and Vance P. Lemmon. RegenBase: A knowledge base of spinal cord injury biology for translational research. *Database: Oxford Journal*, 2016:1–13, March 2016.
- [8] Saminda Abeyruwan, Dilip Sarkar, Faisal Sikder, and Ubbo Visser. Semi-Automatic Extraction of Training Examples from Sensor Readings for and Posture Monitoring. *IEEE Sensors*, 16(13):5406–5415, April 2016.
- [9] Jia Xu, Emilo Shironoshita, Ubbo Visser, Nigel John, and Mansur Kabuka. Converting Instance Checking to Subsumption: A Rethink for Object Queries over Practical Ontologies. *International Journal of Intelligence Science*, 5(1):44–62, January 2015.
- [10] Lemmon Vance P., Ferguson Adam R., Popovich Phillip G., Xu Xiao-Ming, Snow Diane M., Igarashi Michihiro, Bixby John L. Beattie Christine E., and the MIASCI Consortium (U. Visser is part of the consortium). Minimum Information about a Spinal Cord Injury Experiment: A Proposed Reporting Standard for Spinal Cord Injury Experiments. *Journal of Neurotrauma*, 31(15):1354–1361, August 2014.
- [11] Vance P. Lemmon, Saminda Abeyruwan, Ubbo Visser, and John L. Bixby. Facilitating transparency in spinal cord injury studies using data standards and ontologies. *Neural Regeneration Research*, 9(1):6–7, March 2014.
- [12] Alex M. Clark, Barry Bunin, Nadia Litterman, Stephan C. Schürer, and Ubbo Visser. Fast and accurate semantic annotation of bioassays exploiting a hybrid of machine learning and user confirmation. *PeerJ*, 2(e524):1–23, August 2014.

- [13] AV Callahan, K Sakurai, SW Abeyruwan, AR Ferguson, PG Popovich, U Visser, JL Bixby, and VP Lemmon. Minimum Information about a Spinal Cord Injury Experiment (MI-ASCI): Concepts and integration with the RegenBase Ontology. *Journal of Neurotrauma*, 31(12):A3–02, A–35, June 2014. Abstract print from 32th Annual National Neurotrauma Symposium.
- [14] Saminda Abeyruwan, Uma Vempati, Hande Küçük, Ubbo Visser, Amar Koleti, Ahsan Mir, Kunie Sakurai, Caty Chung, Joshua Bittker, Paul Clemons, Steve Brudz, Anosha Siripala, Arturo Morales, Martin Romacker, David Twomey, Svetlana Bureeva, Vance Lemmon, and Stephan Schürer. Evolving BioAssay Ontology (BAO): Modularization, Integration and Applications. *Journal of Biomedical Semantics*, 5(Suppl 1):S5, 1–22, July 2014.
- [15] Uma D Vempati, Magdalena J Przydzial, Saminda Abeyruwan, Kunie Sakurai, Caty Chung, Christopher Mader, Ubbo Visser, Vance P Lemmon, and Stephan C Schürer. Formalization, Annotation and Analysis of Diverse Drug and Probe Screening Assay Datasets using the BioAssay Ontology (BAO). *PLoS One*, 7(11):e49198, 14 pages, November 2012.
- [16] Tobias Warden and Ubbo Visser. Real-time spatio-temporal analysis of dynamic scenes. *Knowledge and Information Systems*, 27(3):1–37, June 2011.
- [17] Ubbo Visser, Saminda Abeyruwan, Uma Vempati, Robin Smith, Vance Lemmon, and Stephan Schürer. BioAssay Ontology (BAO): A Semantic Description of Bioassays and High-Throughput Screening Results. *BMC Bioinformatics*, 12(1):257–273, July 2011.
- [18] Ubbo Visser. KI und Roboter. *Künstliche Intelligenz (German AI Journal)*, 24(3):185–187, August 2010.
- [19] Ubbo Visser and Hans-Dieter Burkhard. RoboCup 2006: 10 Years of Achievements and Future Challenges. *AI Magazine*, 28(2):115–130, June/July 2007.
- [20] Hans-Dieter Burkhard, Ubbo Visser, Matthias Jüngel, Ansgar Bredenfeld, and Thomas Christaller. Herausforderung für KI und Robotik. *Künstliche Intelligenz (German AI Journal)*, 20(2):5–11, February 2006.
- [21] Michel Klein and Ubbo Visser. Semantic Web Challenge 2004. *Journal of Web Semantics*, 3(2–3):209–210, October 2005.
- [22] Thomas Wagner, Ubbo Visser, and Otthein Herzog. Egocentric Qualitative Spatial Knowledge Representation for Physical Robots. *Robotics and Autonomous Systems*, 49(1–2):25–42, November 2004.
- [23] Ubbo Visser and Patrick Doherty. Issues in designing physical agents for dynamic real-time environments: World modeling, planning, learning, and communicating. *AI Magazine*, 25(2):137–138, August 2004.
- [24] Michel Klein and Ubbo Visser. Semantic Web Challenge 2003. *IEEE Intelligent Systems*, 19(3):31–33, May/June 2004.
- [25] Sebastian Hübner, Rainer Spittel, Ubbo Visser, and Thomas Vögele. Ontology-Based Search for Interactive Digital Maps. *IEEE Intelligent Systems*, 19(3):80–86, May 2004.
- [26] Lars Bernard, Sören Haubrock, Sebastian Hübner, Rolf Lessing, Michael Lutz, and Ubbo Visser. Ontologies for Intelligent Search and Semantic Translation in Spatial Data Infrastructures. *Photogrammetrie - Fernerkundung - Geoinformation (PFG)*, 10(6):451–461, November 2003.
- [27] Ubbo Visser, Heiner Stuckenschmidt, Gerhard Schuster, and Thomas Vögele. Ontologies for Geographic Information Processing. *Computers & Geosciences*, 28(1):103–117, February 2002.

- [28] Ubbo Visser, Heiner Stuckenschmidt, Christoph Schlieder, Holger Wache, and Ingo Timm. Terminology Integration for the Management of Distributed Information Resources. *Künstliche Intelligenz (KI), Special Issue Knowledge Management*, 16(1):31–34, February 2002.
- [29] Ubbo Visser, Uwe Voges, Karoline Epke, Rupert Pfeiffer, and Ulrich Streit. Umweltschonender Pflanzenschutz mit Hilfe des Expertensystems PRO_PLANT. *Künstliche Intelligenz (KI)*, 93(3):34–43, September 1993.
- (b) Juried or refereed conference papers :
- [30] Pedro Peña and Ubbo Visser. Adaptive Walk-Kick on a Bipedal Robot. In Stefan Chalup et al., editor, *RoboCup 2019: Robot Soccer World Cup XXIII*. Springer Berlin / Heidelberg, 2020. **Best Paper Candidate**, to appear.
- [31] Rahul Dass, Nick Petersen, Ubbo Visser, and Marisa Omori. It’s Not Just Black and White: Classifying Defendant Mugshots Based on the Multidimensionality of Race and Ethnicity. In L. Paull and M. Brown, editors, *Proceedings of the 17th Computer and Robot Vision*, pages 238–245. IEEE Xplore, 2020.
- [32] Pedro Peña, Christine Lisetti, Mihai Polceanu, and Ubbo Visser. eEVA: Real-time Web-based Affective Agents for Human-Robot Interface. In Dirk Holz, Katie Genter, Maarouf Saad, and Oskar von Stryk, editors, *RoboCup 2018: Robot Soccer World Cup XXII*, volume 11374, pages 262–274. Springer, Cham, 2019.
- [33] Pedro Peña, Joseph Masterjohn, and Ubbo Visser. An Omni-directional Kick Engine for Humanoid Robots with Parameter Optimization. In Hidehisa Akiyama, Oliver Obst, Claude Sammut, and Flavio Tonidandel, editors, *RoboCup 2017: Robot Soccer World Cup XXI*, pages 385–397. Springer Berlin / Heidelberg, 2018.
- [34] Hande Küçük-McGinty, Stephan Schürer, and Ubbo Visser. KNowledge Acquisition and Representation Methodology (KNARM). In *Proceedings of the 9th International Conference on Biological Ontology*, Proceedings of the Joint International Conference on Biological Ontology and BioCreative (2016). ICBO, ICBO, July 2018.
- [35] Andreas Seekircher and Ubbo Visser. A Closed-Loop Gait for Humanoid Robots Combining LIPM with Parameter Optimization. In Sven Behnke, Daniel Lee, Sanem Sariel, and Raymond Sheh, editors, *RoboCup 2016: Robot Soccer World Cup XX*, volume 9776, pages 71–83. Springer Berlin / Heidelberg, 2017.
- [36] Kyle Poore, Joseph Masterjohn, Andreas Seekircher, Pedro Peña, and Ubbo Visser. DTMF Audio Communication for NAO Robots. In I. Russell and W. Eberle, editors, *Proceedings of the 30th International Florida Artificial Intelligence Research Society Conference (FLAIRS)*, pages 448–453. AAAI press, 2017.
- [37] Pedro Peña, Joseph Masterjohn, and Ubbo Visser. Optimizing Kick Trajectory: A Comparative Study. In Christoph Benz Müller et al., editor, *GCAI 2017. 3rd Global Conference on Artificial Intelligence*, volume 50, pages 239–245. EPiC Series in Computing, 2017.
- [38] Joseph G. Masterjohn, Mihai Polceanu, Julian Jarrett, Andreas Seekircher, Cédric Buche, and Ubbo Visser. Regression and Mental Models for Decision Making on Robotic Biped Goalkeepers. In Luis Almeida, Jianmin Ji, Gerald Steinbauer, and Sean Luke, editors, *RoboCup 2015: Robot Soccer World Cup XIX*, volume 9513 of *Lecture Notes in Artificial Intelligence*, pages 177 – 189. Springer Berlin / Heidelberg, 2016.
- [39] Hande Küçük-McGinty, Saurabh Mehta, Yu Lin and Nooshin Nabizadeh, Vasileios Stathias, Dusica Vidovic, Amar Koletić, Christopher Mader, Jianbin Duan, Ubbo Visser, and Stephan Schürer. Building Concordant Ontologies for Drug Discovery. In *Proceedings of the 7th*

- International Conference on Biological Ontology*, Proceedings of the Joint International Conference on Biological Ontology and BioCreative (2016). ICBO and BioCreative, ICBO and BioCreative, 08/01/2016 2016.
- [40] Hande Küçük-McGinty, Yu Lin, Saurabh Mehta, Nooshin Nabizadeh, Vasileios Stathias, Dusica Vidovic, Amar Koleti, Christopher Mader, Jianbin Duan, Ubbo Visser, Tudor Oprea, and Stephan Schürer. Ontologies to integrate, classify and model drug discovery data. In *Bio-Ontologies SIG at Intelligent Systems for Molecular Biology*. International Society for Computational Biology (ISCB), 2016.
- [41] Alison Callahan, Matthew C. Danzi, Giulia Zunino, Daniel J. Cooper, Nigam H. Shah, Ubbo Visser, John L. Bixby, and Vance P. Lemmon. Extending RegenBase to elucidate effects of nerve injury on gene expression. In Michel Dumontier, Philippe Rocca-Serra, Nigam Shah, and Karin Verspoor, editors, *Bio-Ontologies SIG at Intelligent Systems for Molecular Biology*. International Society for Computational Biology (ISCB), 2016.
- [42] Saminda Abeyruwan and Ubbo Visser. RLLib: C++ Library to Predict, Control, and Represent Learnable Knowledge using On/Off Policy. In Luis Almeida, Jianmin Ji, Gerald Steinbauer, and Sean Luke, editors, *RoboCup 2015: Robot Soccer World Cup XIX*, volume 9513 of *Lecture Notes in Artificial Intelligence*, pages 356–364. Springer Berlin / Heidelberg, January 2016.
- [43] Kyle Poore, Saminda Abeyruwan, Andreas Seekircher, and Ubbo Visser. Single- and Multi-Channel Whistle Recognition with NAO Robots. In A. C. Bianchi, H. Akin Reinaldo, Subramanian Ramamoorthy, and Komei Sugiura, editors, *RoboCup 2014: Robot Soccer World Cup XVIII*, volume 8992 of *LNAI*, pages 1–13. Springer International Publishing Switzerland, 2015.
- [44] Saminda Abeyruwan and Ubbo Visser. A New Real-Time Algorithm to Extend DL Assertional Formalism to Represent and Deduce Entities in Robotic Soccer. In A. C. Bianchi, H. Akin Reinaldo, Subramanian Ramamoorthy, and Komei Sugiura, editors, *RoboCup 2014: Robot Soccer World Cup XVIII*, volume 8992 of *LNAI*, pages 270–282. Springer International Publishing Switzerland, 2015.
- [45] Saminda Abeyruwan, Faisal Sikder, Ubbo Visser, and Dilip Sakar. Activity Monitoring and Prediction for Humans and NAO Humanoid Robots using Wearable Sensors. In Ingrid Russell and William Eberle, editors, *Proceedings of the Twenty-Eighth International Florida Artificial Intelligence Research Society Conference*, pages 342 – 347. AAAI, AAAI press, 2015.
- [46] Saminda Abeyruwan, Ramesh Baral, Ugan Yasavur, Andreas Seekircher, Ubbo Visser, and Christine Lisetti. Spoken Dialog Systems for Health Interventions using Fully Autonomous Humanoid Robots. In Ingrid Russell and William Eberle, editors, *Proceedings of FLAIRS 2015*. AAAI, AAAI press, 2015. Poster.
- [47] Jia Xu, Ubbo Visser, and Mansur Kabuka. Converting instance checking to subsumption: A rethink for object queries over practical ontologies. In Carla E. Brodley and Peter Stone, editors, *Proceedings of the Twenty-Eighth AAAI Conference on Artificial Intelligence*, pages 3142 – 3143. AAAI Press, 2014.
- [48] Jia Xu, E. Patrick Shironoshita, Ubbo Visser, Nigel John, and Mansur Kabuka. Optimizing the Most Specific Concept Method for Efficient Instance Checking. In Andrei Broder, Kyuseok Shim, and Torsten Suel, editors, *Proceedings of Proc Int World Wide Web Conf*, pages 405 – 406, Seoul, Korea, 2014. ACM 978-1-4503-2745-9/14/04.
- [49] Justin Stoecker and Ubbo Visser. Visualizing and Debugging Complex Multi-Agent Soccer Scenes in Real Time. In Sven Behnke, Manuela Veloso, Arnoud Visser, and Rong Xiong,

- editors, *RoboCup 2013: Robot Soccer World Cup XVII*, LNAI 8371, pages 640 – 647. Springer Berlin / Heidelberg, 2014.
- [50] Alexander Härtl, Ubbo Visser, and Thomas Röfer. Robust and Efficient Object Recognition for the Standard Platform League. In Sven Behnke, Manuela Veloso, Arnoud Visser, and Rong Xiong, editors, *RoboCup 2013: Robot Soccer World Cup XVII*, LNAI 8371, pages 396 – 407. Springer Berlin / Heidelberg, 2014.
- [51] Saminda Abeyruwan, Ramesh Baral, Ugan Yasavur, Christine Lisetti, and Ubbo Visser. Humanoid Robots and Spoken Dialog Systems for Brief Health Interventions. In Sonia Chernova, Kris Hauser, Chad Jenkins, Maja Matarić, Andrea Thomaz, and Manuela Veloso, editors, *AAAI Fall Symposium, AI-HRI Workshop*, AAAI Fall Symposium Series, pages 2–4. AAAI press, 2014.
- [52] Uma Vempati, Hande Küçük, Saminda Abeyruwan, Ubbo Visser, Vance Lemmon, A Mir, and Stephan Schürer. BioAssay Ontology (BAO): Modularization, Integration and Applications. In *21st International conference on Intelligent Systems for Molecular Biology (ISMB) and 12th European Conference on Computational Biology (ECCB)*. Bio-Ontologies SIG, 2013.
- [53] Andreas Seekircher, Justin Stoecker, Saminda Abeyruwan, and Ubbo Visser. Motion capture and contemporary optimization algorithms for robust and stable motions on simulated biped robots. In Xiaoping Chen, Peter Stone, Luis Enrique Sucar, and Tijn Van der Zant, editors, *RoboCup 2012: Robot Soccer World Cup XVI*, volume 7500, pages 213–224. Springer Berlin / Heidelberg, Mexico City, 2013.
- [54] Saminda Abeyruwan and Andreas Seekircher and Ubbo Visser. Dynamic Role Assignment using General Value Functions. In Sam Devlin and Daniel Hennes and Enda Howley, editor, *AAMAS 13 Workshop on Adaptive Learning Agents*, Saint Paul, MN, 2013.
- [55] Justin Stoecker and Ubbo Visser. RoboViz: Programmable Visualization for Simulated Soccer. In Thomas Röfer, Norbert Michael Mayer, Jesus Savage, and Uluç Saranlı, editors, *RoboCup 2011: Robot Soccer World Cup XV*, pages 282–293. Springer Berlin / Heidelberg, 2012.
- [56] Christine Lisetti, Ugan Yasavur, Claudia De Leon, Reza Amini, Naphthali Rishe, and Ubbo Visser. Building an On-demand Avatar-based Health Intervention for Behavior Change. In *Proceedings of FLAIRS 2012*, pages 175–181. AAAI Press, 2012.
- [57] Saminda Abeyruwan, Andreas Seekircher, and Ubbo Visser. Dynamic Role Assignment using General Value Functions. In Sven Behnke, Thomas Röfer, and Ubbo Visser, editors, *IEEE Humanoid Robots, HRS workshop*, Osaka, Japan, 2012. IEEE.
- [58] Ubbo Visser. TopLeague & Bundesliga Manager - New generation online soccer games. In Eric Chown, Akihiro Matsumoto, Paul Plöger, and Javier Ruiz del Solar, editors, *RoboCup 2010: Robot Soccer World Cup XIV*, volume 6556 of *Lecture Notes in Computer Science*, pages 230–241. Springer, 2011.
- [59] U Vempati, U. Visser, S Abeyruwan, K. Sakurai, M. Przydzial, C. Chung, R. Smith, A Koleti, C. Mader, V. Lemmon, and S. Schürer. BioAssay Ontology to describe high-throughput screening assays and their results. In Barry Smith, editor, *ICBO Proceedings: International Conference on Biomedical Ontology*, pages 209–216, 2011.
- [60] Andreas Seekircher, Abeyruwan Saminda, and Ubbo Visser. Accurate ball tracking with Extended Kalman Filters as a pre-requisite for a high-level behavior with Reinforcement Learning. In Sven Behnke, Thomas Roefer, and Peter Stone, editors, *Humanoids*, 2011.
- [61] Christine L Lisetti, Ugan Yasavur, Ubbo Visser, and Naphtali Rishe. Toward conducting motivational interviewing with an on-demand clinician avatar for tailored health behav-

- ior change interventions. In *Pervasive Computing Technologies for Healthcare (Pervasive-Health)*, 2011 5th International Conference on, pages 246–249. IEEE, IEEE Xplore, October 2011.
- [62] Ubbo Visser and Christine Lisetti. Avatars in a modern soccer manager. In Wiebe van der Hoek, Gal A. Kaminka, Yves Lespérance, Michael Luck, and Sandip Sen, editors, *Proceedings of the ARDE workshop at AAMAS 2010*, volume 1, pages 12–20. International Foundation for Autonomous Agents and Multiagent Systems, ACM Digital Library, 2010.
- [63] Carsten Rachuy and Ubbo Visser. Behavior-analysis and-prediction for agents in real-time and dynamic adversarial environments. In *Proceedings of the European Conference on AI (ECAI)*, pages 979–980, 2010.
- [64] Saminda Abeyruwan, Ubbo Visser, Stephan Schuerer, Vance Lemmon, and Stephan Schürer. PrOntoLearn: Using Lexico-Semantic Ontology Generation using Probabilistic Methods. In Fernando Bobillo, Rommel Carvalho, Paulo C G Da Costa, Claudia D’Amato, Nicola Fanizzi, Kathryn B Laskey, Kenneth J Laskey, Thomas Lukasiewicz, Trevor Martin, Matthias Nickles, and Michael Pool, editors, *Workshop on Uncertainty Reasoning for the Semantic Web at the 9th International Semantic Web Conference, ISWC 2010*, volume 654, pages 25–36. <http://ceur-ws.org/>, 2010.
- [65] Saminda Abeyruwan, Victor Diaz, Armando Locay, Nabeel Sneij, Andreas Seekircher, Justin Stoecker, and Ubbo Visser. RoboCanes - Team Description Paper. In *RoboCup 2010: Robot Soccer World Cup XIV*, 2010.
- [66] Saminda Abeyruwan, Caty Chung, Nakul Datar, Felimon Gayanilo, Amar Koleti, Vance Lemmon, Christopher Mader, Mitsunori Ogihara, Deepthi Puram, Kunie Sakurai, Robin Smith, Uma Vempati, Sreeharsha Venkatapuram, Ubbo Visser, and Stephan Schürer. BAOsearch: A Semantic Web Application for Biological Screening and Drug Discovery Research. In *ISWC: Uncertainty WS*, Shanghai, China, 2010.
- [67] Tobias Warden, Andreas Lattner, and Ubbo Visser. Real-time spatio-temporal analysis of dynamic scenes in 3d soccer simulation. In Luca Iocchi, Hitoshi Matsubara, Alfredo Weitzenfeld, and Changjiu Zhou, editors, *RoboCup 2008: Robot Soccer World Cup XII*, Lecture Notes of Artificial Intelligence. Springer, Heidelberg, 2009.
- [68] Sebastian Hübner and Ubbo Visser. Temporal representation and reasoning for the semantic web. In Chad Lane and David Wilson, editors, *21st international FLAIRS conference*, pages 113–114, Coconut Grove, FL, USA, 2008. AAAI Press.
- [69] Frank Dylla, Alexander Ferrein, Gerhard Lakemeyer, Jan Murray, Oliver Obst, Thomas Röfer, Stefan Schiffer, Frieder Stolzenburg, Ubbo Visser, and Thomas Wagner. Approaching a formal soccer theory from the behavior specification in robotic soccer. In Peter Dabnicki and Arnold Baca, editors, *Computer Science in Sport*, Bioengineering, pages 161–185. WIT Press, London, 2008.
- [70] Steffen Planthaber and Ubbo Visser. Logfile player and analyzer for RoboCup 3D. In Gerhard Lakemeyer, Elizabeth Sklar, Domenico Sorrenti, and Tomoichi Takahashi, editors, *RoboCup 2006: Robot Soccer World Cup X*, volume 4434 of *Lecture Notes in Computer Science*, pages 426–433. Springer, Bremen, Germany, 2007.
- [71] Andreas Lattner, Andrea Miene, Ubbo Visser, and Otthein Herzog. Sequential pattern mining for situation and behavior prediction in simulated robotic soccer. In Itsuki Noda, Adam Jacoff, Ansgar Bredenfeld, and Yasutake Takahashi, editors, *RoboCup 2005: Robot Soccer World Cup IX*, volume 4020 of *Lecture Notes in Computer Science*, pages 118–129. Springer-Verlag, Osaka, Japan, 2006.

- [72] Christoph Waldmann, Ubbo Visser, Michael Diepenbroek, and Uwe Schindler. Semantic infrastructure for marine geosensor networks. In Christoph Brox, Antonio Krüger, and Ingo Simonis, editors, *Geosensornetzwerke - von der Forschung zur praktischen Anwendung*, volume 23, pages 127–133, Münster, 2005. Institut für Geoinformatik, Universität Münster.
- [73] Frank Dylla, Alexander Ferrein, Gerhard Lakemeyer, Jan Murray, Oliver Obst, Thomas Röfer, Frieder Stolzenburg, Ubbo Visser, and Thomas Wagner. Towards a League-Independent Qualitative Soccer Theory for RoboCup. In Daniele Nardi, Martin Riedmiller, Claude Sammut, and José Santos-Victor, editors, *RoboCup 2004: Robot Soccer World Cup VIII*, volume 3276 of *Lecture Notes in Computer Science*, pages 611–618. Springer, Lisbon, Portugal, 2005.
- [74] Thomas Wagner, Ubbo Visser, Andreas Lattner, and Otthein Herzog. Qualitative Egocentric Updating for Autonomous Mobiles. In *5th IFAC Symposium on Intelligent Autonomous Vehicles*, volume 1, pages 107–112, Lisbon, Portugal, 2004. International Federation of Automatic Control, Elsevier.
- [75] Thomas Wagner, Ubbo Visser, and Otthein Herzog. Egocentric qualitative spatial knowledge representation for physical robots. In Craig Schlenoff and Mike Uschold, editors, *AAAI Spring Symposium*, pages 9–16, Stanford, CA, 2004. AAAI Press, Technical Report SS-04-04.
- [76] Andrea Miene, Ubbo Visser, and Otthein Herzog. Recognition and prediction of motion situations based on a qualitative motion description. In Daniel Polani, Brett Browning, Andrea Bonarini, and Kazuo Yoshida, editors, *RoboCup 2003: Robot Soccer World Cup VII*, volume 3020 of *Lecture Notes in Computer Science*, pages 77–88. Springer-Verlag, Padua, Italy, 2004.
- [77] Andrea Miene, Andreas Lattner, Ubbo Visser, and Otthein Herzog. Dynamic-preserving qualitative motion description for intelligent vehicles. In *IEEE Intelligent Vehicles Symposium*, pages 642–646, Parma, Italy, 2004. IEEE.
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- [79] Thomas Wagner, Christoph Schlieder, and Ubbo Visser. An extended panorama: Efficient qualitative spatial knowledge representation for highly dynamic environments. In Ubbo Visser, Patrick Doherty, Gerhard Lakemeyer, and Manuela Veloso, editors, *IJCAI-03 Workshop on Issues in Designing Physical Agents for Dynamic Real-Time Environments: World modelling, planning, learning, and communicating*, pages 109–115, Acapulco, Mexico, 2003. AAAI Press.
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- [85] Holger Wache, Ubbo Visser, and Thorsten Scholz. Ontology construction - an iterative and dynamic task. In Susan Haller and Gene Simmons, editors, *Florida Artificial Intelligence Research Society Conference (FLAIRS)*, pages 445–449, Pensacola, FL, USA, 2002. AAAI press.
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- [96] Thomas Vögele, Heiner Stuckenschmidt, and Ubbo Visser. Towards intelligent brokering of geoinformation. In *Urban and Rural Data Management (UDMS)*, pages 135–142, Delft, 2000. Electronic.
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- [107] Ubbo Visser, Emanoil Pop, Ross Hayward, and Joachim Diederich. Regelextraktion aus neuronalen Netzen am Beispiel der Ermittlung von Herbiziden im Pflanzenschutz - Beratungssystem PRO_PLANT. In H. Kremers and W. Pillmann, editors, *Space and Time in Environmental Information System*, Umwelt-Informatik aktuell, pages 694–701, Berlin, 1995. Metropolis Verlag, Marburg GI-Informatik im Umweltschutz.
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- [109] Uwe Voges, Ubbo Visser, Andreas Johnen, and Karsten Hell. PRO_PLANT - Pflanzenschutz mit Hilfe eines Expertensystems. In Otthein Herzog, Thomas Christaller, and Schmitt, editors, *17. Fachtagung für künstliche Intelligenz*, Grundlagen und Anwendungen der KI, pages 350–362, Stuttgart, 1993.
- [110] Ubbo Visser and Ulrich Streit. Möglichkeiten zur Einbindung neuronaler Netze am Beispiel des Beratungssystems PRO_PLANT. In R. Ackmann, B. Petersen, and H. Geidel, editors, *Referate der 13. GIL-Jahrestagung*, volume 3 of *Berichte der Gesellschaft für Informatik in der Land-, Forst- und Ernährungswirtschaft*, pages 32–36, Giessen, 1991. Ulmer Verlag.

18. Other works, publications and abstracts in journals:

- [111] Ubbo Visser. Our software production is still some sort of hacking. *KI - Künstliche Intelligenz*, 34(3):7, 2020. accepted.
- [112] Ubbo Visser. Robots in committees. *KI - Künstliche Intelligenz*, 32(1):85–90, February 2018.
- [113] Ubbo Visser. AI and Robotics for the Human Brain Project II. *KI - Künstliche Intelligenz*, 33(3), August 2018.
- [114] Ubbo Visser. Quo vadis, AI? *KI - Künstliche Intelligenz*, 31(1):99–105, Mar 2017.
- [115] Ubbo Visser. Semantic Web Reloaded: An Update on the Progress of Semantic Web technologies. *KI - Künstliche Intelligenz*, 30(2):109–112, 2016.

- [116] Ubbo Visser. AI and Robotics: RoboCup Evolution. *KI - Künstliche Intelligenz*, 30(1):333–337, January 2016.
- [117] Ubbo Visser. 20 Years of RoboCup. *KI - Künstliche Intelligenz*, 30(3):217 – 220, August 2016.
- [118] Ubbo Visser. Recent statistics on the growth of the KI journal. *KI - Künstliche Intelligenz*, 29(2):107–110, 2015.
- [119] Ubbo Visser. KI Fachbereichspolitik und künstliche kognitive Systeme. *KI - Künstliche Intelligenz*, 29(2):207–212, 2015.
- [120] Vance Lemmon, Alison Callahan, Saminda Abeyruwan, Adam Ferguson, Phillip Popovich, Ubbo Visser, and John Bixby. Facilitating reproducibility and data integration for SCI reseach with MIASCI and RegenBase. *Journal of Neurotrauma*, 32(12):A–1–A–152, 2015.
- [121] Ubbo Visser. KI und Robotik für das Human Brain Project. *KI - Künstliche Intelligenz*, 28(4):315 – 320, 2014.
- [122] Ubbo Visser. Mother tongue? *KI - Künstliche Intelligenz*, 27(4):305–307, 2013.
- [123] Ubbo Visser. Human-centered robotics. *KI - Künstliche Intelligenz*, 27(2):173–177, 2013.
- [124] Ubbo Visser. AI, Robotics and the Role of ECCAI. *KI - Künstliche Intelligenz*, 27(4):369–374, 2013.
- [125] Ubbo Visser. Question/Answering systems - Interview with Dr. Vinay K. Chaudhri, Program Director, Artificial Intelligence Center, SRI International, Menlo Park, CA, USA. *KI - Künstliche Intelligenz*, 26(2):191–195, 2012.
- [126] Ubbo Visser. Interview mit Prof. Wolfgang Wahlster, Leiter des DFKI und Professor an der Universität des Saarlandes. *KI - Künstliche Intelligenz*, 25(4):341–345, October 2011.
- [127] Ubbo Visser. Interview mit Prof. Kerstin Schill, Professorin an der Universität Bremen. *KI - Künstliche Intelligenz*, 25(4):347–349, October 2011.
- [128] Ubbo Visser. Interview with Prof. Manuela Veloso, President of the RoboCup Federation and President-Elect of AAAI. *KI - Künstliche Intelligenz*, 25(1):87–88, October 2010.

19. Other works accepted for publication (e.g. edited proceedings):

- [129] Ubbo Visser, Gerhard Lakemeyer, Manuela Veloso, and George Vachtsevanos, editors. *Proceedings of IJCAI-05 Workshop on Agents in Real-Time and Dynamic Environments*. IJCAI, August 2005.
- [130] Ubbo Visser, Patrick Doherty, Gerhard Lakemeyer, and Manuela Veloso, editors. *Proceedings of IJCAI-03 Workshop on Issues in Designing Physical Agents for Dynamic Real-Time Environments: World modelling, planning, learning, and communicating*, Acapulco, Mexico, July 2003. AAAI Press.
- [131] Ubbo Visser, Hans-Dieter Burkhard, Patrick Doherty, and Gerhard Lakemeyer, editors. *Proceedings of ECAI-04 Workshop on Agents in dynamic and real-time environments*. ECAI, July 2004.
- [132] Ubbo Visser. *Intelligent Information Integration for the Semantic Web*. Habilitation by Thesis, Department of Mathematics and Computer Science, University of Bremen, 12 2003. 267 pages. *Please note: Obtaining a habilitation in Germany is equivalent to obtaining tenure in the US.*
- [133] Ubbo Visser. *Development and application of neural networks within the framework of the rule-based plant protection advisory system PRO_PLANT*. PhD-Thesis, Faculty of Mathematics and Natural Science, Westfälische Wilhelms-Universität Münster, 1995. 158 pages.

Please note: Thesis is written in German. Original title: Entwicklung und Anwendung neuronaler Netze im Rahmen des Pflanzenschutz-Beratungssystems PRO-PLANT.

PROFESSIONAL

20. Funded Research Performed:

The total amount of grants awarded is > **\$11 Million** out of which over **\$7 Million** have been raised as **Sole PI** or Head of Funding Committee. Please note that I did **not** count any overhead for research institutions. The awarded grants include peer-reviewed fundamental research grants, applied research grants, industry grants as well as grants for educational projects. The awarded grants come from international and national funding organizations as well as from governmental organizations and from industry.

Research Grants in the USA

- **(ACTIVE)** *Precision-based Assessment for the Detection of Mild Cognitive Impairment in Older Adults*, U. Visser is **Co-PI**, NIH R01 grant, 12/17 - 11/22, \$283,031 for U. Visser, \$3,138,726 total.
- **(ACTIVE)** *Human-robot interaction with the Toyota HSR robot*, U. Visser is **PI**, Toyota TRI grant, 12/17 - 11/21, \$100,000 for U. Visser, \$100,000 total.
- *Facial Profiling: Defendant Physical Characteristics, Machine Learning Analytics, and Criminal Justice Disparities in Miami-Dade County*, U. Visser is **Co-PI**, 01/19 – 08/19, award # U-LINK 19-774, \$11,000 (\$5,000 summer salary, \$6,000 for PhD student), \$39,000 total, PI is Dr. Nick Petersen, Sociology.
- *Integrated Knowledge Environment: Data Coordination and Integration Center (DCIC) for LINCS-BD2K*, U. Visser is **Co-Investigator**, NIH U54 (1U54HL127624-01), 09/14 - 04/19, approx. \$250,000 for U. Visser, \$2,550,656 total.
- *RegenBase: A Searchable Database to Organize Regeneration Knowledge via Ontologies*, U. Visser is **Co-Investigator**, NIH RO1 (1R01NS080145-01), 05/12 - 04/17, approx. \$230,000 for U. Visser, \$2,128,230 total. Extended to 04/2017.
- *Transformative Robotics Experience for Elementary Students (TREES)*, U. Visser is **Curriculum Expert**, NSF EAGER grant, 05/15 - 04/17, \$299,737 in total, \$6,000 for U. Visser.
- *Simplifying Behavior Engineering in 3D Simulation and SPL*, U. Visser is **Co-PI** and **Host**, RoboCup Federation Grant, 09/14 - 02/15, \$5,000 total.
- *Education for high school and SPL*, U. Visser is **Co-PI** and **Host**, RoboCup Federation Grant, 08/14 - 12/14, \$5,000 total.
- *LIFE Bridge (LINCS)*, Bridge funding from NIH-LINCS (3U01HL111561), 07/01/2013 - 06/30/2014, \$50,000 for U. Visser, U. Visser is **Co-PI** of LIFE, \$325,000 total.
- *Simplifying encoding of bioassays to accelerate translational drug discovery*, U. Visser & S. Schürer are **subcontractors**, SBIR Phase I grant, NIH (1R43TR0000185-01A1), 09/13 - 05/14, \$15,000 for U. Visser and S. Schürer, \$150,000 total.
- *LINCS Information FramEwork (LIFE) to Integrate and Analyze Diverse Data Sets*, U. Visser is **Co-PI**, NIH-LINCS Strategic Grant (U01HL111561), 09/11-08/13, \$100,000 for U. Visser, \$750,000 total.
- *BioAssay Ontology*, U. Visser is **Co-Investigator**, NIH Grant (NHGRI 1RC2HG005668-01), 10/09 - 09/11, \$80,000 for U. Visser.
- *Boosting the 3D SSL Simulator*, U. Visser is **Co-PI**, RoboCup Federation Funding, 02/11 - 04/11, \$5,000 for U. Visser.

- *Feasibility Study for Online Browser Games in the USA*, U. Visser is **Sole PI**, Internal Grant U of M, 04/09 - 07/09, \$20,000 for U. Visser, (internal UM grant).

Research Grants Pending or In Progress

Research Grants in the USA Pending or In Progress

- *SCH: INT: Collaborative Research: Designing Web-based Conversational 3D Virtual Health Assistants for Motivational Interviewing about Alcohol Misuse*, U. Visser is **PI**, NSF proposal, 07/20 - 06/24, \$441,000 for U. Visser, Total: \$1,200,000.
- *NRI: FND: Collaborative Research: Virtual assistant for collaboration with humans on the Toyota HSR robot*, U. Visser is **PI**, NSF proposal, 01/21 - 12/24, Total: \$750,000, encouraged by NSF to submit, based on former RAPID Collaborative Grant with FIU, in preparation.

Research Grants in Europe

- *aitainment - Multiagent online soccer game*, U. Visser is **Co-PI**, Industry R&D grant 03/10 - 02/12, 750,000 Euros
- *coach and win - Multiagent online soccer game*, U. Visser is **Sole PI**, German Government, High-Tech Seed Fund, 02/07 - 01/11, 570,000 Euros
- *Multiagent Visualization of real-time ticker messages*, U. Visser is **Sole PI**, Industry grant 09/09 - 03/10, 90,000 Euros
- *aitainment - Multiagent online soccer game*, U. Visser is **Sole PI**, Industry grant 05/09 - 05/10, 200,000 Euros
- *aitainment - Multiagent online soccer game*, U. Visser is **Sole PI**, Industry grant 03/08 - 05/09, 325,000 Euros
- *Automatic recognition of plans and intentions of adversarial mobile robots in cooperative and concurrent dynamic environments*, U. Visser is **PI**, special research program RoboCup (SPP 1125, period 3), German Research Council (DFG), 11/05 - 10/08, 300,000 Euros
- *RoboCup - Transfer*, Applied research project in the area of mobile robots that act in dynamic real-time environments, U. Visser is **Sole PI**, Special research program (FIP), State Government, 10/04 - 09/07, 211,000 Euros
- *RoboCup - Virtual Bundesliga*, Applied research grant, U. Visser is **Sole PI**, State Government, Senator for Education and Science, 01/06 - 06/06, 110,000 Euros
- *Internetcommunities II - Future trends for online gaming*, U. Visser is **Sole PI**, State Government, 09/07 - 02/08, 75,000 Euros
- *Internetcommunities - Future trends for online gaming*, U. Visser is **Sole PI**, State Government, 05/07 - 08/07, 50,000 Euros
- *Moving - Image-based navigation for underwater vehicles*, U. Visser is **Co-PI**, State Government - Robotics Initiative, 09/06 - 02/08, 77,000 Euros
- *RoboCup - Outdoor robots*, U. Visser is **Co-PI**, Federal Ministry for Education and Research (BMBF), 03/06 - 08/06, 115,000 Euros
- *RoboCup - Schools*, Research and education project in the area of mobile robots that act in dynamic real-time environments, U. Visser is **Co-PI**, Special research and education program, Senator for Education and Science, State Government, 09/04 - 09/06, 145,000 Euros
- *RoboCup - WorldCup*, U. Visser is **Head of OC**, State Government, Industry, 09/04 - 10/06, 2,400,000 Euros

- *Small personal grants*, U. Visser is **Sole PI**, travel grants for International Conferences, German Research Council (DFG), 2003, 2005, 7,500 Euros.
- *Automatic recognition of plans and intentions of adversarial mobile robots in cooperative and concurrent dynamic environments*, U. Visser is **PI**, special research program RoboCup (SPP 1125, period 2), German Research Council (DFG), 11/03 - 10/05, 225,000 Euros
- *GeoShare - Intelligent Use of Geodata*, U. Visser is partner University Faculty, European Commission, INTERREG IIIb., 12/02 - 11/05, 225,000 Euros
- *MeanInGS - Semantic Interoperability with the help of Geoservices*, U. Visser is **Co-PI**, German Research Council and Federal Ministry for Education and Research (DFG/BMBF), 10/02 - 09/04, 240,000 Euros
- *Automatic recognition of plans and intentions of adversarial mobile robots in cooperative and concurrent dynamic environments*, U. Visser is **PI**, special research program RoboCup (SPP 1125, period 1), German Research Council (DFG), 11/01 - 10/03, 225,000 Euros
- *Modeling Real Property Transactions*, U. Visser is partner University Faculty, European Commission, COST Action G9, 03/01 - 02/03, 45,000 Euros
- *Various small research grants, e.g. GWG-GIS, Revision, EISA*, U. Visser is **Sole PI**, State Government, Senator for Environmental Affairs, 07/96 - 03/01, 37,500 Euros
- *DataShare - Intelligent Data Integration and Sharing*, U. Visser is partner University Faculty, European Commission, INTERREG IIc., 11/99 - 04/01, 165,000 Euros
- *WinSpect - Wireless communication and knowledge discovery for maintenance of large industry plants*, U. Visser is **Sole PI**, Special research program (ISP II/12), State Government, 10/99 - 09/02, 91,000 Euros
- *BUI SY - Bremen Environmental Information System*, U. Visser is **Sole PI**, State Government, Senator for Environmental Affairs, 09/98 - 05/99, 60,000 Euros
- *Multimedia Unterweser*, Special information system for water/waste water, U. Visser is **Sole PI**, State Government, Senator for Environmental Affairs, 09/98 - 03/99, 25,000 Euros
- *Artificial Neural Networks and Rule-Extraction for Agricultural Expert Systems*, U. Visser is **Sole PI**, Personal funding from Federal Ministry for Education and Research (BMBF), 01/96 - 07/96, 15,000 Euros

Research Grants in Australia

- *PP-Banana - A decision support system for reducing pesticides in banana crops*, U. Visser is **Sole PI**, Australian Research Council (ARC-Collab), 04/97 - 03/01, 70,000 Euros
- *DAISY - Computer Support for On-Farm Breeding Decisions*, U. Visser is **Sole PI**, Australian Research Council (ARC-Small), 11/96 - 07/97, 20,000 Euros

21. Editorial responsibilities:

- **Associate Editor** of the German AI Journal, 09/2007 – present, Publisher: Springer.
- **Associate Editor** of the International Journal on Semantic Web and Information Systems (IJSWIS), 08/2006 – present, Publisher: Elsevier (until 2014), IGI Global (from 2015).
- **Supervising Editor**, German Journal on AI, Special Issue on Education in Artificial Intelligence K-12, Spring/Summer 2021.
- **Supervising Editor**, German Journal on AI, Special Issue on “RoboCup”, Summer and Fall 2016 (two editions).
- **Supervising Editor**, German Journal on AI, Special Issue on “Semantic Web”, Spring 2016.

- **Supervising Editor**, German Journal on AI, Special Issue on “Health & Wellbeing”, Spring 2015.
- **Supervising Editor**, German Journal on AI, Special Issue on “AI & Agriculture”, Fall 2013.
- **Supervising Editor**, German Journal on AI, Special Issue on “SLAM”, Spring 2010.
- **Supervising Editor**, German Journal on AI, Special Issue on “Humanoid robots”, Fall 2008.
- **Guest Co-editor**, German Journal on AI, Special Issue on “RoboCup”, March 2006.
- **Editorial Board** member of the International Journal on Semantic Web and Information Systems since the start of the journal in 2005. Publisher: Idea Group.
- **Guest Editor**, IEEE Intelligent Systems, Special Issue on “Semantic Web Challenge”, May 2004.
- **Guest Editor**, German Journal on AI, Special Issue on “Semantic Web”, March 2003.

22. Professional and Honorary Organizations

- **Distinguished Faculty for Cognitive Neuroscience and Aging** by the Miller School of Medicine since 05/2019.
- **Trustee** of the RoboCup Federation, 2018 – present.
- **Internal Advisory Board** of the RoboCup Federation, 2013 – 2018.
- **Trustee** of the RoboCup Federation, 2006-2012.
- **Executive Member** of the Media & IT Association (State of Bremen), August 2007 – August 2008 (leaving for USA).
- **Executive Member** of the RoboCup Federation, 2003-2006.
- **Co-Speaker** of the German RoboCup Association (Arbeitskreis RoboCup), 2003 – present.
- **Advisory Committee Member** for RoboCup World Championships, Suzhou 2008, Graz 2009, Singapore 2010, Istanbul 2011, Mexico City 2012

23. Honors and Awards:

- **ONLINESTAR 2009**, prestigious award presented to DFL, German Soccer Association, for best Internet-Sports-Site, my game Bundesliga Manager, played a crucial role in this.
- **Scientific Challenge Award** for a paper titled ”Recognition and Prediction of Motion Situations Based on a Qualitative Motion Description”, RoboCup Symposium 2003.
- **Best paper award (2nd place)** at the international conference on ”Business informatics and information systems in the finance business” (WI-IF) (out of 266 papers). The title of the paper is ”Intelligent Brokering of Environmental Information with the BUSTER system”, 2001.
- **Best innovative regional software (2nd place)** awarded by the North-Rhine Westphalian government (largest state in Germany). Team member and head of development of a group of 25 people who developed a plant protection expert system (PRO_PLANT), 1994.
- **Artificial Intelligence Award of the Society for Informatics (GI)**: The PRO_PLANT group won at the Second German Conference on Expert Systems in Hamburg (out of 27 systems), 1993.
- **Final qualifier** at the German-Austrian academic college software prize (which means that the system is one of the five best systems out of 45 other systems).
- **Best new software prize**. The PRO_PLANT group was awarded at the worlds largest agricultural exhibition (Agritechnica) in Frankfurt, Germany, 1993.
- **ACER award (2nd place)** The PRO_PLANT group became second for the ”conception of a decision-supported plant protection advisory system”, 1990.

24. Post-Doctoral Fellowships:

- Queensland University of Technology, **Post-Doctoral Fellow**, July 1996 - July 1997. Neurocomputing Research Centre, School of Computer Science. Research on knowledge-based systems and artificial neural networks.

25. Other Professional Activities (e.g., papers presented; performances; conference proceedings; seminar or conference panel member; catalogue work; etc.):

Event coordination

- **Chair**, RoboCup US-Open, April 2017.
- **Co-Chair**, IROS-Workshops (IEEE/RSJ International Conference on Intelligent Robots and Systems), September/October 2015.
- **Co-Chair**, HUMANOIDS workshop on *Humanoid Soccer Robots*, November 2012.
- **Co-Chair**, AAMAS workshop on *Agents in Dynamic and Real-Time Environments*, May 2010.
- **Co-Chair and head of committee**, RoboCup Symposium, July 2007.
- **General Co-Chair and Head of Organizing Committee**, RoboCup World Championships, June 2006.
- **Program Co-Chair**, Web Intelligence, December 2006.
- **Chair**, ISWC (International Semantic Web Conference), *Semantic Web Challenge*, November 2005.
- **Vice-Chair**, Web Intelligence, September 2005.
- **Chair**, IJCAI workshop on *Agents in Dynamic and Real-Time Environments*, August 2005.
- **Chair**, ECAI workshop on *Agents in Dynamic and Real-Time Environments*, August 2004.
- **Co-Chair**, ISWC, *Semantic Web Challenge*, November 2004.
- **Co-Chair**, Workshop at German Computer Science & AI Conference: *Semantic Web Services and Dynamic Networks*, September 2004.
- **Chair**, IJCAI workshop on *Issues in Designing Physical Agents for Dynamic Real-Time Environments: World modeling, planning, learning, and communicating*, August 2003.
- **Co-Chair**, ISWC, *Semantic Web Challenge*, November 2003.
- **Chair**, ECAI workshop on *Ontologies and Semantic Interoperability*, August 2002.
- **Chair**, IJCAI workshop on *Ontologies and Information Sharing*, August 2001.
- **Chair**, CSEP (Computer Science for Environmental Protection) workshop on *Information Sharing*, September 2000.
- **Chair**, CSEP workshop on *Intelligent methods in environmental informatics; special aspects of time and space*, September 1999.
- **Co-Chair**, German AI conference workshop on *Agent technologies*, September 1999.
- **Exhibition-Chair**, German AI conference and CSEP, September 1998.
- **Exhibition-Co-Chair**, CeBIT (two exhibits, CeBIT is the worlds largest IT-Fair), March 1998.
- **Co-Chair**, German Computer Science conference (GI), workshop on *Environmental planning and computer science*, September 1997.
- **Exhibition-Co-Chair**, Agritechnica (the world largest exhibition in agricultural products), plant protection expert system PRO_PLANT, September 1995.
- **Exhibition-Co-Chair**, CeBIT, plant protection expert system PRO_PLANT, March 1994.
- **Exhibition-Co-Chair**, Agritechnica, plant protection expert system PRO_PLANT, September 1993.

Member of Scientific Committees

- RoboCup Symposium, July 2020.

- FLAIRS-33 (Track: Autonomous Robots and Agents), May 2020.
- RoboCup Symposium, July 2019.
- ICAPS 2019 (International Conference on Automated Planning and Scheduling), June 2019
- FLAIRS-32 (Track: Autonomous Robots and Agents), May 2019.
- RoboCup Symposium, June 2018.
- FLAIRS-31 (Track: Autonomous Robots and Agents), May 2018.
- ICAPS 2018 (International Conference on Automated Planning and Scheduling), June 2018
- RoboCup Symposium, July 2017.
- FLAIRS-30 (Track: Autonomous Robots and Agents), May 2017.
- RoboCup Symposium, July 2016.
- RoboCup Symposium, July 2015.
- IEEE RSJ International Conference on Intelligent Robots and Systems (IROS), workshop program committee, September 2015.
- RoboCup Scientific Jury Simulation Leagues, June 2014.
- RoboCup Symposium, June 2014.
- AAAI's Conference on Artificial Intelligence for Interactive Digital Entertainment (AIIDE), October 2013
- RoboCup Symposium, June 2013.
- Humanoid Soccer Robots WS on Humanoids 2012 Conference, November 2012.
- RoboCup Symposium, June 2012.
- Humanoid Soccer Robots WS on Humanoids 2011 Conference, November 2011.
- International Semantic Web Conference (ISWC), October 2011.
- RoboCup Symposium, July 2011.
- Autonomous Agents and Multiagent Systems (AAMAS), May 2011.
- Humanoid-Soccer-Workshop, Humanoids, December 2010.
- Prestigious Applications of Intelligent Systems (PAIS), August 2010.
- RoboCup Symposium, July 2010.
- Workshop Practical Cognitive Agents and Robots on AAMAS, May 2010
- Workshop Agents in Real-time and Dynamic Environments on AAMAS, May 2010
- Florida AI Research Society (FLAIRS), May 2010.
- International Conference on Autonomous Agents and Multiagent Systems (AAMAS), May 2010.
- RoboCup Symposium, July 2009.
- BMI workshop (Künstliche Intelligenz, KI), September 2009.
- European Semantic Web Conference (ESWC), June 2009.
- Florida AI Research Society (FLAIRS), May 2009.
- International Semantic Web Conference (ISWC), Semantic Web Challenge, November 2008.
- Workshop on 'Universe of RoboCup Simulators' on the International Conference on Simulation, Modeling, and Programming for Autonomous Robots (SIMPAN), November 2008.
- European Semantic Web Conference (ESWC), June 2008.
- RoboCup Symposium, June 2008.
- Florida AI Research Society (FLAIRS), May 2008.
- Human-Robot Interaction (HRI), March 2008 (reviewer)
- German AI Conference (KI), September 2001, 2007.
- Wirtschaftsinformatik (Computer Science in Business and Economy), September 2007.
- Geoinformatics Days (GI-Days), September 2007.
- RoboCup Symposium, June 2007.
- Florida AI Research Society (FLAIRS), May 2007.
- International Semantic Web Conference, November 2006.

- International Semantic Web Conference, Semantic Sensor Networks Workshop, November 2006.
- International Symposium on Practical Cognitive Agents and Robots (PCAR), November 2006.
- Semantic Sensor Networks Workshop at ISWC, November 2006.
- Brazilian AI Conference, workshop on ontologies and their applications (WONTO), October 2006.
- German AI Conference (KI), September 2006.
- Portuguese Conference on Artificial Intelligence, Workshop Building and Applying Ontologies for the Semantic Web, December 2005.
- Conference on Information and Knowledge Management (CIKM), Knowledge Management, November 2005.
- European Semantic Web Conference (ESWC), August 2006.
- Florida AI Research Society (FLAIRS), May 2006.
- Web Intelligence (WI), Semantic Web Track, September 2005.
- Geoinformatics Days (GI-Days), September 2005.
- German Computer Science Society (GI), Sensor Web Workshop, September 2005.
- German AI Conference (KI), September 2005.
- COST-Workshop, European Cooperation in the Field of Scientific and Technical Research, Intelligent Land-Transactions, September 2005.
- European Semantic Web Conference (ESWC), Demo and Poster Session, August 2005.
- Florida AI Research Society (FLAIRS), May 2005.
- RoboCup Symposium, July 2005.
- ECAI Workshop SIMIS: Semantic Intelligent Middleware for Interoperable Systems, August 2004.
- Brazilian AI Conference (in conjunction with IBERAMIA), October 2004.
- Workshop "Methods and Technology for Empirical Evaluation of Multi-agent Systems and Multi-robot Teams" at the German AI conference (KI), September 2004.
- ISWC workshop on Practical and Scalable Semantic Systems, November 2003.
- Geoinformatics Days (GI-Days), September 2003.
- IJCAI workshop on Ontologies and Distributed Systems, August 2003.
- Florida AI Research Society (FLAIRS), Special Track on Semantic Web, May 2003.
- ECAI workshop on Ontologies and Semantic Interoperability, August 2002.
- Hypermedia in Environmental Protection (HU/EML), October 2001.
- IJCAI workshop on Ontologies and Information Sharing, August 2001.
- CSEP (Computer Science for Environmental Protection) workshop on *Information Sharing*, September 2000.
- AWAPAP, Inaugural Australian Workshop on the Application of Artificial Intelligence to Plant and Animal Production, December 1999.
- German AI Conference (KI), workshop on Intelligent methods in environmental informatics; special aspects of time and space, September 1999.
- German AI Conference (KI), workshop on Agent technologies, September 1999.
- CSEP (Computer Science for Environmental Protection), September 1998.
- German Computer Science Society (GI), Workshop Spatial planning and environmental informatics, September 1997.
- AK IWU, Workshop Computer Science and Environmental Protection, 1991.

Journal Reviewer

- Robotics and Autonomous Systems.

- Journal of photogrammetry, remote sensing and geoinformation processing (PFG).
- International Journal of Advanced Robotic Systems (IJARS).
- Journal of Intelligent & Robotic Systems (JINT).
- Autonomous Agents and Multi-Agent Systems (JAAMAS).
- IEEE Transactions on Neural Systems & Rehabilitation Engineering.
- Journal of Web Semantics (JWS).
- Information Science (INS).
- Computers & Geosciences (C&G).
- International Journal of Geographical Information Science (IJGIS).

Book Reviewer

- Springer, 2005-2007.
- Ashgate Publishing Limited, 2003.

Research Grant Expert Reviewer

- European Commission, Brussels, FP7-ICT-Call 5, Challenge 4.2, Cultural Heritage & Technology Enhanced Learning, 2009, BELGIUM.
- European Commission, Brussels, FP7-ICT-Call 3, Challenge 4.3, Cultural Heritage & Technology Enhanced Learning, 2008, BELGIUM.
- European Commission, Brussels, FP7-ICT-Call 1, Cultural Heritage & Technology Enhanced Learning, 2007, BELGIUM.
- European Commission, Brussels, FP6-ICT-Call 5, Learning and Cultural Heritage, 2005, BELGIUM.
- NASA Research Proposals, Intelligent Systems Project, 2003, USA.
- Netherlands Organization for Scientific Research (NWO), 2003, THE NETHERLANDS.
- German Research Council (DFG), several proposals until 2008, GERMANY.
- German Federal Ministry of Education and Research (BMBF), several proposals until 2010, GERMANY.

Invited seminars, keynotes and press interviews

- *Human vs. Machine* Host: Judah Friedlaender's show for AOL TechCrunch, University of Miami RoboCanes lab, September 2016.
- *Artificial Intelligence and Robotics for Intelligent Agents* Host: The Miami Project to Cure Paralysis, University of Miami Medical School, December 2013.
- *Playing soccer with bipedal robots: will robots win against the human world champion team by the year 2050?* Host: Florida International University, Center for the Study of Matter at Extreme Conditions, College of Engineering & Computing, January 2013.
- *Knowledge Representation and Reasoning for Multiagent Systems and Semantic Web Applications.* Host: University of Miami, Computer Science Department, October 2011.
- *Background Knowledge for inductive Learning Algorithms - Importance, Problems, Perspectives.* Host: University for Applied Sciences, Schmalkalden, Germany, May 2011.
- *AI and Games.* Host: University for Technology and Economy, HTW Berlin, Department of Media Informatics, December 2010.
- *Statistics-based Real-Time Sports Simulation.* Host: Singapore Polytechnic, Robotics Lab (Prof. Changjiu Zhou), December 2009.

- *Motion Capture for Real-Time Sports Simulation*. Host: Florida International University, Computer Science, USA, November 2009.
- *Statistics-based MAS for Real-Time Sports Simulation*. Host: UT Austin, Computer Science, USA, October 2009.
- *Artificial Intelligence and Robotics for Soccer playing Agents*. Host: Lions Club Bremen, Germany, December 2008.
- *AI, Robotics and Philosophy: Can autonomous robots be held liable for their actions?*. Interview with FAZ (Frankfurt Allgemeine Zeitung), Germany, July 2008.
- *AI techniques for autonomous systems*. Lecture within an AI course. Host: Florida International University, Computer Science Department, January 2008.
- *AI and Robotics as emerging Technologies*. Interview with TV station 'Center-TV', January 2008.
- *New curricula in high schools necessary?*. Interview with Magazine 'Elektor' (Note: Elektor is one of the oldest German Magazines in the electronic area in Germany), November 2007.
- *Autonomous robots: solving problems in real-time, dynamic, and adversarial environments*. Host: Department of Ocean Engineering, Florida Atlantic University, USA, November 2007.
- *Problem-solving for autonomous agents in real-time, dynamic, and adversarial environments*. Host: School of Computing and Information Sciences, Florida International University, USA, November 2007.
- *Soccer-playing robots: solving problems in real-time, dynamic, and adversarial environments*. Host: Department of Computer Science, University of Miami, USA, October 2007.
- *Autonomous soccer robots for AI games*. Interview with c't Magazine (Note: c't is the largest Computer Magazine in Europe), July 2007.
- *Artificial Intelligence and Robotics for Soccer playing Agents*. Host: Daimler-Chrysler Plant Bremen, 25.000 visitors at open day, June 2007.
- *Science and Living in Bremen*. Interview within the official state election TV -Show in Bremen. Host: ZDF - German Television, May 2007.
- *Artificial Intelligence and Robotics for Soccer playing Agents*. Host: Executive Board, RWE-Group (North-Rhine Westfalian Electricity group), March 2007.
- *Motion detection and prediction in dynamic and real-time environments*. Host: Technical University of Chemnitz, Germany, January 2007.
- *Robotics and AI - An attempt to evaluate future perspectives from 20 years of experience*. Host: Fraunhofer Institute IAIS, Bonn, November 2006.
- *World-Class Science meets World-Class Soccer*. 4 continuous Live-Interviews within the TV - Show 'RoboCup', Host: ZDF - German Television, June 2006.
- *RoboCup-WorldCup - Mobile Robots on the way in our society?*. 2 Live-Interviews within the TV - Show 'Buten & Binnen', Host: ARD German Television (Bremen), June 2006.
- *RoboCup-WorldCup for soccer-playing robots*. Live-Interview within the Radio - Broadcast 'Schlager'. Host: NDR Norddeutscher Rundfunk, June 2006.
- *Robots act in niche markets*. Host: Interview (among others) with the national newspaper 'Handelsblatt', June 2006.
- *RoboCup-WorldCup*. Live-Interviews within the TV - Show 'DW-World', Host: Deutsche Welle (World), Interview in German and English, June 2006.
- *RoboCup*. Interviews with the career magazine 'Karriere'. Host: Verlagsgruppe Handelsblatt GmbH, May 2006.
- *Artificial Intelligence and Robotics for Soccer playing Agents*. Host: Bremen Industry Club, May 2006.
- *RoboCup - an Introduction to AI and Robotics*. Host: Association Media & IT, April 2006.

- *RoboCup - an alternative soccer World Cup*. Host: TV-Interview with the ARD (First German Television), Show: ARD Ratgeber Technik, May 2006.
- *Soccer players with feet made out of steel*. Interview with the 'Berliner Zeitung', May 2006.
- *RoboCup - mobile soccer-playing robots*. Host: Radio-Interview, ARD-Studio Bremen (ARD: First German Television), April 2006.
- *World-Class Science meets World-Class Soccer*. Live-Interview within the TV - Show 'News', Host: ZDF - German Television, March 2006.
- *RoboCup - AI and Robotics*. Host: State Government of the state of Bremen, CeBIT, March 2006.
- *Robotics Initiative - AI and Robotics at the TZI*. Host: Industry Chamber and State Government of Bremen, February 2006.
- *Artificial Intelligence and Robotics for Soccer playing and Rescue Scenarios*. Host: Europe-Asian Legal and Medical Conference, January 2006.
- *Semantics for intelligent Geo-Information Processing* (in German). Host: Technical University of Dresden, Germany, November 2005.
- *RoboCup: Künstliche Intelligenz & Robotik für Fußball- und Rettungsroboter*. Host: Association of German Engineers, Region North-West, November 2005.
- *Mobile robots in dynamic environments - Space and Time issues*. Host: University of Münster, Department of Geo-Informatics, Germany, October 2005.
- *2050 soll ein Roboter-Team den Fußball-Weltmeister besiegen*. Interview for the Magazine 'Highlights' of the University of Bremen, September 2005.
- *Intelligent tools for the Semantic Web based on qualitative modeling*. Host: Universität Stuttgart, Department of Computer Science, September 2005.
- *In der Robotik sind acht Jahre Welten* (in German). Interview for science online (spektrumDirekt), August 2005.
- *Why play soccer with robots* (in German). Interview for students in high schools, University of Bremen, June 2005.
- *Outdoor mobile robots*. Host: Federal Ministry for Education and Research (BMBF), April 2005.
- *AI and Robotics - Mobile soccer-playing robots*. Host: State Government of the state of Bremen, Hanover Fair Industry, April 2005.
- *Semantics as fundamental basis for processing Geodata* (in German). Host: German Research Council (Round table for future work programs), February 2005.
- *RoboCup - Artificial Intelligence for Soccer-playing dogs*. Host: Forum Robotics in Progress, Daimler Chrysler, Bremen, February 2005.
- *The other WorldCup - RoboCup 2006 in Bremen* (in German). Interview for the Magazine 'The Specialist', January 2005.
- *Egocentric Qualitative Spatial Knowledge Representation Based on Ordering Information for Physical Robot Navigation*. Host: Osaka University, School of Engineering, November 2004.
- *Intelligent tools for the Semantic Web based on qualitative modeling*. Host: University of Weimar, Germany, Department of Computer Science, Portugal, July 2004.
- *Intelligent tools for the Semantic Web based on qualitative modeling*. Host: Instituto Superior Tecnico, Lisbon Technical University, Portugal, July 2004.
- *Intelligent tools for the Semantic Web based on qualitative modeling*. Host: University of Innsbruck, Department of Computer Science, Austria, June 2004.
- *Web-Development: Intelligent tools for the Semantic Web based on qualitative modeling*. Tutorial, Host: World Wide Web Consortium, May 2004.
- *Intelligent Information Integration for the Semantic Web*. Host: Sohar University, Oman (qual-

- ity controlled by University of Queensland, Australia), March 2004.
- *concept@location in time - A new query type for the Semantic Web*. Host: Lund University, Scandinavian AI Conference, Lund, Sweden, March 2004.
 - *Ontology-based Information Integration for the Semantic Web*. 2-Day Tutorial. Host: Lund University, Scandinavian AI Conference, Lund, Sweden, March 2004.
 - *Intelligent Information Integration for the Semantic Web*. 2-Day Tutorial. Host: German Society for Computer Science, Interdisciplinary College (IK '04), Günne, Germany, March 2004.
 - *Artificial Intelligence and Robotics for Soccer playing and Rescue Scenarios*. Host: Europe-Asian Legal and Medical Conference, Cortina d' Ampezzo, Italy, January 2004.
 - *Ontology-based information integration*. 1-Day Tutorial. Host: ISWC, November 2003.
 - *Ontology-based information integration*. 1-Day Tutorial. Host: IJCAI, August 2003.
 - *Intelligent Information Integration for the Semantic Web*. Host: International Quality Network (IQN), University of Bremen, May 2003.
 - *Werkzeuge für das Semantic Web: Ein neuer Typ von intelligenter Suche (concept@location in time)*. Host: University of Applied Science (FH Harz, Werningerode, Germany), January 2003.
 - *Semantic Web Challenge*. (Together with M. Klein from VU Amsterdam). Host: EKAW-Chairs, Sigüenza, Spain, October 2002.
 - *Ontology-Based Information Integration*. Tutorial on the 13th International Conference on Knowledge Engineering and Knowledge Management EKAW 2002 in cooperation with AAAI.
 - *Roboterfußball: Was kann die Künstliche Intelligenz leisten?*. Host: Sport and Games Symposium, Bremen, September 2002.
 - *Artificial Intelligence and Robotics for Soccer playing and Rescue Scenarios*. Host: Europe-Asian Legal and Medical Conference, Cortina d' Ampezzo, Italy, January 2002.
 - *BUSTER - A Middleware for Ontology-based Integration of Information*. Host: International University Bremen (now: Jacobs University Bremen), December 2001.
 - *Methodologies for Ontology-Based Semantic Translation*. Host:, October 2001.
 - *Portal of Geodata for Bremen - Future Options*. Host: Senator for Environmental Affairs, State of Bremen, Germany, June 2001.
 - *Environmental Management Systems for Cost-Optimization in Industry*. Host: Carl Duisberg Society, March 2001.
 - *Plant Protection Advisory System PRO_PLANT*. Host: The University of Queensland, Brisbane, Department of Computer Science, Australia. September 2000.
 - *'Virtual Werder' at the RoboCup-WorldCup*. Host: Humboldt-University Berlin, Department of Computer Science, June 2000.
 - *'Virtual Werder' goes for the World Cup*. Host: TV-Interview with SAT1-German Television, May 2000.
 - *Mobile software robots: 'Virtual Werder'*. Host: TV-Interview with RTL-German Television, April 2000.
 - *Image Processing for Textil-Machines*. Host: Schlafhorst GmbH, Mönchengladbach, Germany, February 2000.
 - *Applied Computer Science in the areas of Environment, Production, and Logistics*. Host: University of Münster, Department of Geo-Informatics, Germany, January 2000.
 - *Wearable Computer, Future or Toys?*. Host: Hammer RC, Hamm, Germany, November 1999.
 - *Coordination of material flow in international production networks*. Host: Lear Corporation, Bremen, December 1998.
 - *Determination of pesticide mixtures: Rule extraction from trained neural networks and symbolic induction algorithms: A comparison*. Host: University of Bremen, Department of Computer Science, Germany, September 1998.

- *Computer supported analysis and assessment in production processes*. Host: European Research Project 'IndAqua' (ESPRIT Project 26240), Brussels, Belgium, May 1998.
- *Information Warehousing and Mining*. Host: International Wearable Computing Conference, talk in technical session, Washington DC, USA, May 1998.
- *Environmental protection with the help of the plant protection expert system PRO_PLANT*. Host: German AI Conference, Hamburg, Germany, September 1993.

TEACHING

26. Teaching Awards Received:

- I am teaching since 1991 in various capacities, mostly in Germany (until 2008). We do not have teaching awards in Germany.

27. Teaching Specialization (courses taught):

- **Associate Professor** at the University of Miami: teaching since Fall 2008.
 - CSC322 *Unix and C*: Spring 2009.
 - CSC329 *Introduction to Game Programming*: Spring 2020, 2018, 2017, 2015, 2014, 2013, 2010
 - CSC40X *Computer Science Seminar Series*: Spring 2018, 2011, 2010; Fall 2016, 2013, 2012, 2011, 2010, 2009.
 - CSC41X *Student projects*: Spring 2014, 2010; Fall 2016, 2010, 2008
 - CSC519 *Programing Languages*: Spring 2013; Fall 2015, 2014, 2011, 2010, 2009, 2008.
 - CSC545 *Artificial Intelligence*: Spring 2014, 2011; Fall 2020, 2019, 2017, 2013, 2012, 2009.
 - CSC645 *Artificial Intelligence - Graduate Student version*: Fall 2020, 2019, 2017, 2013, 2012, 2009.
 - CSC670 Spring 2018, 2017, 2016; Fall 2017, 2016, 2015.
 - CSC688 *Artificial Intelligence/Machine Learning*: Spring 2011.
 - CSC751 *Semantic Web*: Spring 2015, 2013, 2010; Fall 2011, 2008.
 - CSC752 *Autonomous Robotic Systems*: Spring 2017, 2012, 2010; Fall 2020, 2015, 2014, 2013.
- **Privatdozent and Assistant Professor** at the University of Bremen: 2004-2008.

- CS 03-05-H-902.60 *Collegiate project¹ B-Human*, Fall 2007.
- CS 03-05-H-902.50 *Collegiate project B-Smarter*,
Fall 2006, Spring 2007, Fall 2007.
- CS 03-05-H-902.21 *Collegiate project B-Smart*,
Fall 2004, Spring 2005, Fall 2005, Spring 2006.
- CS 03-05-H-902.28 *Collegiate project Bremen Byters*,
Fall 2004, Spring 2005, Fall 2005, Spring 2006.
- CS 03-902.03 *Collegiate project RoboCup II*,
Fall 2002, Spring 2003, Fall 2003, Spring 2004.
- CS 03-710.02 *Artificial Intelligence II (Knowledge acquisition and knowledge representation)*, Spring 2004.
- CS 03-798 *Collegiate project RoboCup*,
Fall 2000, Spring 2001, Fall 2001, Spring 2002.
- GEO 19- *AI-Applications in the Geosciences*, University of Münster, Spring 2000.
- CS 03-774 *Modeling*, Spring 2000.

- **Assistant Professor** at the University of Bremen: 1998-2003.
 - CS 03-771 *Artificial Intelligence I (Foundations of knowledge representation and knowledge processing)*, Fall 1998, Fall 1999, Fall 2000, Fall 2002, Fall 2003.
 - CS 03-771 *Artificial Intelligence II (Knowledge acquisition and knowledge representation)*, Spring 1999, Spring 2000, Spring 2001, Spring 2003.
 - CS 03-x *Multi-agent systems for the RoboCup*, Fall 1999.
 - CS 03-777 *Graduate Colloquium Artificial Intelligence*, Fall 1998-Fall 2007.
 - CS 03-531a *Computer Science I*, Fall 1999.
 - CS 03-531b *Programming Course for Computer Science I*, Fall 1999.

- **Lecturer and Associate Lecturer** at the University of Münster: 1988-1996.
 - GEO 19-x *Neural networks*, Fall 1993.
 - GEO 19-x *Geoinformatics*, (partly), Spring 1992, 1993.
 - GEO 19-x *Computer supported recording of climatological and hydrological data*,
Spring 1992, Fall 1993.
 - GEO 19-x *Student-Excursion: Excursion with practical climatological measuring methods*, Fall 1991.
 - GEO 19-x *Practical class: Climatological measuring methods*, Fall 1991.
 - GEO 19-x *Artificial neural networks for in landscape-ecology*, Spring 1991.

28. Thesis and Dissertation Advising/Post-doctoral student supervision (chairman or committee member; topic; student name; date):

¹A collegiate project is a 4-semester project with approx. 20-30 students who usually start in semester 5 and end the project in semester 8. The goal is set up a rather large project and manage it by themselves. The project is accompanied with lectures and seminars around the topic of the project.

Mentoring

- **List of supervised PhD Theses²**

- Rahul Dass: *TBD in the area of Vision & Learning*, **Chair**.
- Shengxin (Tony) Luo: *TBD in the area of AI & Robotics*, **Chair**.
- Pedro Peña: *TBD in the area of AI & Robotics*, Graduation: August 2020, **Chair**.
- Hande Küçük-McGinty: *Knowledge acquisition and representation Methodology for Bioinformatics Big Data*, Graduation: May 2018, **Chair**.
- Andreas Seekircher: *Adaptive Dynamic Walking and Motion Optimization for Humanoid Robots*, Graduation: July 2015, **Chair**.
- Saminda Abeyruwan: *Learnable Knowledge for Autonomous Agents*, Graduation: July 2015, **Chair**.

- Oliver Urbann (TU Dortmund, Germany): *Laufen humanoider Roboter auf regelungstechnischer Basis mit Echtzeitmodifikation der Fusspositionen*, Graduation: Fall 2016, Committee member.
- Abdulaziz Al-Ali: *A pruned and confident method for multi-label classification*, Graduation: May 2016, Committee member.
- Mihai Polceanum: *Orpheus: Reasoning and Prediction with Heterogeneous rEpresentations Using Simulation*, Graduation: September 2015, Committee member.
- Justin Stoecker: *Interactive Visualization Systems and Sensor-Based Interfaces for Robotics and Medical Data Analysis*, Graduation: May 2014, Committee member.
- Matthias Hofmann (TU Dortmund, Germany): *TBD in the area of AI & Robotics*, from Fall 2014, Committee member.
- Yan Shiyan: *TBD in the area of Semantic Web and Education*, from Spring 2014, Committee member.
- Reza Amini: *Modeling Human Non-verbal Communication of Empathy to Create Expressive Animations of Virtual Characters*, FIU CS student, Graduation: July 2015, Committee member.
- Ugan Yasavur: *Dialogue Manager For Behavior Change Dialogue Systems*, FIU CS student, Graduation: July 2015, Committee member.
- Oliver Obst: *Controlling Physical Multiagent Teams: Getting League-Independent Results from RoboCup Soccer*. Doctorate in 2006, Committee member.
- Michael Lutz: *Ontology-Based Discovery and Composition of Geographic Information Services*, Doctorate in 2005, Committee member.
- Udo Einspanier: *Formal Metamodeling for the Specification and Implementation of Feature Catalogues*, Doctorate in 2005, Committee member.

- **List of supervised Masters Theses (in Germany: Diplom)**

- Katarzyna Pasternak: *TBD in the area of HRI*. **Chair**.
- Pedro Peña: *Omni-Directional Kick Engine for Humanoid Robots* Spring 2018. **Chair**.
- Kyle Poore: *DTMF audio communication for NAO robots* Summer 2017. **Chair**.
- Piyali Nath: *Distributed/Parallel optimization of captured human motions for generating robust and stable motions on simulated robots*, May 2014, **Chair**, Nath now working at Microsoft.
- Morthada Alkhawaja: *TerraFly and Semantic Web*, **Chair**, Graduation: July 2010, Alkhawaja now working at ARAMCO.
- Saminda Abeyruwan: *PrOnto: Unsupervised Lexico-Semantic Ontology Generation Using*

²Also as 2nd supervisor

- Probabilistic Methods*, MSc in May 2010, **Chair**.
- Tobias Warden: *Spatio-Temporal Real-Time Analysis of Dynamic Scenes in the RoboCup 3D Simulation League*, MSc in 2008, **Chair**.
- Arne Stahlbock: *Functions for the evaluation of situation for action selection*, MSc in 2008, **Chair**.
- Carsten Rachuy: *Probabilistic model for classification and prediction of game situations*, MSc in 2008, **Chair**.
- Arne Sahlmann and Sven Schade: *Comparison of formal approaches for describing the semantics of geoinformation services to enable matchmaking*, MSc in 2006, Committee member.
- Mathis Karmann: *Constructing and Validating an Ontology Definition Metamodel with USE*, MSc in 2005, **Chair**.
- Björn Meyer: *Ranking and configuration knowledge in knowledge-based diagnosis systems for clients support*, MSc in 2005, **Chair**.
- Christian Drücker: *Opponent modeling in multi-agent systems*, MSc in 2004, **Chair**.
- Sebastian Hübner: *Qualitative abstraction of time for annotation and retrieval in the Semantic Web*, MSc in 2003, **Chair**.
- Magnus Kolweyh: *Self-Organizing Virtual Communities with Peer-to-Peer Agents*, MSc in 2003, **Chair**.
- Waleri Enns: *Plan Merging in dynamic Multiagent-Environments*, MSc in 2003, **Chair**.
- Hans-Georg Weland: *Strategy recognition in dynamic real time environments*, MSc in 2002, **Chair**.
- Jörg Wührmann: *Conception and development of an ontology-based information system for environmental hazardous substances*, MSc in 2002, **Chair**.
- Mark Sancken: *Interactive manipulation and real time portrayal of three-dimensional geographical data*, MSc in 2001, **Chair**.
- Johannes Vogel: *Quality assurance and system outline*, MSc in 2000, **Chair**.
- Stefan Michel: *Conception and development of a computer supported field database for the plant protection advice system PRO-PLANT*, MSc in 1996, Committee member.
- Karsten Hell: *Conception and development of a computer supported information system for canola pests*, MSc in 1995, Committee member.
- **List of supervised Undergraduates**
 - Anthony Luo (Shengxin Luo), Spring 2019 – Summer 2020
 - Shreeya Mishra, Summer 2016 – Summer 2017
 - Amanda Hillegass, Summer 2016 – Summer 2017
 - Kyle Poore, Fall 2013 – Spring 2014
 - John Mauldin, Spring 2011 – 2013
 - Armando Locay, Summer 2009 – Fall 2010
 - Matthew Ferens, Summer 2009 – Fall 2010
 - Adam Schwartz, Spring 2010 – Fall 2010

SERVICE

29. University Committee and Administrative Responsibilities:

- Graduate Director, Summer 2015 – present
- Faculty Hiring committee for multiple positions, Fall 2019 - Spring 2020
- Faculty Hiring committee for the Knowledge Representation position (Chair), Fall 2014 – Spring

2015.

- Undergraduate advising U Miami, Fall 2013 – Fall 2015.
- Video Games Club (U Miami), Fall 2008 – Fall 2017.

Before 2008:

- AI Lab steering committee (U Bremen), 1998–2008.
- AI Lab colloquium organization (U Bremen), 1998–2008.
- Faculty Recruiting committee, (U Bremen), 1998–2004.
- Center for Computing Technologies Council (U Bremen), 1998–2001.
- Departments teaching strategy committee (U Bremen), 1998–2003.
- Committee for new courses and diversity in the AI, Cognition, and Robotics area (U Bremen), 2000–2001.
- Committee for conception of a new Department (Geo-Informatics, U Münster), 1991–1995.

30. Community Activities:

- RoboCanes demo at Frost Science Museum for the National Engineer's week, February 2020.
- RoboCanes demo for Dean's development team (6 people), November 2019.
- Visit to Frost Science Museum for Demo at the museum, August, 2019
- RoboCanes demo for Frost Museum Visitor, November, 2018.
- Lab demo for Frost Museum Miami Visitors (Dean's visitors), August, 2018.
- RoboCanes demo for Miami Country Day School, February, 2018.
- RoboCanes demo for Carrollton School students (project NAO), June, 2017.
- RoboCanes demo/interview/featuring for AOL TechCrunch Show "Human vs. Machine", professional TV team (27 crew members) produced an episode. Airs in Spring 2017, up to 20 Million followers, September 8, 2016.
- RoboCanes demo for Carrollton School students (project NAO), June 17, 2016.
- Robotics/Visualization demo for two groups of Honors Students at Nautilus Middle School IB Scholar, May 20, 2016.
- RoboCanes demo for a large group (150) of Nova Blanche Forman Elementary School students, November 12, 2015.
- AI/Robotics talk for Nova Blanche Forman Elementary School teachers in Broward County, August 19, 2015.
- RoboCanes demo for Gulliver middle school students, May 8, 2015.
- RoboCanes demo for high school students, April 3, 2015.
- RoboCanes full game demo for Arts & Science College Alumni, August 22, 2014.
- Junior SPL robot demo with Carrollton students at RoboCup 2014 in Brazil.
- RoboCanes full game demo at Carrollton High School on January 11, 2014.
- Robot demo at Carrollton High School on December 6, 2013, audience: 500 students.
- RoboCanes demo for students at Miami Norland High School, November 11, 2013.
- RoboCanes demo for Engineering Magnet students at Booker T. Washington High School, November 11, 2013.
- Discussing new curricula for high and middle schools in Broward/Miami-Dade counties, e.g. invited talk at Florida League of Middle Schools Region 7 STEM Conference, October 25, 2013.
- Mentoring senior school girls (Anna Maasland, Courtney F.) from Carrollton School of the Sacred Heart in Miami, Topic: autonomous robots, Fall 2013.
- 2 × 'Meet the RoboCanes': open house/invited robot demonstration for alums/donors of A&S College on August 12 & August 15 2013.
- RoboCanes demo for Friends and Alums of A&S College on April 8, 2013.