



Prof. Rodrigo da Silva Guerra, Ph. D.

rodrigo.guerra@ufsm.br

Short bio

I am interested in the field of artificial intelligence and cognitive robotics, especially in what regards cooperation and learning between humans and robots. I work on developing and applying cognitive robotics related subjects, such as machine learning, neural networks, and computer vision, into practical problems. More recently I have focused on the subject of compliant robotic manipulation.

Work

2018 – Now	Visiting Professor at National Normal Taiwan University, Taiwan
2017 – Now	Chair of IEEE-RAS South Brazil
2016 – Now	Co-founder of Qiron Robotics
2012 – Now	Professor at Universidade Federal de Santa Maria, Brazil
2008 – 2011	Researcher at Japan Science and Technology (JST) working under guidance of Prof. Minoru Asada

Education

2011 – 2012	Postdoc at Universidade Federal do Rio Grande do Sul, Brazil
2005 – 2008	PhD at Osaka Univ., Japan advised by Prof. Minoru Asada with MEXT scholarship. Thesis: Using Insect/Robot Mixed Society as a Tool for Animal Behavior Studies
2002 – 2004	Master in Electrical Eng. at Univ. Federal do Rio Grande do Sul, Brazil, with CAPES scholarship. Theme: self-calibration algorithm for stereo vision system.
1997 – 2001	Automation and Control Eng. undergrad course at Pontifícia Universidade Católica do Rio Grande do Sul, Brazil.
Languages	Portuguese (native), English, Japanese (spoken)

Journal papers

Tatsch, C.; Ahmadi, A.; Bottega, F.; Tani, J.; **Guerra, R. S.**; Dimitri: na Open-Source Humanoid Robot with Compliant Joint. *Journal of Intelligent & Robotic Systems*, 2017.

Guerra, R. S.; Aonuma, H.; Hosoda, K.; Asada, M.; Behavior Change of Crickets in a Robot-Mixed Society. *Journal of Robotics and Mechatronics*, v. 22, p. 526-531, 2010.

Guerra, R. S.; Aonuma, H.; Hosoda, K.; Asada, M.; Semi-automatic behavior analysis using robot/insect Mixed society and video tracking. *Journal of Neuroscience Methods*, v. 191, p. 138-144, 2010.

Book chapters

Gerndt, R.; Bohnen, M.; **Guerra, R. S.**; Asada, M.; The RoboCup Mixed-Reality League – A Case Study. In: Dubois, E.; Gray, P.; Nigay, L.; (Org). *The Engineering of Mixed Reality Systems*. P.399-419, 2010.

Selected recent conference papers

Montenegro, F. J. C.; Grando, R. B.; Librelotto, G. R.; **Guerra, R. S.**; Neural Network as an Alternative to the Jacobian for Iterative Solution to Inverse Kinematics. In: XV Latin American Robotics Symposium 2018, João Pessoa, 2018.

Ahmadi, A.; Tatsch, C.; Montenegro, F.J.C.; Tani, J.; **Guerra, R. S.**; Dimitri: A Low-Cost Compliant Humanoid Torso Designed for Cognitive Robotics Research. In: XIII Latin American Robotics Symposium 2016, Recife, 2016.

Martins, L. T.; **Guerra, R. S.**; Gerndt, R.; Maciel, E.; Tatsch, C.; A Polyurethane-Based Compliant Element for Upgrading Conventional Servos into Series Elastic Actuators. In: 11th IFAC Symposium on Robot Control, Salvador, 2015.

Full list and other info: <http://rodrigoguerra.com>