



Dr. Zhenli Lu
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Short Bio:

Zhenli Lu is currently a Post-doctoral Researcher in IEETA, University of Aveiro, Portugal. And he is also an Associate Professor in School of Mechanical Engineering, Shenyang Ligong University, P. R. China. He received a Bachelor of Engineering degree from Nanjing University of Science and Technology, Nanjing, P. R. China, a Doctor of Engineering (Master-Doctor combined program) degree from Shenyang Institute of Automation, Chinese Academy of Sciences, Shenyang, P. R. China, both are in Mechatronic Engineering. He is a “Thousand people plan” fellow of “Fundação para a Ciência e a Tecnologia” (FCT) in Portugal. Before joining University of Aveiro, he was a Post-doctoral Researcher funded by the FP7 (Seventh Framework Programme) project (Cooperative Human Robot Interaction Systems (FP7-215805)) in the Stem Cell and Brain Research Institute Integrative Neuroscience & Robotics, INSERM U846, Lyon, France. His current research interests include robot intelligent control, bio-inspired control methods for robots, mixed reality and management information system. He has nearly 10 years' research experience in management information system and bio-inspired robot control. Relying on the project of the National Science Foundation of China “Study on the CPG based control methods for snake-like robots” and project of the National High Technology Research and Development Program - “863” Program, “Study on a Snake Robot Adapted to the Environment”, he and his supervisors published more than ten papers, most of them are indexed by EI, ISTP, ISI and one is indexed by SCI. He was awarded the T. J. Tarn best robotics paper and Finalist for C. M. HO Best Paper award at 2005 IEEE International Conference on Robotics and Biomimetics, and the best paper award of the Chinese Journal of Mechanical Engineering in 2007. He won “Chunhui Project” funded by the Chinese Ministry of Education in 2010 and gave an invited report in 13th GuangZhou Convention of Overseas Chinese Scholars in Science and Technology. He served as Program Committee member in 2010 IEEE International Conference on Robotics and Biomimetics (ROBIO2010) and 2011 the 3rd International Conference on Computer and Network Technology (ICCNT 2011). He also served as a reviewer for IEEE IROS 2006, IEEE ROBIO 2005/2006/2007/2010, ICCNT2011, Zidonghua Xuebao/Acta Automatica Sinica, the Journal of Bionic Engineering and the IEEE Transactions on Control Systems Technology.

Awards (Please indicate title, organization and year.)

T. J. TARN Best Paper award in Robotics, 2005 IEEE International Conference on Robotics and Biomimetics (ROBIO 2005), July 2005 (Jinguo Liu, Shugen Ma, Zhenli Lu, Yuechao Wang, Bin Li, and Jing Wang: Design and Experiment of a Novel Link-Type Shape Shifting Modular Robot Series)

Finalist for C. M. HO Best Paper award in Biomimetics, 2005 IEEE International Conference on Robotics and Biomimetics (ROBIO 2005), July 2005 (Zhenli Lu, Shugen Ma, Bin Li, and Yuechao Wang: Design of a Snake-like Robot Controller With Cyclic Inhibitory CPG Model)

Best Paper Award, Chinese Mechanical Engineering Society, November 2007 (Zhenli Lu, Shugen Ma, Bin Li, and Yuechao Wang: Snake-like Robot Controller With Cyclic Inhibitory CPG Model)

Oral Presentations:

A. Invited Reports

[A-1] Zhenli Lu, “CI-CPG Based Locomotion Control Methods for the Snake-like Robot”, 2011 the 3rd International Conference on Computer and Network Technology (ICCNT 2011), Taiyuan, China, February 26-28, 2011 (**in English**).

[A-2] Zhenli Lu, “The robotic intelligent control research group in IEETA, University of Aveiro”, 13th GuangZhou Convention of Overseas Chinese Scholars in Science and Technology, 20-22 December, GuangZhou, CHINA (**in Chinese**).

[A-3] Zhenli Lu, “CPG Based Locomotion Control Methods for the Snake-like Robot”, Chunhui Project invited report funded by the Chinese Ministry of Education in Changshu Institute of Technology, Changshu, China, December 27, 2010 (**in English**).

B. Conference Paper Reports

[B-1] Zhenli Lu, “Locomotion of a Snake-like Robot Controlled by the Bidirectional Cyclic Inhibitory CPG Model,” the 2006 IEEE International Conference on Robotics and Biomimetics (ROBIO'06), Kunming, China, December 17-20, 2006 (**in English**).

[B-2] Zhenli Lu, “Communication Mechanism Study of a Multi-Robot Planetary Exploration System,” the 2006 IEEE International Conference on Robotics and Biomimetics (ROBIO'06), Kunming, China, December 17-20, 2006 (**in English**).

[B-3] Zhenli Lu, “3D Locomotion of a Snake-like Robot Controlled by Cyclic Inhibitory CPG Model,” the 2005 IEEE International Conference on Intelligent Robotics and System (IROS'06), Beijing, China, October 9-15, 2006 (**in English**).

[B-4] Zhenli Lu, “Design and Experiment of a Novel Link-Type Shape Shifting Modular Robot Series,” the 2005 IEEE International Conference on Robotics and Biomimetics (ROBIO'05), Hong Kong SAR and Macau SAR, June 29 – July 03, 2005 (**in English**).

[B-5] Zhenli Lu, “Design of a Snake-like Robot Controller With Cyclic Inhibitory CPG Model,” the 2005 IEEE International Conference on Robotics and Biomimetics (ROBIO'05), pp.35-40, Hong Kong SAR and Macau SAR, June 29 – July 03, 2005

[B-6] Zhenli Lu, “Development of a Hybrid Humanoid Platform and Incorporation of the Passive Actuators,” the 2010 IEEE International Conference on Robotics and Biomimetics (ROBIO'10), Tianjin, December 14-18, 2010 (**in English**).

C. Other Reports

[C-1] Zhenli Lu, “Bio-inspired Locomotion Control Methods for Robots”, workshop of ATRI group in IEETA, University of Aveiro, 2009 (**in English**).

List of Major Publications

Authors (all), title, Journal, Vol. , No. , pp. - , Month, Year

A. Journal Papers

[A-1] Zhenli Lu, Shugen Ma, Bin Li, and Yuechao Wang, A Gaits-transferable CPG Controller for a Snake-like Robot, SCIENCE IN CHINA Ser.F, Vol.51, No.3, pp. 293-305, March,2008

[A-2] Zhenli Lu, Shugen Ma, Bin Li, and Yuechao Wang, A Gaits-transferable CPG Controller for a Snake-like Robot, Zhongguo kexue / SCIENCE IN CHINA Ser.E, Vol.32, No.10, pp. 1304-1315, October,2007 (in Chinese)

[A-3] Zhenli Lu, Shugen Ma, Bin Li, and Yuechao Wang, 3D Locomotion of a Snake-like Robot Controlled by Cyclic Inhibitory CPG Model, Zidonghua Xuebao/Acta Automatica Sinica, Vol.33, No.1, pp.54-58, January, 2007 (in Chinese)

[A-4] Zhenli Lu, Shugen Ma, Bin Li, and Yuechao Wang, Design of a cyclic inhibitory CPG controller for the locomotion of a snake-like robot, Frontiers of Mechanical Engineering in China. Higher Education Press, co-published with Springer-Verlag GmbH, Vol.1, No.4, pp.247-259, October, 2006

[A-5] Zhenli Lu, Shugen Ma, Bin Li, and Yuechao Wang, Snake-like Robot Controller With Cyclic Inhibitory CPG Model, Jixiegongcheng Xuebao/Chinese Journal of Mechanical Engineering, Vol.42, No.5, pp.137-143, May, 2006 (in Chinese)

[A-6] Zhenli Lu, Shugen Ma, Bin Li, and Yuechao Wang, Serpentine Locomotion of a Snake-like Robot Controlled by Cyclic Inhibitory CPG Model, Zidonghua Xuebao/Acta Automatica Sinica, Vol.32, No.1, pp.133-139, January, 2006 (in Chinese)

[A-7] Bin Li, and Zhenli Lu, Control Method of a Snake-like Robot Based on Music Theory, Jiqiren/Robot Vol.27, No.1, pp.14-19, January, 2005 (in Chinese)

B. International Conference Papers

[B-1] Zhenli Lu, Shugen Ma, Bin Li, and Yuechao Wang, “Locomotion of a Snake-like Robot Controlled by the Bidirectional Cyclic Inhibitory CPG Model,” Proceedings of the 2006 IEEE International Conference on Robotics and Biomimetics (ROBIO'06), pp.1209-1214, Kunming, China, December 17-20, 2006

[B-2] Zheng Zhang, Shugen Ma, Zhenli Lu, and Binggang Cao, “Communication Mechanism Study of a Multi-Robot Planetary Exploration System,” Proceedings of the 2006 IEEE International Conference on Robotics and Biomimetics (ROBIO'06), pp.49-54, Kunming, China, December 17-20, 2006

- [B-3] Zhenli Lu, Shugen Ma, Bin Li, and Yuechao Wang, "3D Locomotion of a Snake-like Robot Controlled by Cyclic Inhibitory CPG Model," Proceedings of the 2005 IEEE International Conference on Intelligent Robotics and System (IROS'06), pp.3897-3902, Beijing, China, October 9-15, 2006
- [B-4] Zhenli Lu, Shugen Ma, Bin Li, and Yuechao Wang, "Serpentine Locomotion of a Snake-like Robot Controlled by Cyclic Inhibitory CPG Model," Proceedings of the 2005 IEEE International Conference on Intelligent Robotics and System (IROS'05), pp.3019-3024, Edmonton, Alberta, Canada, August 2-6, 2005
- [B-5] Zhenli Lu, Shugen Ma, Bin Li, and Yuechao Wang, "Design of a Snake-like Robot Controller With Cyclic Inhibitory CPG Model," Proceedings of the 2005 IEEE International Conference on Robotics and Biomimetics (ROBIO'05), pp.35-40, Hong Kong SAR and Macau SAR, June 29 – July 03, 2005
- [B-6] Zhenli Lu, Shugen Ma, Bin Li, and Yuechao Wang, "Serpentine Locomotion of a Snake-like Robot Controlled by Musical Theory," Proceedings of the 2005 IEEE International Conference on Intelligent Robotics and System (IROS'05), pp.3025-3030, Edmonton, Alberta, Canada, August 2-6, 2005
- [B-7] Jinguo Liu, Shugen Ma, Zhenli Lu, Bin Li, Yuechao Wang, and Jing Wang, "Design and Experiment of a Novel Link-Type Shape Shifting Modular Robot Series," Proceedings of the 2005 IEEE International Conference on Robotics and Biomimetics (ROBIO'05), pp.318-323, Hong Kong SAR and Macau SAR, June 29 – July 03, 2005
- [B-8] Zhenli Lu, Aneesh Chauhan, Filipe Silva, Luís Seabra Lopes, "A Brief Survey of Commercial Robotic Arms for Research on Manipulation", Proceedings of the 2011 the 3rd International Conference on Computer and Network Technology (ICCNT 2011), pp. V1-207- V1-212, Taiyuan, China, February 26-28,2011
- [B-9] Zhenli Lu, Stephane Lalle, Vadim Tikhonoff, Peter Ford Dominey, "Bent Leg Walking Gait Design for Humanoid Robotic Child-iCub Based on Key State Switching Control", Proceedings of the 2011 the 3rd International Conference on Computer and Network Technology (ICCNT 2011), pp. V1-213- V1-219, Taiyuan, China, February 26-28,2011