Sylvain Miossec

45 ans

Coordonnées professionnelles: Laboratoire PRISME / IUT de Bourges / Université d'Orléans
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Maître de Conférences

Spécialisé en Modélisation, Conception Optimale,
Génération de Mouvements Optimaux,
Commande des Robots

Formation et Expérience

2008-Aujourd'hui	**Maître de Conférence** de l'Université d'Orléans, enseignant à l'IUT de Bourges section 60 *Conception optimale de robots* au sein de l'axe Robotique d laboratoire PRISME
2004-2008	**Post-doctorat** en robotique humanoïde, JRL (Joint Japanese-French Robotics Laboratory), Japon Direction : Prof. Abderrahmane Kheddar et Prof. Kazuhito Yokoi
2001-2004	**Thèse** en Robotique, IRCCyN (Institut de Recherche en Communication et Cybernétique de Nantes), École Centrale de Nantes, France
1998-2001	**Ingénieur** en Automatique et Robotique, École Centrale de Nantes, France

Expérience en recherche

co-encadrements de thèses	2014-2017	Adrien Pajon
	2014-2017	Julien Baumeyer
	2010-2013	Christophe Drouin
co-encadrements de post-doc	2014-2016	Giovanni de Magistris
Participation Projets	2009-2012	ANR PROSIT
	2015-2017	H2020 Prophetic
Jurys de thèses	29/06/2018	Jiuchun Gao
	8/07/2016	Benjamin Chrétien
	12/12/2008	Adrien Escande
Membre comité sélection	2010, 2011, 2012	INSA de Lyon / Laboratoire Ampère

Review d'articles SII 2019 Associate Editor, Reviewer de IEEE T-RO, IEEE RA-L, IROS, ICRA, Humanoids

Expérience en Enseignement

Enseignements	*Cinématique du point et du solide, statique, cinétique, dynamique*, DUT GMP *Automatismes*, DUT GMP *Développement Durable, éco-conception, Analyse de cycle de vie*, DUT GMP *Conception optimale de robots, optimisation, dynamique des robots*, M2 MARS
Responsabilités	Gestion des notes et préparation des sous-commisions, 2017-2023

Publications

Revues

[1] Miossec, S., Aoustin, Y., *"A Simplified Stability Study for a Biped Walk With Underactuated and Overactuated Phases"*, The International Journal of Robotic Research, Vol. 24, No. 7, July 2005, pp. 537-551.

[2] Escande, A., Kheddar, A., Miossec, S., *"Planning contact points for humanoid robots"*, Robotics and Autonomous Systems, Vol. 61, No. 5, 2013, pp. 428-442.

[3] Escande, A., Miossec, S., Benallegue, M., Kheddar, A., *"A strictly convex hull for computing proximity distances with continuous gradients"*, IEEE Transactions on Robotics, Vol. 30, No. 3, 2014, pp. 666-678.

[4] De Magistris, G., Pajon, A., Miossec, S. , Kheddar, A., *"Optimized humanoid walking with soft soles"*, Robotics and Autonomous Systems, Vol. 95, 2017, pp. 52-63

[5] De Magistris, G., Miossec, S., Escande, A., Kheddar, A., *"Design of optimized soft soles for humanoid robots"*, Robotics and Autonomous Systems, Vol. 95, 2017, pp. 129-142

Chapitres de livre

[6] Miossec, S., Aoustin, Y., *"Optimization process to design walking cyclic gaits with single and double supports for an underactuated biped"*, Lecture Notes in Control and Information Sciences, special issue on Fast Motions in Biomechanics and Robotics: Optimization and Feedback Control, Springer Berlin / Heidelberg, 2006.

Sélection de conférences Internationales

[7] Miossec, S., Yokoi, K., Kheddar, A., *"Development of a software for motion optimization of robots - Application to the kick motion of the HRP-2 robot"*, 2006 IEEE International Conference on Robotics and Biomimetics, Kunming, China, 2006.

[8] Chardonnet, J.-R., Miossec, S., Kheddar, A., Arisumi, H., Hirukawa, H., Pierrot, F., Yokoi, K., *"Dynamic Simulator for Humanoids Using Constraint-Based Method with Static Friction"*, 2006 IEEE International Conference on Robotics and Biomimetics, Kunming, China, 2006.

[9] Stasse, O., Escande, A., Mansard, N., Miossec, S., Evrard, P., Kheddar, A., *"Real-time (self)-collision avoidance task on a HRP-2 humanoid robot"*, IEEE International Conference on Robotics and Automation, ICRA-08, Pasadena, California, 2008

[10] Arisumi, H., Miossec, S., Chardonnet, J.-R., Yokoi, K., *"Dynamic Lifting by Whole Body Motion of Humanoid Robots"*, IROS'08, Nice, France, 2008.

[11] Peer, A., Hirche, S., Weber, C., Krause, I., Buss, M., Miossec, S., Evrard, P., Stasse, O., Neo, E. S., Kheddar, A., Yokoi, K., *"Intercontinental multimodal Tele-Cooperation using a Humanoid Robot"*, IROS'08, Nice, France, 2008.

[12] Escande, A., Kheddar, A., Miossec, S., *"Planning support contact-points for acyclic motions and experiments on HRP-2"*, 11^th International Symposium on Experimental Robotics, ISER'08, Athènes, Grèce, 2008.

[13] Miossec, S., Kheddar, A., *"Human Motion in Cooperative Tasks: Moving Object Case Study"*, ROBIO2008, Bangkok, Thailand, 2009.

[14] Benallegue, M., Escande, A., Miossec, S., Kheddar, A., *"Fast C^1 Proximity Queries Using Support Mapping of Sphere-Torus-Patches Bounding Volumes"*, ICRA-09, Kobe, Japan, 2009.

[15] Keith, F., Mansard, N., Miossec, S., Kheddar, A., *"Optimization of Tasks Warping and Scheduling for Smooth Sequencing of Robotic Actions"*, IROS'09, Saint Louis, USA, 2009.

[16] Miossec, S., Nouaille, L., *"Structural link optimization of an echography robot"*, IFToMM 2011 WC, Mexique, 2011.

[17] Drouin, C., Pourghodrat, A., Miossec, S., Poisson, G., Nelson, C. A., *"Dimensional optimization of A TWO-ARM robot for single-site surgery operations"*, ASME 2013 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference, Portland, USA, 2013.

[18] Julien Baumeyer, Pierre Vieyres, Sylvain Miossec, Cyril Novales, Gerard Poisson, Samuel Pinault, *"Robotic co-manipulation with 6 DoF admittance control: application to patient positioning in proton-therapy"*, 2015 IEEE International Workshop on Advanced Robotics and its Social Impacts (ARSO), Lyon, France, 2005.

[19] Pajon, A., De Magistris, G., Miossec, S., Kaneko, K., Kheddar, A., *"A humanoid walking pattern generator for sole design optimization"*, Advanced Robotics (ICAR), 2015 International Conference on, 105-110

[20] Baumeyer, J., Besnard, V., Miossec, S., Novales, C., Poisson, G., Vieyres, P., Chemouny, J., *"Torque Collision Detection with experimental validation for protontherapy positioning robot"*, XIV Mediterranean Conference on Medical and Biological Engineering andÂ Computing 2016

[21] De Magistris, G., Pajon, A., Miossec, S., Kheddar, A., *"Humanoid walking with compliant soles using a deformation estimator"*, Robotics and Automation (ICRA), 2016 IEEE International Conference on, 1757-1762

[22] Panchea, A. M., Miossec, S., Buttelli, O., Fraisse, P., Van Hamme, A., Welter, M.-L., Ramdani, N., *"Gait analysis using optimality criteria imputed from human data"*, 20th IFAC World Congress, Vol. 50 (1), 2017, pp. 13510-13515

[23] Pajon, A., Caron, S., De Magistris, G., Miossec, S., Kheddar, A., *"Walking on gravel with soft soles using linear inverted pendulum tracking and reaction force distribution"*, Humanoid Robotics (Humanoids), 2017 IEEE-RAS 17th International Conference