



## CIVIL STATUS

+ Mrs Gentiane Venture

+ French

+ Age: 30 (born 29.12.1977)

## PROFESSIONAL EXPERIENCES: RESEARCH

+ *November 2006 - now* Project Assistant Professor at *Nakamura and Yamane Lab., the University of Tokyo* (Japan), on the IRT project to Support Man and Aging Society: Dynamics modelling and identification of legged systems.

+ *December 2004 - November 2006* Postdoc Fellow at *Nakamura and Yamane Lab., the University of Tokyo* (Japan), supported by the Japan Society for Promotion of Science: Dynamic modelling, identification and control of a musculo-skeletal animal-like (or humanoid) robot.

+ *January 2004 - December 2004* Research Assistant in the *French Nuclear Agency CEA* (Paris - France), Department of Robotics and Intelligent Systems: Force-feed back teleoperation of a micromanipulator robot called Mu-mad.

+ *November 2000 - November 2003* PhD student at the *Ecole Centrale de Nantes*, (Paris & Nantes - France), in the Robotics lab of the *IRCCyN (Institut de Recherche en Communication et Cyberntique de Nantes)* and in collaboration with the car manufacturer *PSA-Peugeot Citroen*: Identification of the dynamic parameters of car using robotic formalism.

## PROFESSIONAL EXPERIENCES: TEACHING

+ *June 2008* Teaching master students 2 classes of *Kinematics, Dynamics and Redundancy* at the University of Tokyo, Department of Mechano-Informatics. (In Japanese)

+ *July 2007* Teaching undergraduate students one class of *Robotics and multi-body systems* at the University of Tokyo, Department of Mechano-Informatics. (In English, Japanese Material)

+ *June 2007* Teaching master students *Parametric Identification of Dynamic Systems* at the University of Tokyo, Department of Mechano-Informatics. (In English, Japanese Material)

+ *July 2006* Teaching master students *Parametric Identification of Dynamic Systems* at the University of Tokyo, Department of Mechano-Informatics. (In English)

+ *September 2003 - July 2004*

+ Responsible of the class "*linear systems: automatics and control*" 2<sup>d</sup> year Engineer school at the CNAM in Paris and the University of Marne la Vallee.

+ Responsible of the class "*discrete systems*" 3<sup>rd</sup> year of Engineer school of the University of Marne la Vallee.

+ *September 2001- March 2002* Teaching practical classes of *Electrical Engineering* at the *IUT de Velizy*.

## EDUCATION AND DIPLOMAS

+ *2003* PhD degree in Robotics from the *Ecole Centrale de Nantes*, Robotics lab of the *IRCCyN* (France)

+ *2000*

+ French DEA (M.Sc.), graduate degree in applied Robotics (with honours): Movement generation for non-holonomic car like robots. Robotics lab of the *IRCCyN* (France)

+ Engineer diploma from the *Ecole Centrale de Nantes* (France) : general higher education degree in Engineering. Special skills in Automation and Robotics.

## SPOKEN LANGUAGES - MISCELLANEOUS

+ French: native      + English: fluent      + Japanese: good      + Spanish: good      + Italian: basic

+ Sports: kyudo, horse ridding, yabusame      + Hobbies: cooking, cinema, traveling, literature

## CONTACT

+ 911 2-4-12 Suido Bunkyo-ku - 112-0005 Tokyo - Japan

+ [gentiane.venture@hotmail.com](mailto:gentiane.venture@hotmail.com)



## PUBLICATIONS

### + *International Journal*

- G. Venture, K. Ayusawa, Y. Nakamura, Identification of Legged Robots From Base-link Dynamics, Trans. on Robotics (Under review)
- G. Venture, K. Yamane, T. Yamamoto and Y. Nakamura, Identification of Human Limb Visco-Elasticity Using Robotics Methods to Support the Diagnosis of Neuromuscular Diseases, Int. J. of Robotic Research. (to be published)
- G. Venture, P.-J. Ripert, W. Khalil, M. Gautier, P. Bodson, *Modelling and identification of passenger car dynamics using robotics formalism*, IEEE Transactions on Intelligent Transportation Systems, Vol. 7, No. 3, pp 349-359, Sept. 2006.
- G. Venture, D.S. Haliyo, A. Micaelli, S. Regnier, *Force-feedback coupling for micro handling applications*, Journal of Micromechatronics, Vol. 3, No. 3-4, pp 307-327, 2006.
- G. Venture, W. Khalil, M. Gautier, P. Bodson, *Identification of the dynamic parameters of a car*, SAE Transactions Journal of Passenger Cars - Mechanical Systems, vol. 112, No 6, pp1318-1324, 2003.

### + *International Conference With Review and Proceedings*

- K. Ayusawa, G. Venture, Y. Nakamura, Identification of the inertial parameters of a humanoid robot using unactuated dynamics of the base-link, Proc. IEEE/RAS International Conf. on Humanoid Robots, Daejeon, Korea, 2008. (to be published)
- G. Venture, K. Ayusawa, Y. Nakamura, Human and Humanoid Identification Based on Unactuated Dynamics, IEEE/RAS-EMBS Proc.Int. Conf. on Biomedical Robotics and Biomechatronics, pp 445-450, Scottsdale, USA, 2008.
- K. Ayusawa, G. Venture, Y. Nakamura, Identification of Humanoid Robots Dynamics Using Floating-base Motion Dynamics, Proc. IEEE/Int. Conf. on Intelligent Robot System, pp 2854-2859, Nice, France, 2008.
- G. Venture, K. Ayusawa, Y. Nakamura, Motion Capture Based Identification of The Human Body Inertial Parameters, IEEE/EMBS Proc. Int. Conf. on Engineering in Medicine and Biology, pp 4575-4578, Vancouver, Canada, 2008.
- G. Venture, K. Ayusawa, Y. Nakamura, Dynamics Identification of Humanoid Systems, Proc. CISM-IFTToMM Symp. on Robot Design, Dynamics, and Control (ROMANSY2008), pp 301-308, Tokyo, Japan, 2008.
- G. Venture, K. Yamane, Y. Nakamura, *Identification of human joint passive dynamics*, Proc. of the IEEE Int. Conf. on Robotics and Automation, pp 2960-2965, Orlando, USA, 2006.
- G. Venture, K. Yamane, Y. Nakamura, *Identification of human musculo-tendon subject specific dynamics using musculo-skeletal computations and non linear least squares*, Proc. of the IEEE/RAS-EMBS Int. Conf. on Biomedical Robotics and Biomechatronics, pp 211-216, Pisa, Italy, 2006.
- G. Venture, K. Yamane, Y. Nakamura, *In-vivo Estimation of the Human Elbow Joint Dynamics during Passive Movements Using Musculo-skeletal Model Computations*, Proc. of the IEEE/RAS-EMBS Int. Conf. on Biomedical Robotics and Biomechatronics, pp 205-210, Pisa, Italy, 2006.
- G. Venture, K. Yamane, Y. Nakamura, *Application of non-linear least square method to estimate the muscle dynamics of the elbow joint*, IFAC Int. Conf. on Systems Identification, New Castle, Australia, 2006.
- G. Venture, K. Yamane, Y. Nakamura, *Identifying musculo-tendon parameters of human body based on the musculo-skeletal dynamics and the Hill-Stroeve muscle model*, Proc. IEEE/RAS Int. Conf. on Humanoid Robots, pp 351-356, Tsukuba, Japan, 2005
- G. Venture, D.S. Haliyo, A. Micaelli, S. Rgnier, *Force-feedback micromanipulation with unconditionally stable coupling*, Proc. IEEE/Int. Conf. on Intelligent Robot System, pp 784-789, Alberta, Canada, 2005

- D.S. Haliyo, G. Venture, S. Regnier, J.-C. Guinot, *An overview of the micro-manipulation system Mu-MAD*, Proc. IEEE/ASME Int. Conf. on Advanced Intelligent Mechatronics, pp 390-395, Monterey, USA, 2005
- D.S. Haliyo, G. Venture, S. Regnier, *Tele-manipulation by adhesion of micro objects*, Proc. 6th IEEE Int. Symp. on Computational Intelligence in Robotics and Automation, pp 133-138, Finland, 2005
- G. Venture, W. Khalil, M. Gautier, P. Bodson, *Identification of the dynamic parameters of a car: simulation and experimental results*, IFAC Symp. on Advances in Automotive Control, session invitee, April 2004, Salerno Italy
- G. Venture, W. Khalil, M. Gautier, P. Bodson, *Identification of the dynamic parameters of a car*, IFAC CTS 2003, Tokyo, Japan
- G. Venture, W. Khalil, M. Gautier, P. Bodson, *Experimental identification of the dynamic parameters of a car*, SYROCO 2003, Wroclaw, Poland
- G. Venture, M. Gautier, W. Khalil, P. Bodson, *Parametric Identification of a car dynamics*, IFAC-SYSID 2003, Rotterdam, Netherlands
- Venture, P. Bodson, W. Khalil, M. Gautier, *Identification of the dynamic parameters of a car*, SAE 2003 world congress, SP-1778 : Vehicle dynamics and simulation, Detroit, USA
- G. Venture, W. Khalil, M. Gautier, P. Bodson, *Dynamic modelling and identification of a car*, Proc. of the 15th IFAC world congress 2002, pp 181-186, Barcelona, Spain

#### + Domestic Conference

- G. Venture, K. Ayusawa, Y. Nakamura, ヒューマノイドロボットの同定法を用いた人間の力学パラメータの同定 - Identification of the human body dynamics based on behavior capture, ロボット学会 2008 - 26th RSJ Conference, Kobe, Japan, 2008. (in Japanese)
- K. Ayusawa, G. Venture, Y. Nakamura, ベースリンク運動方程式を利用したヒューマノイドの全身力学パラメータの同定 - Inertial Parameters Identifiability of Humanoid Robot Based on the Baseline Equations of motion, DVD proceedings of ROBOMECH, Nagano, Japan, 2008. (in Japanese)
- K. Ayusawa, G. Venture, K. Yamamoto, Y. Nakamura, 床反力計測に基づくヒューマノイドの全身力学パラメータの同定 - Contact Force Sensor Based Identification of Humanoid Robot, 13th Robotics Symposia, pp.259-264 Japan, 2008. (in Japanese)
- G. Venture, K. Yamane, Y. Nakamura, M. Hirashima, 神経筋疾患の診断を支援するための四肢関節粘弾性の無痛・無拘束推定法 - A Painless and Constraint-free Method to Estimate Viscoelastic Passive Dynamics of Limbs Joints to Support Diagnosis of Neuromuscular Diseases, 25th RSJ Conference, Chiba, Japan, September 2007.
- G. Venture, K. Yamane, Y. Nakamura, Passive Stiffness Estimation of Human Joints and its Medical Applications Based on Musculoskeletal Dynamics Model and Motion-Capturing - 筋骨格モデルとモーションキャプチャーを用いた人間の関節受動的スティフネス推定とその医療応用, 12th Jc-IFTToMM Symposium(Japanese Council), pp 91-96, Tokyo, Japan, June 2006. (in English) Finalist for the Young Investigator Best Paper Award.
- G. Venture, P. Bodson, W. Khalil, M. Gautier, Identification des parametres dynamiques d'un vehicule, Congres SIA 2003, Lyon, France, June 2003. (in French)
- G. Venture, Identification des parametres dynamiques d'une voiture, 17emes Journees des Jeunes Chercheurs en Robotique, Mars 2003, Velizy, France, March 2003. (in French)

#### + Invited Talks and Seminars

- The Institut of Communication and Cybernetics of Nantes, Nantes, France, September 2008.
- The University of Southern California, Center for Embedded System, Los Angeles, January 2007.
- The University of Southern California, Thomas E. Mann Institute, Los Angeles, January 2007.
- The University of Stanford, AI Lab, Palo Alto, January 2007.
- The University of California, Berkeley, Robotics and Intelligent machines Lab and Berkeley Robotics Lab, Berkeley, January 2007.
- Journees Scientifiques Francophones, organized by the French Embassy in Japan, Tokyo, Japan, November 2005
- Seminars of the Association of French Researchers in Japan, Sciencopex, Tokyo, Japon, June 2005
- Center for Autonomous Systems, Royal Institute of Technology (KTH), Stockholm, Sweden, July 2003
- Groupe de Travail en Identification (ENSAM), Paris, France, March 2003
- HeuDiaSyc (UTC), Compigne, France, June 2002
- Laboratoire de Robotique de Paris, Vlizy, France, March 2002

- Colloque "les CIFRE au Mondial de L'automobile", Paris, France, October, 2003.

#### + *Awards and Grants*

- NIH/NIBIB EMBC08 Conference Support Award to attend EMBC conference
- Japan Society for Promotion of Science Postdoctoral fellowship for two years
- Grant in Aid for Scientific Research from the Japan Society for Promotion of Science 2004-2006
- IEEE/RAS grant to attend the IEEE/RAS and ISRS International School of Robotics Science 2005
- JSPS grant to attend the ESF-JSPS Frontier Science Conference for Young Researchers on Experimental Cognitive Robotics, Shonan Village, Kanagawa, Japan, March 2008s
- IEEE/RAS Best performance design award in the Hands on Robot Contest of the IEEE/RAS and ISRS International School of Robotics Science 2005
- Nominated as a finalist for the Young Investigator Best Paper Award during the IFToMM Japanese Council conference 2006

#### + *Japanese Patent*

- May 2008: 外力と運動の計測のみにより，ヒューマノイド全身の質量パラメータを同定する技術．関節トルクの計測が不要という特徴を持つ」．

#### + *Services*

- Member of the IEEE Robotic and Automation Society
- Member of the Engineering in Medicine and Biology Society
- Member of the Robotics Society of Japan
- Editorial Board Member of The Open Transportation Journal
- Peer-Reviewer: IEEE Transactions on Intelligent Transportation Systems, IEEE Transactions on Robotics, IEEE/EMBS Transactions on Biomedical Engineering, Computer-Aided Design, IEEE/EMBS Engineering in Medicine and Biology Magazine, ASME Journal of Dynamic Systems, Measurement and Control, ICRA 2009, ROMANSY 2008, IROS 2005, ROBIO 2005...
- Conference session chair IROS 2008
- Organization and animation of the IRT Control System Group seminars inviting internationally renowned foreign professors.

*Almost all pdf files of these publications are available at  
[www.gentianeetantoine.com/gentiane/publication-us.html](http://www.gentianeetantoine.com/gentiane/publication-us.html)*