

Curriculum Vitæ (January 2017)

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Education

- 1978–81 Thèse de Docteur Ingénieur, Université de Paris XI at Orsay, France
- 1978 Diplôme d'études approfondies, Université de Nantes
- 1975–78 Diplôme d'Ingénieur, Ecole Centrale de Nantes (then ENSM), Nantes, France

Employment

- 2017– *Visiting Professor of Tactile Perception and Technologies*, School of Advanced Study, University of London (part time)
- 2017– *Chief Scientific Officier*, Actronika SAS, Paris (part time)
- 2011– *Professeur* (on leave 2017–) Institut des Systèmes Intelligents et de Robotique, Université Pierre et Marie Curie
- 2008–11 *Professeur* (associé), Institut des Systèmes Intelligents et de Robotique, Université Pierre et Marie Curie
- 2006–11 *Professor* (on leave 2008–11), Dept. of Electrical Engineering, McGill University, Montréal, QC Canada
Teaching undergraduate and graduate courses in computer engineering and control systems
Research in design and applications of haptic devices, robotics, control
Duties in departmental, faculty, and university affairs
- 2006–07 *Professeur Invité*, Université Pierre et Marie Curie
- 2001–04 *Director*, Center for Intelligent Machines, McGill University, Montréal, Qc Canada
- 1994–06 *Associate Professor*, Department of Electrical and Computer Engineering, McGill University, Montréal, Qc Canada
- 1989–94 *Assistant Professor*, Department of Electrical Engineering, McGill University, Montréal, Qc Canada
- 1985–89 *Adjunct Professor*, Department of Electrical Engineering, McGill University Montréal, Qc Canada
- 1983–85 *Attaché* then *Chargé de Recherche* at the Centre National de la Recherche Scientifique (CNRS)
- 1984 *Consultant*, Hewlett Packard Laboratories, Manufacturing Research Center, Palo Alto, California, USA
- 1981–83 *Visiting Assistant Professor*, Purdue University, School of Electrical Engineering, West Lafayette, Indiana, USA

Ten representative articles

- Shao, Y., Hayward, V., Visell, Y. 2016. Spatial Patterns of Cutaneous Vibration During Whole-Hand Haptic Interactions, *PNAS*, 113(15):4188–4193
- Dupin, L., Hayward, V. Wexler, M. 2015. Direct coupling of haptic signals between hands. *PNAS*, 112(2):619–624.
- Jörntell, H., Bengtsson, F., Geborek, P., Spanne, A., Terekhov, A. V., Hayward, V. 2014. Segregation of tactile input features in neurons of the cuneate nucleus. *Neuron*. 83:1444–1452.
- Bochereau, S., Terekhov, A. V., Hayward, V. 2014. Amplitude and duration interdependence in the perceived intensity of complex tactile signals. *Proceedings of Eurohaptics*, pp. 93-100. (Best Oral Paper honorable mention)
- Delhaye, B., Hayward, V., Lefèvre, Ph., and Thonnard, J.-L. 2012. Texture-induced vibrations in the forearm during tactile exploration. *Frontiers in Behavioral Neuroscience*, 6(7):1–10
- Giordano, B. L., Visell, Y., Yao, H.-Y., Hayward, V., Cooperstock, J., and McAdams, S. 2012. Identification of ground materials in auditory, kinesthetic, haptic and audiohaptic conditions. *Journal of the Acoustical Society of America*, 131(5):4002–4012
- Wiertelwski, M., Lozada, J., Hayward, V. 2011. The spatial spectrum of tangential skin displacement can encode tactual texture. *IEEE Transactions on Robotics*, 27(3):461–472
- André, T., Lévesque, V., Hayward, V., Lefèvre, P., and Thonnard, J.-L. 2011. Effect of skin hydration on the dynamics of fingertip gripping contact. *Journal of the Royal Society Interface*, 8(64):1574–1583
- Konkle, T., Wang, Q., Hayward, V., and Moore, C. I. 2009. Motion after-effects transfer between touch and vision, *Current Biology*, 19(9):745–750
- Hayward, V. and K. E. MacLean, V. 2007. Do it yourself haptics, Part-I. *IEEE Robotics and Autom. Magazine*, 14(4):88–104

Research Contributions

92 articles in journals (*Nature*, *PNAS*, *Neuron*, *Current Biology*, *Royal Society Journals*, *Scientific Reports*, *Plos ONE*) 23 chapters in books, 153 papers in conference proceedings, 25 patents, 60+ invited lectures in the past 10 years, H-index: 49 (Google Scholar), 30 (Scopus), 26 (WoS). More than 30 mentions in the press including *Wired Magazine* (2015), “Big Data: The Next Google” *Nature* Vol. 455 (2008), *The New Scientist* (thrice), or *The Economist* (2007).

Active Research Grants

- 2016–17 *Software Layers for Deafblind Tactile Communication*, Google Faculty Research Award, V. Hayward, US\$ 63,000.
- 2013–17 *Wearable Haptics for Humans and Robots* (WEARHAP), Technological Development Project, Integrated Project (IP), 7th Framework Programme, D. Prattichizzo (Coordinator), M. O. Ernst, S. Hirche, E. P. Scilingo, M. Bergamasco, A. Argyros, M. A. Otaduy, N. Tsagarakis, V. Hayward, B. B. Edin (PIs), 147,394 €/year of 1,925,000 €/year in total.
- 2013–17 *Virtual Prototyping of Tactile Displays* (PROTOTOUCH), Marie-Curie Action: Initial Training Networks (ITN), 7th Framework Programme, M. Adams (Coordinator), J.-L. Thonnard, J. Wessberg, J. Peric, R. Tomaz, J. Schmidhuber, V. Hayward, B. Lemaire-Semail, C. Chapaz, U. Groz (PIs), 1,014,726 €/year

Awards and Distinctions

2017 Leverhulme Trust Visiting Professorship, University of London
2016 Keynote Speaker, Handicap 2016, Paris, France
2015 Best Paper Award (honorable mention), World Haptics 2015, Chicago, USA.
2014 Invited Speaker, AsiaHaptics 2014, Tsukuba, Japan
2014 Best Paper Award (poster presentation) Eurohaptics 2014, Versailles, France
2013 Distinguished Lecture Series, Department of Computing Science, University of British Columbia, Canada
2012 Plenary Speaker 2012 *IEEE Int. Conference on Multisensor Fusion and Information Integration*, Hamburg, Germany
2012 Lecturer, Series '*Robotique, les fondations d'une discipline*', *Chaire d'innovation technologique, Collège de France*, Paris
2010 Keynote Speaker, *Haptic Audio Interaction Design 2010*, Copenhagen, Denmark
2010 Plenary Theme Speaker, *32nd Annual Int. Conf. of the IEEE Eng. in Med. and Biology Society*, Buenos Aires, Argentina
2010 Keynote Speaker, *Joint European Meeting, EuroVR-EVE*, Orsay, France
2010 Best Paper Award, *Eurohaptics*, Amsterdam, the Netherlands
2009 Lectio Magistralis, *University of Verona*, Verona, Italy
2008 Fellow of the IEEE
2007 Lecturer, *The Cutting Edge: Royal Society Lectures in Science*, McGill University
2007 Best Paper Award (applications), *World Haptics 2007*, Salt Lake City, Utah, USA
2006 Keynote Speaker, *8th International IFAC Symposium on Robot Control*, SYROCO 2006, Bologna, Italy
2006 Best Demonstration Award, *Eurohaptics 2006*, Paris
2006 Opening Lecture, *2nd Enactive Workshop*, Montréal, Canada
2006 Invited Lecture, *Journées ROBEA, CNRS*, Paris, France
2006 Best Paper Award, *ACM CHI'06 Conference*, Montréal, Canada
2006 Best Paper Award, *14th Symposium on Haptic Interfaces For Virtual Environments & Teleoperator Syst.*, Arlington, USA
2005 Keynote Lecture, *Dutch-Belgium Haptics Society*, Brussels, Belgium
2004 Keynote Speaker, *Eurohaptics*, Munich, Germany
2002 The E. (Ben) & Mary Hochhausen Award for Research in Adaptive Technology For Blind and Visually Impaired Persons
2001 Opening Lecture, *IEEE ICMA Conference*, Osaka, Japan
2000 Distinguished Lecture Series, *Dept. of Computing Science, University of Alberta*, Canada
1995 Best Demonstration Award, *1995 IRIS-PREARN Conference*, Ottawa, Canada
1994 Best Paper Award: *8th Canadian Astronautics and Space Institute Annual Conference*
1991 NASA Space Act Tech Brief Award (as a result of work on robot programming for JPL)

Teaching at the Université Pierre et Marie Curie

2009–16 *Interfaces et réalité virtuelle* (niveau M2+ROB5), enrollment: 16, 15, 10, 22 (cours = 30 heures)
2009–16 *Haptics for rehabilitation* (Master International, 50%), enrollment: 14, 15, 18, 25 (cours = 18 + 4 heures)
2009–16 *Asservissements numériques*, (niveau ROB4) enrollment: 25, (cours + TD + TP = 20 + 17 + 8 heures)

Supervision

In progress at UPMC: 2 Ph.D.

Completed at UPMC: 8 Postdocs; 10 Ph.D.; 8 Masters; 6 research engineers

Rest of career: 6 Postdocs; 17 Ph.D.; 18 Masters

Numerous other activities among which

2013–14 IEEE Fellow Evaluation Committee

2007–11 Associate Editor, *IEEE Transactions on Haptics*

2007–14 Associate Editor, *ACM Transactions on Applied Perception*

1990– Many grant evaluations has ad-hoc reviewer; panel member including NSERC, NSF, EU FP7 and others; Frequent ad-hoc reviewer for conferences and journals (70 journals from the ACM, the IEEE, neuroscience, other fields); Co-founder in four start-up companies and consultancy for several high-tech companies.

Event Organization (brief selection)

2014 General Chair of Eurohaptics 2014, 24–27 June 2014, Versailles, France. The event attracted 270 international participants as well as eleven industry sponsors..

2013 Co-organized with Jonathan Platkiewicz the first "Workshop on Early Touch" at the Computational Neuroscience Meeting, July 17, 2013, Université Paris Descartes, Paris, France.

2006 Co-organized, together with Prof. J. M. Hollerbach (Univ. of Utah) the *IEEE-RAS/IFRR School of Robotics Science on Haptic Interaction*. The school hosted 35 Ph.D/Post-doctoral students from across the world.