

PERSONAL INFORMATION

Thomas Robert

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🌐 <https://thomasrobertresearch.wordpress.com/>

WORK EXPERIENCE

Sep 2016–Jul 2017

Invited researcher

Ecole de Technologie Supérieure (ETS) / The University of Montreal Hospital Research Centre (CRCHUM), Montreal (Canada)

Stability and naturalness of gait while walking on a haptic treadmill, Imaging and orthopaedics research laboratory (LIO)

Jan 2008–Present

Researcher

the French institute of science and technology for transport, development and networks (IFSTTAR), Bron (France)

Dynamics of human movement, with a specific focus on balance and falls, Laboratoire de Biomécanique et Mécanique de Chocs (LBMC)

Mar 2008–Sep 2008

Visiting Researcher

University of Virginia, Charlottesville (United States)

Posture and locomotion of Children with Cerebral Palsy, Motion Analysis and Motor Performance Lab.

Influence of reflex bracing on post-impact kinematics of vehicle's occupants, Center of Applied Biomechanics.

Jan 2007–Dec 2007

Postdoctoral researcher

Pennsylvania State University, State College (United States)

Muscular synergies in postural tasks, Mark Latash's Motor Control Lab

Apr 2006–Jul 2006

Research assistant

French Institute for Transport and Safety Research (INRETS), Bron (France)

Stability of standing passengers in buses, Laboratoire de Biomécanique et Modélisation Humaine (LBMH)

EDUCATION AND TRAINING

Jan 2003–Sep 2006

PhD in Biomechanics

EQF level 8

National Institute of Applied Sciences (INSA), Lyon (France)

Biomechanical Analysis of the balance recovery of standing human following their supporting surface translation – Application to the protection of standing passengers in public transportation.

2002

MSc in Mechanics

EQF level 7

National Institute of Applied Sciences (INSA), Lyon (France)

PERSONAL SKILLS

Mother tongue(s) French

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	C1	C1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
 Common European Framework of Reference for Languages

ADDITIONAL INFORMATION

Publications

Bibliometry

- more than 30 documents referenced in international scientific databases (e.g. Scopus)
- h-factor = 7
- 150 citations

Selected publications

- Z. Aftab, T. Robert and P.-B. Wieber. Balance Recovery Prediction with Multiple Strategies for Standing Humans. *PLoS ONE* 11(3): e0151166, 2016
- P. Vallée, R. Tisserand, T. Robert. Possible recovery or unavoidable fall? A model to predict the one step balance recovery threshold and its stepping characteristics. *Journal of Biomechanics*, vol. 48, pp. 3905–3911, 2015.
- T. Robert, J. Causse, L. Denninger, and X. Wang. A 3D analysis of the joint torques developed during driver's ingress–egress motion, *Ergonomics*, vol. 57, pp. 1008-1020, 2014.
- Z. Aftab, T. Robert, and P.-B. Wieber. Predicting multiple step placements for human balance recovery tasks, *Journal of Biomechanics*, vol. 45, pp. 2804 – 2809, 2012.
- T. Robert, B. C. Bennett, S. D. Russell, C. A. Zirker, and M. F. Abel. Angular momentum synergies during walking. *Experimental Brain Research*, vol. 197, no. 2, pp. 185–197, 2009.

Supervision

Postdoctoral researcher

2016-2017 : Jean-Louis Honein "Interactions between vehicles and pedestrians in street crossing situations: experiments on simulator and movement analysis", co-supervised with A. Dommès, fundings from Vedecom.

2011-2012 : Anurag Soni "Pedestrian Pre-Crash Reactions and their effects on crash outcomes", co-supervised with P. Beillas, european funding (Marie-Curie IIF).

PhD Students

2015-...: Mahdi Abid "Estimation and Characterization of the gait cycle using a handheld portable device", co-supervised with V. Reneaudin (Geoloc - IFSTTAR) and Y. Aoustin (IRCCYN - EC Nantes), funding from IFSTTAR.

2012-2015 : Pascal Vallée "Simulation of the balance recovery processes and the risk of fall in public transportation", co-supervised with X. Wang (LBMC - IFSTTAR), funding from IFSTTAR.

2012-2015 : Romain Tisserand "Biomechanical and cognitive processes leading to fall in elderly", co-supervised with L. Chèze (LBMC - UCBL), funding from La Région Rhône Alpes.

2009-2012 : Zohaib Aftab "Dynamic simulation of balance recovery: Application to standing passengers of public transports", co-supervised with B. Brogliato and P.B. Wieber (INRIA), funding from La Région Rhône-Alpes.

2009-2012 : Zhaopeng Qiu "Displacement of a virtual manikin in a very constrained environment: movement simulation considering equilibrium constraints", co-supervised with A. Escande and A. Micaelli (CEA-LIST), shared funding between IFSTTAR and CEA.