

Curriculum vitae

NAME
MITTON David
DOB : 22/12/71

POSITION TITLE
Senior Researcher

| INSTITUTION AND LOCATION | EDUCATION TRAINING | | |
|---|---|----------|----------------|
| | DEGREE | YEAR (s) | FIELD OF STUDY |
| Université Lyon 1, France | M.Sc. | 1994 | Biomedical |
| Institut National des Sciences Appliquées, Lyon, France | Ph.D. | 1997 | Biomechanics |
| Université Paris 12, France | « Habilitation à diriger des recherches » | 2003 | Biomechanics |

RESEARCH AND PROFESSIONAL EXPERIENCE

POSITIONS:

- 1998-2003 **Assistant Professor** in Biomechanics, Arts et Métiers ParisTech, Paris, France
- 1999 (2 months) Invited researcher, Laboratoire de recherche en Imagerie et Orthopédie, Montréal, Québec, Canada
- 2003-2006 **Associate Professor** in Biomechanics, Arts et Métiers ParisTech, Paris, France
- 2006 -2008 **Professor** in Biomechanics, Arts et Métiers ParisTech, Paris, France
- 2009-2015 **Senior Researcher** in Biomechanics (IFSTTAR (The French institute of science and technology for transport development and networks), head of the Impact biomechanics team in LBMC, (LBMC, Univ Lyon-IFSTTAR), Lyon, France
- 2016-present Senior Researcher in Biomechanics, Director of the biomechanics and impact mechanics laboratory (LBMC, Univ Lyon-IFSTTAR), Lyon, France

HONORS AND AWARDS

- 1998 Société de Biomécanique award (young researcher, under 35 y.o)
- 2009 Société de Biomécanique award (senior researcher, under 50 y.o)

RESEARCH ACTIVITIES

Tissue biomechanics: Ex vivo and in vivo characterization of the mechanical properties of biological tissues.
Bone fracture prediction: Consideration of the loading conditions to predict the fracture risk.

PhD SUPERVISION

PhD advisor of 20 students (19 defended and 1 ongoing).
External examiner of 24 PhD

PUBLICATIONS

Co-author of more than 80 articles in peer review international journals
International proceedings: 115
Patents: 7

MAJOR RECENT PUBLICATIONS

Hauptert S, Guérard S, Mitton D, Peyrin F, Laugier P. (2015) Quantification of nonlinear elasticity for the evaluation of submillimeter crack length in cortical bone, Journal of the Mechanical Behavior of Biomedical Materials, 48: 210-219

Podwojewski, Otténio M, Beillas P, Guérin G, Turquier F, Mitton D. (2014) Mechanical response of human abdominal walls ex vivo: Effect of an incisional hernia and a mesh repair. *Journal of the Mechanical Behavior of Biomedical Materials*, 38, 126-33

Tran D, Mitton D, Voirin D, Turquier F, Beillas P. (2014) Contribution of the skin, rectus abdominis and their sheaths to the biomechanical structural response of the abdominal wall ex vivo. *Journal of Biomechanics*, 47(12):3056-63

Mitton D, Minonzo J-G, Talmant M, Ellouz R, Rongieras F, Laugier P and Bruyère-Garnier K. (2014) Non-destructive assessment of human ribs mechanical properties using quantitative ultrasound. *Journal of Biomechanics*, 47(6), 1548-53

Hauptert S, Guérard S, Peyrin F, Mitton D, Laugier P. (2014) Non Destructive Characterization of Cortical Bone Micro-Damage by Nonlinear Resonant Ultrasound Spectroscopy. *PLoS ONE* 9(1): e83599.

ADMINISTRATIVES DUTIES

- 2016-present **Director** of the biomechanics and impact mechanics laboratory (LBMC, Univ Lyon-IFSTTAR), Lyon, France
- 2014-present **President of the Société de Biomécanique** (french speaking Society of Biomechanics)
- 2013-2016 **Chairman** of the ESB 2016 (jointly organized by the European Society of Biomechanics and the Société de Biomécanique), 10-13 July 2016, Lyon
- 2011-2014 Coordinator of the French research group in Impact Biomechanics (GRBC), funded by 6 laboratories
- 2009-2015 Head of the impact biomechanics team of the LBMC (Univ Lyon-IFSTTAR, dir. P. VEZIN)
- 2006/2008 Head of the track «Tissue and joint biomechanics» of the Master degree (Arts et Métiers ParisTech).
- 2006-2008 Head of the tissue biomechanics team of the biomechanics laboratory (Arts et Métiers ParisTech-CNRS, dir. W. Skalli).

EXPERTISES

- 2014-present Member of the Scientific Review Committee of the International Research Council on Biomechanics of Injury
- 2012-2015 Member of the Scientific Advisory Board of the European project Longlife (FP7, N°280741)
- 2007-present Expert for research funds (France, Hong Kong, Switzerland)
- 2007-present Board member of the following journals: IRBM, Journal of Engineering in Medicine and Journal of Musculoskeletal Research
- 2005-present Scientific committee member:
- III International Congress on Computational Bioengineering, Margarita, Venezuela, 2007
- Conferences of the Société de Biomécanique: every year from 2005
- Séminaire qualité osseuse, Paris, 2006-2013
- 2005-present Session chair in international conferences:
- Société de Biomécanique (every year from Brussels 2005)
- European Society of Biomechanics (Patras, 2013)
- International Society of Biomechanics (Brussels 2011)
- World Congress of Biomechanics (Boston 2014)
- 1996-present Rewiever for international journals (Medical Engineering & Physics, Spine, Clinical Biomechanics, Journal of Biomechanics, Journal of Mechanical Behavior of Biomedical Materials...), more than 70 articles