

PERSONAL INFORMATION

Laurence Chèze



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Sex F | Date of birth 19/05/1967 | Nationality french

POSITION

University Professor

WORK EXPERIENCE

from 2005-present

**Professor in Mechanics-Biomechanics**

Teaching and research  
University claudé Bernard – Lyon 1 – Department of Mechanics – Lyon

from 1999-2005

**Associate Professor in Mechanics-Biomechanics**

Teaching and research  
University claudé Bernard – Lyon 1 – Polytech Engineering School – Lyon

from 1994-1999

**Assistant Professor in Mechanics-Biomechanics**

Teaching and research  
University claudé Bernard – Lyon 1 – Polytech Engineering School – Lyon

EDUCATION AND TRAINING

from 1993-1999

**Research supervision enablement**

University claudé Bernard – Lyon 1

from 1990-1993

**Philosophy Doctorate**

Mechanics, with a major in Biomechanics  
University claudé Bernard – Lyon 1

from 1989-1990

**M. Sc.**

Mechanics, with a major in Biomechanics  
University claudé Bernard – Lyon 1

from 1984-1989

**Engineer**

Mechanics  
INSA Engineering School - Lyon

PERSONAL SKILLS

Mother tongue(s)

French

Other language(s)

English

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
B2 : Independent user	C1 : Proficient user	B2 : Independent user	B2 : Independent user	B2 : Independent user

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user  
Common European Framework of Reference for Languages

ADDITIONAL INFORMATION

Administration

- 2015-present : Deputy director of the Laboratory of Biomechanics and Impact Mechanics
- 2013-2016 : Deputy director of the Interuniversity Centre of Bioengineering of the Human Neuromuscularskeletal System
- 2008-present : Responsible of the Biomechanics speciality of the Master Degree, University Lyon 1
- 2007-2015 : Responsible of the Bachelor Degree in Mechanics and Civil Engineering, University Lyon 1
- 2003-2015 : Head of the research team "Biomechanics & Orthopaedics" of the Laboratory of Biomechanics and Impact Mechanics

Offices held in professional societies

- 2009-2011 : President of the Société de Biomécanique (International French spoken Society)
- 2005-2011 : Member of the Executive Council of the Société de Biomécanique

Advisory

- 2008-2015 : Member of the National Council of the Universities, Mechanics section
- 2012-present : Expert for the General Direction for Research & Innovation, French Ministry of Research

Editorial work

- 2019-present : Editorial Board member of *Clinical biomechanics*
- 2012-present : Editorial Board member of the *Journal of Medical Engineering*
- 2006-present : Editorial Board member of the *Applied Bionics & Biomechanics*

Education and Research activity evaluation

- 2011-2015 : Member of the national expert panel for the evaluation of the educational and research activity of universities

Evaluation of research projects

- Revision of several research projects submitted to : French National Agency of Research (15), Quebec Ministry of Research (7), University of Geneva, Swiss National Science Foundation, University of Roma, Federal Polytechnical School of Lausanne, University of Leuven (2), Université Libre de Bruxelles.

Organisation of Scientific events

- 2016 : Member of the Organizing committee of the European Society of Biomechanics congress, Lyon, France
- 2011 : Co-President of the congress of the Société Francophone d'Analyse du Mouvement chez l'enfant et l'adulte, Saint-Etienne, France (150 participants)
- 2010 : Co-President of the symposium " *Technologies de la santé : de l'innovation au marché* » (Entretiens Jacques Cartier), Lyon, France (90 participants)
- 2008 : Co-President of the symposium " *Technologies de la santé : de l'idée à l'innovation* » (Entretiens Jacques Cartier), Montreal, Québec (80 participants)
- 2007 : President of the congress of the Société de Biomécanique in Lyon (150 participants)

Completed funded research projects

- 2013-2016 : Project funded by the Fonds National de Recherche du Luxembourg : Advanced kinematic and dynamic models of the upper limb for clinical evaluation.
- 2013-2016 : Project funded by CWD society : Biomécanique dorsale du cheval monté, analyse des interactions selle-dos et application à la conception de selle ultra-adaptée (127 k€).
- 2012-2015 : Project funded by the Rhône-Alpes region : Simulation du rattrapage d'équilibre – vers une meilleure compréhension des mécanismes biomécaniques et cognitifs à l'origine des chutes chez les personnes âgées (100 k€)
- 2012-2015 : Project funded by AXS society : Développement d'une modélisation biomécanique du rachis pour le suivi non invasif de ses pathologies déformantes (118 k€)
- 2011-2015 : Project funded by French National Agency of Research : Etude écologique de l'Interaction Homme-Matériel : Application à l'ergonomie des raquettes de tennis (161 k€)
- 2011-2014 : Project funded by CTC society : Etude biomécanique de l'effet du chaussage sur la marche de l'enfant sain (118 k€)
- 2010-2014 : Project funded by French National Agency of Research : Approche multi-échelle pour la modélisation personnalisée du système musculo-squelettique (237 k€)
- 2009-2013 : FP7 International Reintegration Grant DEMU2NECK : A deformable, multi-domain, numerical muscular neck model for orthopaedics and ergonomics applications (100 k€)
- 2009-2012 : Project funded by Adapt Loiret Association : Quantification des efforts développés à la marche par le triceps sural chez des sujets sains et des patients hémiplegiques adultes (7 k€)
- 2008-2011 : Project funded by Medimex society : Modélisation musculo-squelettique avancée pour la simulation dynamique de la marche (179 k€)
- 2008-2011 : Project funded by CTC society : Etude biomécanique du pied et de la cheville de l'enfant sain, de l'acquisition de la marche, jusqu'à l'âge de six ans (158 k€)
- 2007-2010 : Project funded by French National Agency of Research : Evaluation des paramètres biomécaniques lors de l'utilisation d'un fauteuil roulant manuel (120 k€)
- 2007 : Project funded by OSEO-ANVAR foundation : Modélisation biomécanique avancée du système musculo-squelettique (36 k€)
- 2003-2006 : Project funded by Medimex society : Mise en place de protocoles expérimentaux et de modèles biomécaniques adaptés à différentes demandes cliniques (121 k€)
- 2003-2006 : Project funded by the Rhône-Alpes region : coordination gestuelle en aviron in situ (75 k€)
- 2002-2007 : Project funded by AXS society : Modèle multi-corps permettant de simuler la chirurgie de la scoliose (55 k€)

## On going research projects

- 2021-2025 : Project funded by French National Agency of Research : Sensors and monitoring instruments in equine E-health (880 k€).
- 2017-2021 : Project funded by Project funded by French National Agency of Research : Plateforme numérique permettant d'étudier les mécanismes impliqués dans le maintien et le rattrapage de l'équilibre humain (290 k€).

## Patents

- 2012 : Method and device for dynamically determining the position and orientation of the bone elements of the spine. Koell, P., Dumas, R., Elbaroudi, F., Cheze, L. *Patent WO2012025697(A1)*
- 1991 : Bench for supporting a stretcher, with suspension. Soulier G., Brossard J.P., Courtiade M. Chèze L. *French patent FR2654926*

## Book

L. Cheze. Analyse cinématique du mouvement humain.  
French version, ISTE Ed. (118p. Oct. 2014)  
ISBN : 978-1-78405-051-1 (papier)  
ISBN : 978-1-78406-051-0 (ebook)

L. Cheze. Kinematic analysis of human movement  
English version, WILEY Ed. (144p. Nov. 2014)  
ISBN: 978-1-84821-610-5 (paper / ebook)

## Bibliometric analysis

H index = 24, citations = 1964 (Web of Science)  
orcid.org/0000-0003-2265-9781

## Teaching activities

- Design and teaching of a lecture in Biomechanics (72h / year) at Università Politecnica delle Marche, Italy (2015-2016).
- Design and teaching of a lecture in Biomechanics (2\*28h / year) at Ecole Polytechnique Fédérale de Lausanne, Switzerland (2003-2005).
- Lecture at the European School ERASMUS « Motor disabilities : posture and movement analysis, rehabilitation, neurophysiology », Marseille, France (annually 2h, since 2000).
- Main Lectures at University of Lyon (1994 – present)
  - *Bachelor Degree in Mechanics*: General Mechanics, Static of solids, Newtonian Mechanics, Introduction to biomechanics.
  - *Mechanical Engineer Degree*: Analytical mechanics, Multi-body dynamics.
  - *Master Degree in Biomechanics* : Musculoskeletal biomechanics, Experimental measurements in biomechanics.
  - *Master Degree in Biomedical Sciences* : Movement analysis systems, Kinematics and dynamics of human movement.