

Benedicte Vanwanseele, Department of Movement Sciences, KU Leuven,
Benedicte.Vanwanseele@kuleuven.be



Academic education:

2020 Good Clinical Practice Certificate
2003-2004 Post-Doctoral Fellow, Laboratory for Biomechanics, ETH-Zurich
2000-2003 PhD student, Laboratory for Biomechanics, ETH-Zurich
1997-1998 Post-Graduate Study in Biomedical and Clinical Engineering, Mechanical Engineering Department, KU Leuven, Belgium (Cum Laude, top of the year)
1993-1997 Master in Physical Education, KU Leuven, Belgium (Cum Laude)
1995-1997 Academic Teaching Degree, KU Leuven, Belgium

Working experience

2021-... Full professor, Head of the Human Movement research group, Faculty of Movement and Rehabilitation Sciences, KU Leuven, Belgium
2016- 2021 Associate research professor, Faculty of Movement and Rehabilitation Sciences, KU Leuven, Belgium
2011- 2016 Tenure-track assistant research professor, Faculty of Movement and Rehabilitation Sciences, KU Leuven, Belgium
Since Sept 2010 Research leader, Fontys University of Applied Science, Eindhoven, the Netherlands (Part time)
Since 2010 Honorary Senior Lecturer, Discipline of Exercise and Sport Science (EXSS), Faculty of Health Sciences, The University of Sydney
2009 - 2010 Senior Lecturer, Discipline of Exercise and Sport Science (EXSS), Faculty of Health Sciences, The University of Sydney
2004-2009 Lecturer, Discipline of Exercise and Sport Science (EXSS), Faculty of Health Sciences, The University of Sydney
2003-2004 Lecturer, Laboratory for Biomechanics, ETH Zurich
1999-2003 Research and Teaching Assistant, Laboratory for Biomechanics, ETH Zurich
1999-2003 Teaching Assistant, Laboratory for Biomechanics, ETH Zurich

Teaching experience

Over the last ten years, I am coordinating and lecturing one Bachelor Course in the 2nd year Bachelor of Sport and Movement Science: Biomechanics – movement analysis, several Master courses in the Master of Sport and Movement Science (Research Topics in Human Movement Analysis (Muscle and tendon biomechanics), Capita Selecta Theories of Exercise Training – Sports Biomechanics, Monitoring of Training and Match Loads in Intermittent (Team) Sports.
I have supervised over 80 Master thesis students to completion and 16 Bachelor research internships.

Institutional responsibilities

2021-... Head of the Human Movement research group
2020-... Part of the doctoral committee Rehabilitation and Sport Sciences
2014-2020 Secretary of the Permanent Education Committee

Research Grants (last 10 years)

Vanwanseele B, Shim V, “Understanding the interplay between tendon structure and muscle function to optimize tendon strain for better treatment of Achilles tendinopathy”. FWO, 2021-2025: € 328,000

Vanwanseele B, Jonkers I, Verschueren S, Vanrenterghem J, Philips J, “Musculoskeletal load assessment in human movement interventions: turning state-of-the-art research tools into a unique business-solution”. Research Council KULeuven, 2021-2023: € 320,000

Vanwanseele B, “Understanding the role of altered tendon properties on tendon strains during recovery from Achilles tendinopathy.” Research Council KULeuven, 2020-2024: €270,000

Vanwanseele B, “Functioning and Participation in Children with Clubfeet.” Stichting Innovatie Allientie RAAK Pro, 2020-2024: €986,000.

Vanwanseele B, Davis J, “Development of a novel adaptive training tool that uses artificial intelligence to provide individualized biomechanical feedback for runners in the real-world” Research Council KULeuven, €2017-2019, 251,000.

Vanwanseele B, "Een intelligent, modulair en interactief visualisatiesysteem voor toepassingen in fitness, sport en revalidatie", iMinds, 2017-2019: €233,000

Vanwanseele B, "Een verbeterde opsporing en behandeling van relapse klompvoeten: de rol van klinische gangbeeldanalyses" Stichting Innovatie Alliantie RAAK Publiek, 2017-2018: €600,000.

Vanwanseele B, "Nano4Sports", Interreg V, 2017-2019: € 300,000.

Timmermans A, Grieten L, Vandenabeele F, Jonkers I, Vanwanseele B, Davis J, Corten K, Bellemans J "Mobile monitoring of joint loading profiles in persons with degenerative hip and knee problems", FWO TBM, 2017-2021: €940,000.

Vanwanseele B, "Quantifying lower back motion and muscle activity during daily life activities in Ankylosing Spondylitis patients." Fund for scientific research in rheumatology (FWRO-FRSR), 2016-2017: €15,000.

A detailed muscle-function assessment device", small infrastructure grant, research council kuleuven.2016-2018, €95,200

Davis J, Vanwanseele B "Towards an integrated framework to improve the efficiency of rehabilitation and prevention of sports injuries." Research Grant KU Leuven, 2015-2017: €210,000

Westhovens R, Vanwanseele B, Van Huffel S, Puers B, Dankaert W, Geurts L " Sensor-based Platform for the Accurate and Remote monitoring of Kinematics linked to E-health (SPARKLE)", Interdisciplinary Research Program KU Leuven, 2014-2018: €720,000

Pisters M, Vanwanseele B, Blokhuis T, Holtslag H, de Bie R. "Validiteit en bruikbaarheid van de SensiStep: een biofeedback systeem voor partieel belasten van het aangedane been", Wetenschappelijk College Fysiotherapie, 2014: €40,000

Vanwanseele B, "Bewegen met artrose: Validiteit en betrouwbaarheid van drie mobiele meetinstrumenten voor de bepaling van kniebelasting bij patiënten met knieartrose", Stichting Innovatie Alliantie RAAK Internationaal, 2012-2013: €374,788.

PhD students

14 PhD students graduated under my supervision. I currently supervise 10 PhD students.

Keynotes and invited talks.

In the recent years, I gave several keynote and invited lectures for the French International Society of Biomechanics (2021), South African Society of Biomechanics (2020), at Loughborough University UK(2022), Waseda University Japan (2019,2022), the Norwegian School of Sport Sciences (2019).

Journal Review

Since 2017 associate editor of Sports Biomechanics. Since 2020 academic editor of Sensors. Since 2021, part of the editorial board of the Scandinavian Journal of Medicine and Science in Sports.

Guest editor of special issue "Sensors: Wearable Systems in Physical Rehabilitation: Opportunities and Challenges ".

Guest editor of special issue "Journal of Sports Biomechanics: The biomechanics of running footwear: From injury prevention to performance enhancement".

Reviewer for several peer-reviewed international journals: Sports Biomechanics, Journal of Biomechanics, Journal of Sport Sciences, Clinical Biomechanics, BMC Public Health, Journal of Anatomy, Computer Methods in Biomechanics and Biomedical Engineering,.

Research Grant Review

Member of Swiss National Science Foundation ERC panel

Reviewer for FWF Austrian Science Fund; Research and Development grant, the University of Sydney; National Health and Medical Research Council, project grants; German "Forschungsnetz zu muskuloskeletalen Erkrankungen"; Research Council KU Leuven.

Scientific publications

More than 100 peer-reviewed scientific articles, H-index of 34 (source: google scholar).

Full up-to-date list: <https://lirias.kuleuven.be/cv?u=U0040192>

<http://orcid.org/0000-0002-6158-9483>

Other impact

involved in the implementation of evidence-based methods to improve training programs for elite athletes such as the Red Lions (national hockey team).

Co-founder and scientific advisor for a spin-off company (RunEASI) which develops wearable technology to track running and walking gait pattern.