

Jonas Verbrugghe (JV)

Education: PhD in Rehabilitation Sciences
MSc in Physiotherapy and Rehabilitation Sciences
Date of birth: 08/04/1991 (34 years old)
Nationality: Belgian
Languages: Dutch (Native), English (proficient), French (basic)
Online profile: Orcid, [ResearchGate](#), [LinkedIn](#), [Google Scholar](#), [X](#).



CURRENT POSITION

Guest professor - Antwerp University (BE) - 2,5 year (Dec 2022 - present) (60-70%)

Content: Supporting REVAKI BSc and MSc degree in Rehabilitation Sciences and Physiotherapy and MOVANT research group.

Function: 70% appointment: Developing and teaching courses related to musculoskeletal and sports rehabilitation, both at BSc and MSc level. Providing guidance and supervision to PhD-students and other researchers investigating effectiveness and underlying mechanisms of exercise therapy and related topics in chronic (musculoskeletal) disorders. Overseeing research projects and coordinating collaborative initiatives with other departments and institutions at and related with Antwerp University. Contributing to the development and implementation of the department's strategic plan in the Department Council, which involves setting goals, defining priorities, and allocating resources of [MOVANT](#) (research)/[REVAKI](#) (education).

Guest professor/Postdoctoral researcher - Hasselt University (BE) - 5,5 years (Oct 2020 - present) (100% until Oct 2022, 30-40% until present)

Content: Supporting the [musculoskeletal research group](#) at Faculty of Rehabilitation Sciences by collaborating in innovative research topics. Coordination of the FWO-TBM TechnoHIT project. Supporting education related to musculoskeletal rehabilitation.

Function: 70% research: Designing and coordinating multiple elaborate research lines such as 1) Underlying working mechanisms of physical activity and exercise in chronic musculoskeletal pain; 2) Effectiveness of high intensity training in chronic low back pain; 3) Feasibility of (mobile) technology in musculoskeletal rehabilitation protocols. Specific tasks related to this goal are: Project coordination, writing proposals for new research funding, setting up new (inter)national collaborations, producing scientific datasets, publishing articles, supporting BSc/MSc/PhD students with thesis assignments, etc.
30% Education: supporting production and delivery of educational courses related to musculoskeletal rehabilitation, managing curriculum revisions, preparing exam content and schedules, etc.

PAST POSITIONS

Postdoctoral research assistant - Hasselt University (BE) - 1 year (Oct 2019 - Oct 2020)

Content: 1) Evaluation of a new 'Rehabilitation Technology' MSc degree within Faculty of Rehabilitation Sciences; 2) Designing of a new 'Societal therapeutic thinking' compulsory course in BSc Rehabilitation Sciences and Physiotherapy, 3) supporting the complete redesign of MSc Rehabilitation Sciences and Physiotherapy curriculum.

Function: Exploratory data-extraction, inter/intrafaculty brainstorm & development, (inter)national focus group meetings with educational partners, recap meetings with the faculty dean, formal proposal writing, etc.

PhD researcher - Hasselt University (BE) - 4 years (Oct 2015 - Oct 2019)

Content: Evaluation of feasibility and effectiveness of high intensity training in chronic low back pain.

Function: Development of a comprehensive set of skills related to achieving an independent academic profile (i.e. scientific, teaching, supervisory, transferable skills) as defined in doctoral school requirements.

Predoctoral research assistant - Hasselt University (BE) - 1 year (Oct 2014 - Oct 2015)

Content: Project 1: Evaluation of the applicability motion detection systems for rehab of musculoskeletal diseases (TETRA-project in collaboration with PXL University of Applied Sciences).
Project 2: Optimization of assistive techn delivery in BE (Subsidized by the Flemish Government department Public Health).

Function: Systematic review publication writing, clinical trial designing, ethical committee approval preparing, performing focus group/recap meetings, scientific presentations, technical support communication, etc.

Site case manager - Boehringer Ingelheim Pharma (Elsene, BE) - 1 year (Jan 2014 - Jan 2015)

Content: International scientific COPD study on exercise activation and influence of medication.

Function: Behavior modification therapist (active group education sessions, individual motivational sessions, protocol related administration, communication with the main research group).

Independent physiotherapist in a clinical group practice - 4-Fitness (Genk, BE) - 1,5 years (Jul 2014 - Nov 2015)

Content: Exercise therapy in sports and end phase rehabilitation, Graded physical therapy for spine related disorders, small group training (e.g. functional restoration programs, cardiorespiratory circuits).

EDUCATION

PhD in Rehabilitation Sciences (Hasselt University (BE), 2019)

Topic: ['High Intensity Training in Chronic Nonspecific Low Back Pain'](#)

Supervisor: Prof. Dr. Annick Timmermans (Head of Research, REVAL Research Center, UHasselt)

MSc in Physiotherapy and Rehabilitation Sciences (Hasselt University (BE), KUL (BE), TAMK (FI), 2014)

Merit: 79% (Magna cum laude; 1st ranked program graduate (1/49); 1st place award for best clinical internship)

BSc in Physiotherapy (Hasselt University (BE), PHL (BE), 2012)

Merit: 68% (Cum laude)

INTERNATIONAL MOBILITY

As a postdoctoral researcher (2021): An FWO funded long-term research stay (3 mo) with prof. dr. Kristian K. Petersen at the [Center for Neuroplasticity and Pain](#), Aalborg University (Aalborg, Denmark).

As a MSc in Physiotherapy and Rehabilitation Sciences student (2014): A Hasselt University funded clinical internship exchange program (3 mo) at the [Department of Social Services and Health Care](#), Tampere University (Tampere, Finland).

PUBLICATIONS

Publication summary: I have published 41 A1 papers (>800 citations, >300 in the last two years; H-index: 15, I10-index: 17) of which >10 as first author, seven as last, and >75% in high impact (Q1) Journals. For some recent milestone papers see below. For a full publication list: [see here](#).

- Meus T, Van Eetvelde J, Meuwissen I, Meeus M, Boullosa D, Timmermans A, & **Verbrugghe J.** (2025). *Exercise and Heart Rate Variability in Chronic Musculoskeletal Pain: A Systematic Review*. Sports Medicine-Open, 11(1), 109. **(Q1, IF 5.9)**.
- Meuwissen I, Vanderstraeten R, Roussel NA, Meeus M, Van Eetvelde JS, Meus T, Timmermans A, & **Verbrugghe, J.** (2025). *Contributors to Adherence to Exercise Therapy in Non-Specific Chronic Low Back Pain: A Systematic Review of Qualitative and Quantitative Research*. Journal of Clinical Medicine, 14(17), 6251. **(Q1, IF 2.9)**.
- **Verbrugghe J**, Meeus M, O'Keeffe M, Hoegh M, & Reneman M. (2025). *Can a suggested physical activity paradox explain pain in workers?*. Pain, 166(10), e487-e488. **(Q1, IF 5.5)**.
- Meus T, Timmermans A, Klaps S, & **Verbrugghe J.** (2024). *High-Intensity Training Telerehabilitation for Persons with Chronic Low Back Pain: A Pilot Clinical Trial*. Journal of Clinical Medicine, 13(24), 7599. **(Q1, IF 3.0)**.
- Vervullens S, Meert L, Meeus M, Heusdens CH, Verdonk P, Foubert A, Abatih E, Durnez L, Smeets RJ, & **Verbrugghe J.** (2024). *Application of the IASP Grading System to Identify Underlying Pain Mechanisms in Patients With Knee Osteoarthritis: A Prospective Cohort Study*. The Clinical journal of pain, 40(10), 563-577. **(Q1, IF 3.1)**.
- Sergooris A, **Verbrugghe J**, Bonnechère B, Klaps S, Matheve T, Vandeputte FJ, Corten K, & Timmermans, A. (2024). *Beyond the Hip: Clinical Phenotypes of Hip Osteoarthritis Across the Biopsychosocial Spectrum*. Journal of Clinical Medicine, 13(22), 6824. **(Q1, IF 3.0)**.
- Vaegter HB, Kinnunen M, **Verbrugghe J**, Cunningham C, Meeus M, & Reneman, M. F. (2024). *Physical activity should be the primary intervention for individuals living with chronic pain. A position paper from the EFIC 'On the Move' Task Force*. European Journal of Pain. **(Q1, IF 3.5)**.
- **Verbrugghe J**, Klaps S, Verboven K, Meus T, Kempeneers K, Petersen KKS, & Timmermans A. (2025). *Acute Effects of a High-Intensity Interval Training Protocol on Pain Sensitivity and Inflammatory Markers in Persons with Chronic Nonspecific Low Back Pain: A Controlled Clinical Trial*. Applied Sciences, 15(6), 2918. **(Q1, IF 2.5)**.

- Tarantino D, Theysmans T, Mottola R, & **Verbrugghe J.** (2023). *High Intensity Training for Knee Osteoarthritis: A Narrative Review*. Sports. **(Q1, IF 2.7)**.
- Zeb A, **Verbrugghe J**, Neven A, Burtin C, Janssens L, Meus T, & Timmermans A. (2025). *Effects of Physical Activity and Exercise Interventions on Health Outcomes in Occupational Drivers: A Systematic Review*. Workplace Health & Safety, 73(2), 95-108. **(Q1, IF 2.1)**.
- Klaps S, Haesevoets S, Verbunt J, Köke A, Janssens L, Timmermans A, **Verbrugghe J.** (2022). *Influence of Exercise Intensity on Psychosocial Outcomes in Musculoskeletal Disorders: A Systematic Review*. Sports Health: a Multidisciplinary Approach. **(Q1, IF 4.7)**.
- **Verbrugghe J**, Agten A, Stevens S, Vandenabeele F, Roussel N, Verbunt J, Goossens N, & Timmermans A. (2023). *High intensity training improves symptoms of central sensitization at six-month follow-up in persons with chronic nonspecific low back pain: Secondary analysis of a randomized controlled trial*. Brazilian Journal of Physical Therapy. **(Q1, IF 4.8)**.
- **Verbrugghe J**, Agten A, Stevens S, Hansen D, Demoulin C, Eijnde BO, Vandenabeele F, & Timmermans A. (2019). *Exercise Intensity Matters in Chronic Nonspecific Low Back Pain Rehabilitation*. Medicine and Science in Sports and Exercise. **(Q1, IF 6.3)**.
- Keytsman, C, **Verbrugghe J**, & Eijnde BO. (2024). *The isometric and isokinetic knee extension and flexion muscle strength profile of elite soccer players*. BMC Sports Science, Medicine and Rehabilitation, 16(1), 180. **(Q1, IF 2.8)**.

I disseminated my research in multiple public health sources e.g. Ortho-Rheumato, [Physios](#), [ACSM's Sports Medicine bulletin](#), newspapers, etc.

TEACHING AND EDUCATIONAL DUTIES

I have been (co)titular of following courses (i.e. having end responsibility regarding educational design of the course, providing and evaluating exams, leading the educational team, etc.): UHasselt: Functioning in Musculoskeletal Disorders; Co-creation in the Welfare- and Caresector; UAntwerpen: Health and Prevention, Musculoskeletal Rehab 3 & 4, and Musculoskeletal Rehab specialization 1; Sports Rehabilitation 1.

I have taught and been part of the educational team in following topical courses: UHasselt: Functional Anatomy of the upper extremity; Functional Anatomy of the lower extremity and Trunk; Functioning in Musculoskeletal Disorders; Rehabilitation of Musculoskeletal Disorders; Co-creation in the Welfare- and Caresector; Clinical Reasoning; Rehabilitation Technology in Musculoskeletal Rehabilitation; UAntwerpen: Musculoskeletal Rehab 3 & 4, and Musculoskeletal Rehab specialization 1, Sports Rehabilitation 1, Capita Selecta musculoskeletal Rehabilitation.

I have performed masterthesis part 1 & 2 supervision of >90 students in >35 different 2-year projects at two different institutions (fifteen as promotor, the others as co-promotor) in each academic year from 2014-2015 up to 2023-2024.

I am currently co-promotor of five PhD-students

- 1 Sim Klaps (UH, 2021-2025): *'BREATHE-HIT TRIAL: High intensity training to improve diaphragm functioning in CNSLBP'*
- 2 Jean Mapinduzi (UH, 2023-2027): *'Improving management of hip and knee OA in a low-income country (Burundi)'*
- 3 Iris Meeuwissen (UA, 2023-2029): *'TECHNOHIT TRIAL: Technology-supported high intensity training at home in CNSLBP'*
- 4 Timo Meus (UH, 2023-2027): *'HIT-BACK-HEART: Mechanistic Pain Profiling and Heart Rate Variability in CNSLBP'*
- 5 Julie Van Eetvelde (joint UA-UH, 2024-2028): *'TECHNOHIT TRIAL: Technology-supported high intensity training at home in CNSLBP'*

I have been co-promotor of two successful PhD-students

- 6 Abner Sergooris (UH, 2020-2024): *'Clinical phenotyping and prognostic factors in persons with hip OA after THA'*
- 7 Sophie Vervullens (UA, 2020-2024): *'Recognizing (predictive value of) phenotypes of knee OA after TKA'*

INVITED TALKS/COURSES

- Axxon congres, BE (2025): "De transitie naar de kinesithérapie van de toekomst / Wetenschappelijke perspectieven en innovaties".
- Fullphysio, FR (2024): online masterclass 'High intensity training in chronic nonspecific low back pain'.
- CIKR conference UCLouvain, BE (2024): keynote speaker in the 'pain' session, 'high intensity rehabilitation program in patients suffering from chronic pain'.
- WVVK, BE (2023): clinical 1-day course for physiotherapists: 'Application of HIT in chronic musculoskeletal pain populations'.
- Physiolearning, NL and ACREHAB, BE (2023, 2024, 2025): clinical 2-day course for physiotherapists, 'Artrose, the modern approach'.
- Belgian Back Society, BE (2022): webinar, 'High Intensity Training (HIT) in chronic nonspecific low back pain: current applications for clinical rehabilitation and future interests for scientific research'.
- Leuven & Hasselt University Spine Research Platform, BE (2022): guest lecture, 'High Intensity Training (HIT) in chronic nonspecific low back pain: Research overview'.
- Aalborg University, DK (2021 & 2022): guest lecture in the Research Interest Group Musculoskeletal Health & Implementation, 'Application of high intensity training in chronic nonspecific low back pain'.

FUNDING OBTAINED

- Special Research Fund ('BOF') 4-year PhD program for Sim Klaps (UHasselt, 2021). (ongoing, co-applicant, €194.000)
- FWO Long International Research Stay at Aalborg University (DE)(2021). (finalized, main applicant, €6.891)
- FWO-TBM project 'TECHNO-HIT TRIAL: Technology-supported high intensity training at home in CNSLBP' (UHasselt, 2022). (ongoing, co-applicant, copromotor, 4-year 50% postdoc funding, €849.000)
- Special Research Fund ('BOF') 4-year PhD program for Timo Meus (UHasselt, 2023). (ongoing, co-applicant, copromotor, €260.000)
- VLIR-UOS Short Initiative: TechnoRehabLab² (UHasselt, 2023). (ongoing, co-applicant, copromotor, €70.000)

OTHER RELEVANT RESPONSIBILITIES & TRAITS

Board member [European Pain Federation](#) (EFIC, co-chair special interest group 'on the move campaign')

Content: Support the creation of a position paper on value of physical activity for chronic pain, brainstorm ideas to improve the visibility of EFIC regarding this theme, plan workshops at upcoming EFIC conferences, attend board meetings.

Werkgroep lid [WVVK](#) (Wetenschappelijke Vereniging voor Vlaamse Kinesitherapeuten)

Content: Support specific tasks of the organisation e.g. writing and reviewing summaries of clinical guidelines for broad clinical use and publication on the website, plan workshops and courses.

Certified first aid provider (department deputy at faculty of Rehabilitation Sciences UHasselt)

Content: Theoretic and practical training to provide first aid help (e.g. CPR, use of AED, clinical situation evaluation, ...) during work related situations, half-yearly refresh sessions.

Former representative for student complaint service (first contact at faculty of Rehabilitation Sciences UHasselt)

Content: Spokespersons appointed to register and settle individual/group complains related to the educational courses of Faculty of Rehabilitation Sciences (in 2020-2021).