

# ALL THE 4D4ALL STUDENTS

## PhD

2024-2027

**Mengdi Lu** (PHD candidate), Title: "Using VR application and 4D scanning for neurorehabilitation platform", REVAKI, **University of Antwerp**.

**Bart Eeckhau** (PHD candidate), Title: "Comparative study of the mechanism of action of Dry Needling and Botulinum Toxin type A as a treatment for lower limb post-stroke spasticity: a proof of concept controlled trial", REVAKI, **University of Antwerp**.

2024-2025

**Estela Perez Luque**, Title: "Human Motion Prediction for Automotive Ergonomics Design". **University of Skovde, Sweden**,

## BSc-MSc

2025-2027

**Tiemen Bruyns, Jérôme Huys, Nathan Van Roosbroeck**, Title: "Reliability and validity of portable force plate systems for measuring jump performance and maximum isometric strength", **University of Antwerp, REVAKI**.

**Kristof Merckx, Ramón Alen, Tibo Maes**, Title: "Impact of bikefitting on biomechanical and physiological factors in cycling", **University of Antwerp, REVAKI**.

**Elena Vielfont, Lara Rosseel, Michelle Pyckhout**, Title: "Impact of bikefitting on biomechanical and physiological factors in cycling", **University of Antwerp, REVAKI**.

2024-2026

**Mirte Stessel, Emma Van den Hoek, Femke Van Orden**, Title: "How accurate are 3D and 4D digital human models generated using smartphone compared to traditional anthropometric methods: a systematic review", **University of Antwerp, REVAKI**.

**Nouran Khafaga, Muhammed Ubaidullah Khan, Muhammed Faizan Khan**, Title: "A systematic review of the accuracy, validity and reliability, of markerless versus marked based 3D motion capture for industrial ergonomics risk analysis", **University of Antwerp, REVAKI**.

**Xian Maes, Yassier El Yafchi, Quinte Geldolf**, Title: "Accuracy, validity and reliability of portable force plate for measuring jump performance and maximum isometric force: a systematic review and meta-analysis", **University of Antwerp, REVAKI**.

**Daan Animashaun, Niels Oeyen, Tuur Stienaers**, Title: "Enhancing cyclist ergonomics through 3D-4D biomechanical analysis: a systematic review and meta-analysis", **University of Antwerp, REVAKI**.

**Ayesha Roche, Ruben Van Der Berg, Isha Van Goethem**, Title: "The efficacy of 3D-4D DHM in improving body image perception", **University of Antwerp, REVAKI**.

#### **2024-2025**

**Roberto Sarachetti and Delia Trabuio**, Title: "Design a pill dispenser for improving therapeutical adherence for people with dementia", **UNIFE, (Italy) and University of Antwerp**.

**Valentina Dal Corso, Matteo Trabucco**, Title: "Design a wearable MOCAP to increase awareness in Skiers", **UNIFE, (Italy) and University of Antwerp**.

**Eugenia Fontinovo**, Title: "Ergonomic analysis of the workers' movement in industry, with the experimental comparison between 4D scanning system and inertial measurement unit device, to reduce the risk of musculoskeletal disorders.", **UNIVPM, (Italy) and University of Antwerp**.

#### **2023-2025**

**Nazarahari Hoda, Inva Gjeleshi, Maria Maryam**, Title: "4D Digital Human Modeling in VR for medical applications and simulations", **University of Antwerp, REVAKI**.

**Mannaert Stien, De Block Ruben, Callaerts Yana**, Title: "De ideale houding op de fiets", **University of Antwerp, REVAKI**

**Naalden Annelieke, Laermans Eline, Alex Dens**, Title: "Study new protocols and algorithms in biomechanics for measuring spatiotemporal parameters of gait using innovative photogrammetric", **University of Antwerp, REVAKI**.

**Van Nieuwburg Eline, Gaitanaris, Ilias, Mavrou Maria**, Title: "Study new protocols and algorithms for measuring posturography (e.g., balance control), spine deformities (scoliosis, kyphosis, lordosis) using innovative photogrammetric 4D scanning techniques", **University of Antwerp. Antwerp, REVAKI**.

**Van Laerhoven Charlotte, Jansen Lynn, Van Es Laura**, Title: "Study the effect of music in neurological disorders using wearable devices", **University of Antwerp, REVAKI**.

#### **2023-2024**

**Nourhane Nader**, Title: "Preliminary design and ergonomic assessment of smart garments for astronauts' health monitoring during intravehicular activities", **Aerospace Engineering, Sapienza, Italy**

**Sara Meletani**, Title: "Comparison between the use of 4D optoelectronic stereophotogrammetry wearable inertial measurement systems in the reconstruction of joint kinematics and spatiotemporal parameters during gait in healthy subjects", **UNIVPM (Italy) and University of Antwerp.**

#### **2022-2024**

**Duco van der Wolde, Brent Koks, Rik Kusters**, Title: "Evaluation of the effect of using the Kinesiotape applications using 4D Digital Human Modelling", **University of Antwerp, Medicine.**

**Eveline Abts, Cas Van Bocxlaer, Maxime Van den Bussche**, Title: "The use of 4D scanning in gait analysis", **University of Antwerp, REVAKI.**

**Liam Van Hoof, Kiara de Backer, Maxim Homblé**, Title: "The interaction between balance and gait", **University of Antwerp, REVAKI.**

**Dellaert Lianne, Meeuwssen Lien, Staeljanssens Ellen**, Title: "The difference in gait pattern between obese and healthy body weighted adults assessed with 3D gait analysis", **University of Antwerp, REVAKI.**

#### **2021-2023**

**Gitte Van Cleemput, Zala Van Dyck, Véronique Declercq**, Title: "The effects of rhythmic auditory stimulation on the rehabilitation of stroke patient using wearable devices".