



## András Hegyi

---

- *Research Fellow*
- *Department of Kinesiology*
- *Year of birth: 1989*

### Qualifications, academic degrees

#### University degrees

- **Master's degree** Human kinesiologist (*Exercise Physiology specialization*), Human Kinesiology Programme, Semmelweis University Faculty of Physical Education and Sport Sciences, Budapest, Hungary
- **Bachelor's degree**, Human kinesiologist, Human Kinesiology Programme, Semmelweis University Faculty of Physical Education and Sport Sciences, Budapest, Hungary

#### Academic degrees and titles

- **2020 Doctor of Philosophy**, Biomechanics, University of Jyväskylä, Jyväskylä, Finland, [paivi.e.saari@juu.fi](mailto:paivi.e.saari@juu.fi), Supervisors: Prof Neil J Cronin, Prof Taija Finni

### Professional career

#### Previous and current jobs, positions and titles

- From 2023 March, Research Fellow, Hungarian University of Sports Science, Budapest, Hungary
- From 2023 April, Head of Sport Science and Biomechanics, Research and Methodology Center of Athletics, Hungarian Athletics Federation
- 2020 Oct – 2023 Febr, Postdoctoral researcher, University of Nantes, Nantes, France and National Institute of Sport, Expertise, and Performance INSEP, Paris, France [FULGUR project](#) (Prof. Antoine Nordez, Prof. Gael Guilhem)
- 2015–2020, PhD studies, University of Jyväskylä, Jyväskylä, Finland
- 2014 Jan–June, Research assistant, University of Jyväskylä, Jyväskylä, Finland (funded by Campus Hungary)

#### Public activities at the university (board memberships, leadership positions)

- **Key Organizer of a Blended Intensive Program (BIP) in Biomechanics:** *The basics of musculoskeletal modelling and simulation using OpenSim*, 9–13/October/2023. HUSS, Budapest, Hungary
- **Symposium Organiser;** *Scientific Symposium: Biomechanics in Sports and ageing*, 11/10/2023. HUSS, Budapest, Hungary

- *Symposium Coordinator, 17th International Symposium, Biomechanics of Human Movement: Mechanisms and Methods, 21–23/09/2016. Jyväskylä, Finland*

#### *Key study/research/teaching trips, missions*

- *18–25 Sept 2024, Research Mobility funded by Pannónia Scholarship Programme, University of Nantes, Nantes, France*
- *8–12 July 2024, Erasmus Staff mobility for teaching and training activities, Blended Intensive Program, Politecnico di Torino, Torino, Italy*
- *8–14 April 2024, Research visit funded by the FULGUR project, University of Nantes, Nantes, France and National Institute of Sport, Expertise, and Performance INSEP, Paris, France*
- *14–15 December 2023, Staff mobility to the 64th anniversary of the Faculty of Kinesiology at the University of Zagreb*
- *30 November–10 December 2023, Staff mobility to the next Finnish Institutions: Helsinki University Hospital, R5 gym in Helsinki, University of Jyväskylä, University of Eastern Finland in Kuopio, Ruka Olympic Centre, KIHU Olympic Centre*
- *8–9 November 2023, Erasmus Staff mobility for teaching and training activities, University of Vienna, Vienna, Austria*
- *2018 Jan–Apr, Research visit, The Swedish School of Sport and Health Sciences (GIH), Stockholm, Sweden (funded by the University of Jyväskylä)*
- *2017, 1 month, Research visit, The Swedish School of Sport and Health Sciences (GIH) Stockholm, Sweden*
- *2017, 1 month, Research visit, Université Cote d’Azur, Nice, France*
- *2016, 2 months, Research visit, University of Nantes, Nantes, France, (funded by International Society of Biomechanics)*

#### *Invited presentations*

- *Hamstring muscle function in sprinting and in various hamstring exercises. Aspetar Sports Medicine Center, Doha Qatar, online, 07.05.2024*
- *Hamstring muscle function in sprinting and in various hamstring exercises. Coaches’ Club at the World Athletics Championships 2023, Global Athletics Coaching Academy, Budapest, 23.08.2023*
- *Using high-density EMG to comprehensively describe muscle excitation – lecture and demonstration. University of Vienna, Austria, 8 November 2023*
- *Methods for assessing segment kinematics and EMG activity in sprinting: challenging, simple, or simplistic? Annual Congress of the European College of Sport Science, 2023. Paris, France.*
- *High-density EMG for comprehensive understanding of hamstrings activation in hamstring exercises and at different running speeds. Ningbo University, China, 15 September 2022*

- *Hamstring muscle function in high-speed running and in hamstring exercises. University of Saint-Etienne, France, 17.9.2021*
- *Hamstring function during high speed running and injury prevention: translating research into practice. Performance in Team Sports Conference: a Practical Approach – Bridging the gap between applied science and daily practice. Organised by Barça Innovation Hub, hosted by FC Barcelona, Spain. November 2020*
- *Hamstrings function in high-speed running. Innovative Hamstring Research seminar. Organised and hosted by Faculty of Sport Sciences, Université Cote D’Azur, Nice, France. 3 March 2020*

*Awards, titles, honours*

- *Paavo Komi Student Award, Paavo Komi Memorial Symposium, 2019*
- *Young Investigators Award of the European College of Sport Science, 2017*
- *Student grant from the Hungarian Republic, 2012–2013*
- *Excellence List of Semmelweis University, 2012*
- *Participation in the Talent Development Program named after Ödön Kerpel-Fronius, 2012– 2014*

*Language skills*

<i>language</i>	<i>speaking skills</i>	<i>writing skills</i>	<i>reading skills</i>	<i>do you do media appearance?</i>
<i>English</i>	<i>C2</i>	<i>C2</i>	<i>C2</i>	<i>Yes</i>

*Research, expert activities*

*Major subjects and topics taught*

- *Biomechanics*
- *Research Methods*

*Field and discipline*

- *Sport Science*
- *Biomechanics*

*Current research topics*

- *Optimising isokinetic dynamometry to assess force-velocity properties of hip extensors: validity and reliability*
- *Force-velocity characteristics, muscle volume, and muscle excitation of hip extensors in high-level sprint and jump athletes*
- *Neuromuscular and mechanical function of biceps femoris in relation to hamstring injuries*



- *Inter- and intra-muscular distribution of EMG activity in sprinting with and without resistance*
- *Further research in the field of sports biomechanics investigating muscle-tendon function (ultrasonography and muscle excitation (high-density EMG) as part of international collaborations*

#### *Former research topics*

- *Neuromuscular determinants of sprint performance and hamstring injuries*
- *Sprint kinematics in elite female football players in relation to hamstring injuries*
- *Regional distribution of EMG activity in hamstring muscles in various exercises and at different running speeds*

#### *Key research*

- *Validating field methods to estimate pelvic tilt in sprinting, and the association between prior hamstring injury and pelvic tilt in elite female football players. 2024, J Hum Kinetics*
- *Individual region- and muscle-specific hamstring activity at different running speeds. 2019 Med Sci Sports Exer*
- *Impact of hip flexion angle on unilateral and bilateral Nordic hamstring exercise torque and high-density electromyography activity 2019 JOSPT*
- *High-density electromyography activity in various hamstring exercises 2019 Scand Med Sci Sports*
- *Region-dependent hamstrings activity in Nordic hamstring exercise and stiff-leg deadlift defined with high-density electromyography 2018 Scand J Med Sci Sports*

#### *Membership of a scientific or professional organisation or body*

- *European College of Sport Science*
- *International Society of Biomechanics*
- *Hungarian Society of Biomechanics*

#### *Reviewer for scientific journals*

- *Medicine and Science in Sports and Exercise*
- *Scandinavian Journal of Medicine and Science in Sport*
- *European Journal of Sport Science*
- *Sports Biomechanics*
- *European Journal of Applied Physiology*
- *Translational Sports Medicine*

## *Publications*

- *[Publications in MTMT \(Catalogue of Hungarian Scientific Works\)](#)*



## Contacts

### University residence

- *Building: L3*
- *Room: F/11*
- *E-mail address: [hegyi.andras@tf.hu](mailto:hegyi.andras@tf.hu)*

### Other professional profiles

- [LinkedIn](#)
- [MTMT](#)
- [Google Scholar](#)
- [ORCID](#)
- [ResearchGate](#)
- [X](#)

