28.05.25

Qualifications of the individual for defining area of expertise

Name/ Birth year	**Ludwin Molina Arias** / 1994
Title (year degree obtained) / Prof. status	MSc. ME./BME. (2019) / assistant professor
Address[1]	AGH University of Krakow, 30, Mickiewicza Ave. 30-059 Krakow, Poland arias@agh.edu.pl
Area of expertise[2]	human motion analysis, human locomotion, modelling of dynamic systems, mechanical design and prototyping, biomechanical data analysis
Relevant (best) publications[3]	1. L. Molina Arias, J. Iwaniec and M. Iwaniec. *Modeling and Analysis of the Power Conditioning Circuit for an Electromagnetic Human Walking-Induced Energy Harvester*. Energies, vol. 14, 2021, https://doi.org/10.3390/en14123367. **IF: 3** 2. L. Molina Arias, M. Iwaniec, P. Pirowska, M. Smoleń and P. Augustyniak. *Head and voice-controlled human-machine interface system for transhumeral prosthesis*. Electronics, vol. 12, 2023, https://doi.org/10.3390/electronics12234770. **IF: 2,6** 3. M. Iwaniec, L. Molina Arias and J. Iwaniec. *Characterization of human gait by means of the trajectory of the instantaneous centers of rotation of lower limb segments in the sagittal plane*. IEEE Access, vol. 13, 2025, https://doi.org/10.1109/ACCESS.2025.3539452. **IF: 3,4** 4. L. Molina Arias, M. Iwaniec and J. Iwaniec. *Investigation into the Effect of Joint Clearance on the Dynamics of a Biomechanical Energy Harvesting System*. IEEE Access, vol. 11, 2023, https://doi.org/10.1109/ACCESS.2023.3254207. **IF: 3,4**
Publications statistics:	**Google Scholar:** Publications: 9, Citations: 13, H-index: 2 **Scopus:** Publications: 7, Citations: 11, H-index: 2 **Web of Science**: Publications: 6, Citations: 11, H-index: 2
Other[4]	*didactic responsibilities* 2022 - to date, assistant professor at AGH-UST, "Biomechanical Engineering" 2022 - to date, assistant professor at AGH-UST, "Biomedical Data Mining" 2022 - to date, assistant professor at AGH-UST, "Biomechanical Constructions" 2022 - to date, assistant professor at AGH-UST, "Computer Aided Design" 2024 - to date, assistant professor at AGH-UST, "Identification and Modelling of Biological Structures and Processes" 2024 - to date, assistant professor at AGH-UST, "Basic of Object Programing" 2024 - to date, assistant professor at AGH-UST, "Object Oriented Programing" 2022 - 2024, assistant professor at AGH-UST, "Design using the Finite Element Method" *major grants (as Principal Investigator)* Title: Study of the effect of mechanical joint clearance on the energy efficiency of an electromagnetic energy harvesting device. Period: 2022 - 2023 Centre: AGH University of Krakow (D4/2906) Funds: Excellence Initiative – AGH Research University (IDUB): 20000 PLN

[1] Organisation, street address, telephone, email, web page
[2] With keywords characterising your field(-s) of expertise
[3] Max. 10
[4] List didactic, major grants, conference responsibilities, professional recognitions, memberships, journals, patents, etc.