

Candidate supervisor's information summary form
maximum 2 pages – it should be a summary of most important achievements

Name and surname, degree, title: dr hab. inż. Arkadiusz Orłowski	
Academic discipline/disciplines	Information and Communication Technology
Professional development (degrees and titles) in chronological order	<p>Master of Science in Engineering (Fundamental Problems of Technology), Warsaw University of Technology, 1987</p> <p>Doctor of Physical Sciences, University of Warsaw, 1992</p> <p>Habilitated Doctor of Physical Sciences, Institute of Physics, Polish Academy of Sciences, 1999</p>
Most important publications/patents in the last 3 years (maximum 10)	<p>A. Orłowski, K. Gajowniczek, M. Bator, R. Budzyński, <i>Multimodal Utility Data for Appliance Recognition: A Case Study with Rule-Based Algorithms</i>, Sensors, 2026, vol. 26, nr 2, s.1-20. DOI:10.3390/s26020527.</p> <p>L. Chmielewski, A. Orłowski, M. Nieniewski, <i>Both Shares in Color Visual Cryptography Can Be Statistically Indistinguishable from Noise</i>, w: Modelling and Simulation'2025. The European Simulation and Modelling Conference ESM'2025. Bhonsale Satyajeet S., Polanska Monika E., Van Impe Jan F. M. (red.), 2025, Ghent, Belgium, EUROSIS-ETI, s.77-81, ISBN 9789492859389.</p> <p>J. Andrzejak, L. J. Chmielewski, J. Landmesser-Rusek, A. Orłowski, <i>The Impact of the Measure Used to Calculate the Distance between Exchange Rate Time Series on the Topological Structure of the Currency Network</i>, Entropy, 2024, vol. 26, nr 4, s. 1-17. DOI:10.3390/e2J.6040279.</p> <p>J. Kurek, K. Szymanowski, L. J. Chmielewski, A. Orłowski, <i>Advancing chipboard milling process monitoring through spectrogram-based time series analysis with Convolutional Neural Network using pretrained networks</i>, Machine Graphics & Vision, 2023, vol. 32, nr 2, s. 89-108. DOI:10.22630/MGV.2023.32.2.5.</p> <p>A. Jędrzejuk, N. Kuźma, A. Orłowski, R. Budzyński, Ch. Gehl, M. Serek, <i>Mechanical stimulation decreases auxin and gibberellic acid synthesis but does not affect auxin transport in axillary buds; it also stimulates peroxidase activity in <i>Petunia x atkinsiana</i></i>, Molecules, 2023, vol. 28, nr 6, s. 1-16. DOI:10.3390/molecules28062714.</p> <p>G. Gawdzik, A. Orłowski, <i>Liquid detection and instance segmentation based on Mask R-CNN in industrial environment</i>, Machine Graphics & Vision, 2023, vol. 32, nr 3/4, s. 193-203. DOI:10.22630/MGV.2023.32.3.10.</p> <p>L. J. Chmielewski, A. Orłowski, M. Nieniewski, <i>Error Analysis and Graphical Evidence of Randomness in Two Methods of Color Visual Cryptography</i>, w: Computer Vision and Graphics. Proceedings of the International Conference on Computer Vision and Graphics ICCVG 2022. Chmielewski Leszek, Orłowski Arkadiusz (red.), Lecture Notes in Networks and Systems, 2023, vol. 598, Cham, Springer, s. 237-267, ISBN 978-3-031-22025-8. DOI:10.1007/978-3-031-22025-8_17.</p>

<p>Experience in work with doctoral students (defended doctoral dissertations, initiated doctoral procedures) in chronological order</p>	<p>Defended doctoral dissertations:</p> <p>Piotr Łukasiewicz, <i>Changes in the Income Distribution of Households in Poland in the Years 1993–2003</i>, Warsaw University of Life Sciences (SGGW), 2008.</p> <p>Krzysztof Zmarzłowski, <i>Socio-Economic Determinants of Alcohol Consumption in Households</i>, Warsaw University of Life Sciences (SGGW), 2012.</p> <p>Ewa Jałowiecka, <i>Economic and Social Determinants of Cigarette Consumption in Poland</i>, Warsaw University of Life Sciences (SGGW), 2013.</p> <p>Marek Karwański, <i>A Data Integration Model for Expert Forecasting in IT Risk Management Systems</i>, West Pomeranian University of Technology, 2013.</p> <p>Initiated doctoral procedure:</p> <p>Grzegorz Wieczorek, <i>Computer Analysis of Microscopic Images Supporting the Diagnosis of Intraductal Breast Cancer</i>, Warsaw University of Technology, Faculty of Electrical Engineering. Date of initiation: 24 May 2017.</p>
<p>Achievements in the area of projects/grants (in the last 5 years)</p>	<p>INSPIRE: Inspire students entrepreneurial thinking to drive discovery, creativity and innovation. Numer projektu: 2020-1-PL01-KA203-082255.</p> <p>COVIMO: COVID-19 pandemic as an “opportunity window” for the transition towards new and more inclusive internationalisation through virtual mobility. Numer projektu: 2020-1-CZ01-KA226-HE-094453.</p>
<p>Subject area of the research project for which the candidate student is being recruited</p>	<p>Artificial intelligence (machine learning, deep learning), data mining and data analysis, image recognition and analysis, ICT security, robots and manipulators.</p>
<p><u>Contact details:</u> Institute E-mail address Telephone number</p>	<p>Institute of Information Technology arkadiusz_orlowski@sggw.edu.pl +22 5937200</p>