

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

Name and surname, degree, title: Prof Andrzej Śluzek (PhD, DSc)	
Discipline/ disciplines of science	Information and communication technology
Professional development (degrees and titles) in chronological order	<p>MEng, Warsaw University of Technology, Faculty of Technical Physics and Applied Mathematics.</p> <p>PhD (discipline – automatic control and informatics), Warsaw University of Technology, Faculty of Electronics.</p> <p>DSc/habilitacja (discipline – automatic control and robotics), Warsaw University of Technology, Faculty of Electronics.</p> <p>Professor (discipline – informatics), President of Poland</p>
Most important publications/patens over the last 3 years (maximum 10)	<ol style="list-style-type: none"> 1. Zitouni, M.S., Śluzek, A. (2022) <i>A Data Association Model for Analysis of Crowd Structure</i>, International Journal of Applied Mathematics and Computer Science, vol.32, no.1, 2022, pp.81-94. 2. S.Al Mazrouei, A.Śluzek <i>Simple Methodology for Eye Gaze Direction Estimation</i>. Proc. ACIIDS 2021, Springer Communications in Computer and Information Science, vol 1371, pp 241-253, April 2021 3. M.S.Zitouni, A.Sluzek, <i>Mid-level Features for Categorization of Social Interactions in Public Spaces</i>, 16th Int. Conf. on Control, Automation, Robotics and Vision (ICARCV 2020), pp 1150-1155, Dec. 2020. 4. M.S.Zitouni, A.Sluzek, <i>Video-surveillance Tools for Monitoring Social Responsibility under Covid-19 Restrictions</i>, Int. Conf. on Computer Vision and Graphics ICCVG 2020, Springer LNCS vol.12334, pp 227-239, Sept. 2020. 5. M.S.Zitouni, A.Sluzek, H.Bhaskar, <i>Towards understanding socio-cognitive behaviors of crowds from visual surveillance data</i>, Multimedia Tools and Applications, vol.79(3), pp 1781-1799, 2020. 6. E.N.Salahat, H.Saleh, A.Sluzek, M.Al-Qutayri, B.Mohammad, M.Ismail, <i>Architecture and Method for Maximally Stable Extremal Regions (MSERs)-based Exudates Detection in Fundus Images for Diabetic Retinopathy</i>, US Patent 10,456,027 B2, 29 Oct. 2019. 7. M.S.Zitouni, A.Sluzek, H.Bhaskar, <i>CNN-based Analysis of Crowd Structure using Automatically Annotated Training Data</i>, IEEE Int. Conf. on Advanced Video & Signal-based Surveillance AVSS 2019, Sept. 2019. 8. A.Aljasmī, A.Śluzek, <i>MSER-based Framework for Classification of Objects in Thermal Images</i>, 16th Int. Conf. on Informatics in Control, Automation and Robotics ICINCO 2019, July 2019. 9. M.S.Zitouni, A.Sluzek, H.Bhaskar, <i>Visual Analysis of Socio-Cognitive Crowd Behaviors for Surveillance: A Survey and Categorization of Trends and Methods</i>, Engineering Applications of Artificial Intelligence, vol.82, pp 294-312, June 2019. 10. Y.Liu, B.S.Lee, D.Rajan, A.Sluzek, M.Mckeown, <i>CamType: Assistive Text Entry Using Gaze with an Off-the-shelf Webcam</i>,

	Machine Vision & Applications, vol.30(3), pp 407-421, April 2019.
Experience in work with doctoral students (defended doctoral dissertations, doctoral programmes opened) in chronological order	<p>Advisor of 8 defended PhD dissertations (the most recent four mentioned below):</p> <p>M. Sami Zitouni: <i>Visual Analysis of Crowds for Socio-Cognitive Behaviors Understanding</i>. Khalifa University (Abu Dhabi, UAE), 2019.</p> <p>Sohailah Alyammahi: <i>Crowd Emotion Detection and Visualization from Stationary Video Feeds</i>. Khalifa University (Abu Dhabi, UAE), 2018.</p> <p>Elahe Farahzadeh: <i>Tools for Visual Scene Recognition using the Local Approach</i>. Nanyang Technological University (Singapore), 2014.</p> <p>Zhu Lin: <i>An Adaptive Edge-preserving Color Image Regularization Framework by Partial Differential Equations</i>. Nanyang Technological University (Singapore), 2012.</p> <p>External co-advisor of 1 confirmed PhD project:</p> <p>Xiaoxiong Zhang, <i>Persistent Person Identification and Tracking in Public Scenes</i>. Khalifa University (Abu Dhabi, UAE), 2021.</p>
Project/grants achievements (from the last 10 years)	<p>2018 – 2023: principal investigator of <i>Visual Multi-spectral Semantic Analysis and Prediction using Unmanned Vehicles</i>, project RII.2 of KUCARS research center grant (Khalifa University).</p> <p>2017 – 2019: external co-principal investigator of <i>Eyegaze estimation using deep appearance in natural environment</i>, grant AcRF 2017-T1-001-137, Ministry of Education (Singapore).</p> <p>2014 – 2016: co-principal investigator of KUIRF level 2 research grant (Khalifa University, UAE) <i>Compliant Exoskeleton: Shared Autonomous Mobile Robot Manipulation Using a Compliant Exoskeleton</i>.</p> <p>2013 - 2017: task leader in Semiconductor Research Center (USA/UAE) grant <i>Wireless Baseband: SoC for Biomedical and Surveillance Applications</i> (Task ID: 2440.010).</p> <p>2009 – 2012: co-principal investigator of AcRF (Ministry of Education, Singapore) research grant RG17/08 <i>Object co-space matching for the visually impaired</i>.</p>
Topic – research problem – for which the candidate supervisor seeks a doctoral student	<p>Intelligent algorithms for machine vision. Two areas are considered:</p> <ul style="list-style-type: none"> • Modeling and analysis of group behavior (of human,s animals, drones, etc.), • Machine learning of abstract concepts (e.g. simple arithmetic concepts) from visual training data.
<p><u>Contact details:</u></p> <p>Faulty/Institute</p> <p>E-mail address</p> <p>Tel.</p>	<p>Institute of Information Technology</p> <p>andrzej_sluzek@sggw.edu.pl</p> <p>+48 22 593 7281</p>