

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

Name and surname, degree, title: <b>Prof Andrzej Śluzek (PhD, DSc)</b>	
Discipline/ disciplines of science	Information and communication technology
Professional development (degrees and titles) in chronological order	<p><b>MEng</b>, Warsaw University of Technology, Faculty of Technical Physics and Applied Mathematics.</p> <p><b>PhD</b> (discipline – automatic control and informatics), Warsaw University of Technology, Faculty of Electronics.</p> <p><b>DSc/habilitacja</b> (discipline – automatic control and robotics), Warsaw University of Technology, Faculty of Electronics.</p> <p><b>Professor</b> (discipline – informatics), President of Poland</p>
Most important publications/patens over the last 3 years (maximum 10)	<ol style="list-style-type: none"> <li>1. 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</li> <li>2. 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.</li> <li>3. 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.</li> <li>4. 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.</li> <li>5. A.Obeid, A.Takiddeen, A.S.Sluzek. <i>ICSAC: Towards Outliers Rejection and Multi-model Identification in Keypoint-based Matching of Partial Near-duplicates</i>, 16th ACS/IEEE Int. Conf. on Comp. Syst. &amp; Appl. AICCSA 2019, Abu Dhabi, Nov. 2019.</li> <li>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.</li> <li>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 &amp; Signal-based Surveillance AVSS 2019, Sept. 2019.</li> <li>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.</li> <li>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.</li> <li>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 &amp; Applications, vol.30(3), pp 407-421, April 2019.</li> </ol>

<p>Experience in work with doctoral students (defended doctoral dissertations, doctoral programmes opened) in chronological order</p>	<p><b>Advisor of 8 defended PhD dissertations (the most recent four mentioned below):</b></p> <p>M. Sami Zitouni: <i>Visual Analysis of Crowds for Socio-Cognitive Behaviors Understanding</i>. Khalifa University (Abu Dhabi, UAE), 2019.  Sohailah Alyammahi: <i>Crowd Emotion Detection and Visualization from Stationary Video Feeds</i>. Khalifa University (Abu Dhabi, UAE), 2018.  Elahe Farahzadeh: <i>Tools for Visual Scene Recognition using the Local Approach</i>. Nanyang Technological University (Singapore), 2014.  Zhu Lin: <i>An Adaptive Edge-preserving Color Image Regularization Framework by Partial Differential Equations</i>. Nanyang Technological University (Singapore), 2012.</p> <p><b>External co-advisor of 2 confirmed PhD projects:</b></p> <p>Maya Alhemeiri: <i>Multi-spectral Segmentation, Semantic Analysis and Prediction of Visual Data</i>. Khalifa University (Abu Dhabi, UAE), 2020.  Xiaoxiong Zhang, <i>Persistent Person Identification and Tracking in Public Scenes</i>. Khalifa University (Abu Dhabi, UAE), 2021.</p>
<p>Project/grants achievements (from the last 10 years)</p>	<p><b>2018 – 2023:</b> 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).  <b>2017 – 2019:</b> 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).  <b>2014 – 2016:</b> 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>.  <b>2013 - 2017:</b> task leader in Semiconductor Research Center (USA/UAE) grant <i>Wireless Baseband: SoC for Biomedical and Surveillance Applications</i> (Task ID: 2440.010).  <b>2009 – 2012:</b> co-principal investigator of AcRF (Ministry of Education, Singapore) research grant RG17/08 <i>Object co-space matching for the visually impaired</i>.  <b>2008 – 2011:</b> principal investigator of A*Star ((National Science &amp; Technology Board, Singapore) research grant “<i>Framework for Visual Information Retrieval and Building Content-based Visual Search Engines</i>”.</p>
<p>Topic – research problem – for which the candidate supervisor seeks a doctoral student</p>	<p>Intelligent algorithms for machine vision, focusing on applications in surveillance systems and mobile robotics. Preliminarily, two areas are considered:</p> <ul style="list-style-type: none"> <li>• monitoring and analysis of group behavior of animals,</li> <li>• surveillance and predictive analysis of natural environments</li> </ul>
<p><u>Contact details:</u>  Faculty/Institute  E-mail address  Tel.</p>	<p>Institute of Information Technology  <a href="mailto:andrzej_sluzek@sggw.edu.pl">andrzej_sluzek@sggw.edu.pl</a>  +48 22 593 7281</p>