

CV (summary)

Name ANDRZEJ STEFAN SLUZEK

Status Polish citizen, permanent resident of Singapore, resident of UAE

Academic Qualifications

MEng (with distinction), **PhD** and **DSc** (in Polish “doktor habilitowany”) degrees awarded by Warsaw University of Technology (Poland)

Professor title (the highest academic distinction in Poland) awarded by the President of Poland.

Working Experience

Primary positions:

- **Warsaw University of Technology (Faculty of Electronics), Poland** – first as **Senior Research Assistant** and later as **Assistant Professor** (until 1992).
- **Nanyang Technological University (School of Computer Engineering), Singapore** – from 1992 to 1999 **Senior Lecturer** (at that time equivalent to Assistant Professor elsewhere) and **Associate Professor** after 1999.
- **Khalifa University (Department of Electrical and Computer Engineering), Abu Dhabi** – **Associate Professor** from 2011 until currently.

Concurrent, part-time and visiting positions:

- **Indian Institute of Science (School of Automation), Bangalore (India)** – **Visiting Fellow**, visiting position in 1987.
- **University of Birmingham (School of EEE), UK** – **Research Fellow**, visiting position in 1991-1992.
- **Nanyang Technological University (Robotics Research Centre), Singapore** – **Deputy Director**, concurrent position from 1994 to 2010.
- **National University of Singapore (Temasek Defence Institute), Singapore** – **DTSC Fellow**, a part-time position from 2001 to 2005. DTSC (Defence Technology and Systems Course) is a post-graduate program organized by National University of Singapore for the Ministry of Defence.
- **Ho Chi Minh City University of Technology (National Robotic Laboratory), Vietnam** - international scientific advisor, visiting position in 2004.

- **University of Social Sciences and Humanities (Institute of Social Informatics), Warsaw, Poland – Associate Professor**, concurrent position from 2005 to 2007.
- **Nicolaus Copernicus University (Faculty of Physics, Astronomy and Informatics Professor), Torun, Poland – Associate Professor**, concurrent honorary position from 2009 to 2011.

Teaching Experience

Courses taught:

Warsaw University of Technology

- Logic Circuits
- Image Processing and Recognition
- Computer Graphics

Indian Institute of Science

- Image Processing
- Advanced Topics in Computer Vision

Nanyang Technological University

- Computer Graphics
- Digital Circuits and Systems
- Robotics for Computer Engineering
- Transforms and Signals
- Logic Design

National University of Singapore (DTSC postgraduate program)

- Robotics

Khalifa University

- Introduction to Engineering
- Signals and Systems
- Digital Signal Processing
- Computer Engineering Junior Project

PhD supervision:

1. Witold Czajewski: *Automatic Weld-seam Recognition and Tracking using a Dedicated Robotic Vision System*. Degree awarded by Warsaw University of Technology in 2001 (research advisor).
2. Tan Ching Seong: *The Backscattering Phenomena on Range-Gated Imaging in Short-Range Turbid Media*. Degree awarded by Nanyang Technological University in 2005 (co-supervisor).
3. Md Saiful Islam: *Recognition and Localization of Objects in Relative Scale for Robotic Applications*. Degree awarded by Nanyang Technological University in 2007 (sole supervisor).
4. Paweł Piotr Czapski: *System-level Methods for Power and Energy Efficiency of FPGA-based Embedded Systems*. Degree awarded by Nanyang Technological University in 2011 (sole supervisor).
5. Zhu Lin: *An Adaptive Edge-preserving Color Image Regularization Framework by Partial Differential Equations*. Degree awarded by Nanyang Technological University in 2012 (sole supervisor).
6. Elahe Farahzadeh: *Tools for Visual Scene Recognition using the Local Approach*. Degree awarded by Nanyang Technological University in 2014 (co-supervisor).

Research Experience

Main research interests:

- Machine vision
- Visual information retrieval
- Intelligent robotics
- Signal processing
- Digital systems

Major project and grants:

- **1986 – 1989:** team member of *Graphical simulator for the off-line robot programming system* project, Warsaw University of Technology (Poland).
- **1989:** team member of *Controller for a slide-mounted robot IRp-6* industrial project financed by PIAP (Industrial Institute of Automatic Control and Measurement), Poland.
- **1990:** team member of *Modifications of IRp-6 robot controller - interfacing binary, analog and vision sensors* industrial project financed by PIAP (Industrial Institute of Automatic Control and Measurement), Poland.

- **1990 – 1992:** team member of OCE (Netherlands) project on development of new generation products (two awards for research achievements by the Rector of Warsaw University of Technology, 1993 & 1994) .
- **1991 – 1992:** team member of *Research-oriented Robot Controller* project, grant of KBN (National Scientific Research Committee, Poland).
- **1991 – 1992:** principal investigator of *3D vision systems for robotics* project, grant of KBN (National Scientific Research Committee, Poland).
- **1995 – 1996:** team member of NTU-PSA project on *Development of a High Performance Outdoor Autonomous Navigation System*, MOE/NSTB grant.
- **1995 – 1996:** co-principal investigator of the industrial research project (Philips Singapore) on robotics-based reliability tests for electric irons.
- **1997 – 2000:** principal investigator of AcRF research grant RGM48/97 *Autonomous cooperative robots*.
- **1997 – 2001:** principal investigator of AcRF research grant RG1/97 *Algorithms for Non-coordinated Robots Jointly Handling Objects*.
- **1998 – 2001:** co-principal investigator of industrial project (British Gas Asia-Pacific) on development of underwater robotics (laser-based vision systems)
- **2000 – 2003:** principal investigator of AcRF research grant RG3/99 *New Algorithms for Contour-based Processing and Interpretation of images*.
- **2002/2003:** IDA AEP grant for an exchange student to conduct research on development of a vision enhancing system for turbid waters.
- **2004 – 2007:** principal investigator of the industrial research project (ST Engineering) *FPGA-based development of dynamically reconfigurable nodes for distributed networks of multisensor devices*.
- **2005 – 2009:** *Distributed network of sensing devices*. PhD research project (successfully completed, though with a major change of the topic).
- **2005:** A*Star research travel funds for “*Tools and algorithms for situation-aware systems supporting human decisions in critical situation*” proposal under Singapore-Poland S&T co-operation, S\$2950
- **2007:** SERC research travel funds for “*Framework for Visual Information Retrieval and Building Content-based Visual Search Engines*” proposal under Singapore-Poland S&T co-operation.
- **2008 – 2011:** principal investigator of A*Star research grant “*Framework for Visual Information Retrieval and Building Content-based Visual Search Engines*” under Singapore-Poland S&T co-operation.
- **2009 – 2012:** co-principal investigator of AcRF research grant RG17/08 *Object co-space matching for the visually impaired*.

- **2013 - 2016:** task leader in SRC grant *Wireless Baseband: SoC for Biomedical and Surveillance Applications* (Task ID: 2440.010).
- **2014 – 2016:** co-principal investigator of KUIRF level 2 research grant *Compliant Exoskeleton: Shared Autonomous Mobile Robot Manipulation Using a Compliant Exoskeleton*.

Summary of publications:

(list of selected publications is provided at the end)

- Over **167 peer-reviewed** publications in journals and conference proceedings.
- **5** (co-)authored books and **11** book chapters.
- **2** U.S. Patents granted and **5** U.S. Patent Applications submitted (currently pending).
- **11** technical reports.
- Citations: **605/807** (Google Scholar/compilation of all available data).
- H-index: **12/15** (Google Scholar/compilation of all available data)

Service and Recognition

Professional membership:

- **Association for Image Processing**, Poland – founding member since 1991
- **Robotic Games Society**, Singapore – member since 1996 (board member 1997-1999)
- **Pattern Recognition and Machine Intelligence Association**, Singapore – member since 2003 (/board member 2004-2012).
- **International Association for Information and Management Sciences**, China – member since 2009 (board member 2010-2013).
- **IEEE**, UAE Section – member since 2013, senior member since 2015.

Review and Editorial Services:

- **Editorial boards:**
 - a) *Machine Graphics & Vision: International Journal* (publisher **IPI PAN**), editorial board member; from 1990 until currently.
 - b) *R²C Journal* (publisher **Robotics Research Centre**), co-editor from 1998 to 2008.

- c) *International Journal of Humanoid Robotics* (publisher **World Scientific**), editorial board member; from 2003 to 2009.
- d) *The Open Electrical and Electronic Engineering Journal* (publisher **Bentham Science Publishers**), editorial board member; from 2007 to currently.
- e) *International Journal of Biometrics* (publisher **Inderscience Publishers**), editorial board member; from 2009 to currently.
- Examiner of **14 PhD theses** and **1DSc thesis** (“habilitacja” in Polish) from 6 universities.
- Member of **program/organizing committee** of over **60** scientific conferences and workshops.
- Reviewer for **15 journals** from ISI list.

Awards:

- Award by **Rector of Warsaw University of Technology** for research achievements, 1986.
- Team award by **Rector of Warsaw University of Technology** for research achievements, 1993.
- Team award by **Rector of Warsaw University of Technology** for research achievements, 1994.
- Award by the President of Nanyang Technological University **10 Years Long Service Award**, 2003.
- **Tan Chin Tuan Fellowship**, Nanyang Technological University, 2005.
- Award by the President of Nanyang Technological University **15 Years Long Service Award**, 2009.
- **Zdzisław Pawlak Best Paper Award**, 5th International Symposium Advances in Artificial Intelligence and Applications, 2010.
- **Best Paper Award**, 9th International Conference on Information and Management Sciences (Urumchi, China), 2010.
- **Zdzisław Pawlak Best Paper Award**, 6th International Symposium Advances in Artificial Intelligence and Applications, 2011.

Publicity and service to community:

- **17** invited lectures and presentations.

- **1997 – 2001:** organising committee member and judge of Singapore Robotic Games.
- **Sept.-Oct. 1998:** *Engineering Talk Series* presentations for junior colleges (Singapore).
- **2002 - 2006:** judge at National Junior Robotics Competition (organised by Singapore Science Centre and A*STAR).

RECENT (2010-2015) PUBLICATIONS

- E.Farahzadeh, T.-J.Cham, A.Sluzek, [*Scene recognition by semantic visual words*](#), Signal, Image & Video Processing, vol. 9 (no.8), 2015, pp 1935-1944, doi: 10.1007/s11760-014-0687-7.
- A.Sluzek, [*Multi-distinctive MSER Features and Their Descriptors: A Low-Complexity Tool for Image Matching*](#), ACIVS 2015 Conf. (LNCS 9386, pp 672-680), Oct. 2015, doi 10.1007/978-3-319-25903-1_58.
- A.Sluzek, *Visual Retrieval of Known Objects using Supplementary Depth Data*, 13th Int. Conf. on Numerical Analysis & Applied Maths. ICNAAM 2015 (Workshop on Numerical and Symbolic Computation in Computer Vision), Sept. 2015 (in print).
- A.Sluzek, [*Visual Detection of Objects by Mobile Agents using CBVIR Techniques of Low Complexity*](#), Fed. Conf. on Comp. Science and Inf. Systems FedCSIS 2015 (1st Int. AIMaViG Workshop), Annals of Computer Science and Information Systems, vol. 5, pp 241-246, 2015, doi: 10.15439/2015F85.
- P.-Y.Kong, A.Sluzek, *Average Packet Delay Analysis for a Mobile User in a Two-Tier Heterogeneous Cellular Network*, [dx.doi.org/10.1109/JSYST.2015.2438096](https://doi.org/10.1109/JSYST.2015.2438096), IEEE Systems Journal, published online 12 June 2015.
- T.Alkhidir, A.Sluzek, M.Yapici, [*Simple Method for Adaptive Filtering of Motion Artifacts in E-Textile Wearable ECG Sensors*](#), 37th IEEE Cong. Engineering in Medicine and Biology EMBC'15, Milan, Aug. 2015.
- E.Salahat, H.Saleh, A.Sluzek, B.Mohammed, M.Al-Qutayri, M.Elnaggar, *Novel MSER-guided Street Extraction from Satellite Images*, IEEE Int. Geoscience and Remote Sensing Symposium IGARSS'2015, Milan, July 2015.
- E.Salahat, H.Saleh, M.S.Zitouni, A.S.Sluzek, B.Mohammad, M.Al-Qutayri, M.Elnaggar, *A Robust Histogram-Based Image Segmentation ASIC Design for System-on-Chip using 65nm Technology*, [dx.doi.org/10.1109/ICCSPA.2015.7081298](https://doi.org/10.1109/ICCSPA.2015.7081298), Int. Conf. on Communications, Signal Processing and their Applications ICCSPA'15, Sharyah (UAE), 2015.
- E.Salahat, H.Saleh, A.Sluzek, M.Al-Qutayri, B.Mohammed, M.Elnaggar, *A Novel MERS-CoV Biosurveillance System*, IEEE Int. Conf. on Consumer Electronics ICCE'15, Las Vegas, pp 320-323, 2015.

- A.Sluzek, [*Contextual Descriptors Improving Credibility of Keypoint Matching: Harris-Affine, Hessian-Affine and SIFT feasibility study*](#), 13th Int. Conf. on Control, Automation, Robotics and Vision ICARCV'2014, pp 117-122, Singapore, Dec. 2014, doi: 10.1109/ICARCV.2014.7064290.
- A.Sluzek, [*Extended Keypoint Description and the Corresponding Improvements in Image Retrieval*](#), LNCS vol. 9008, pp 698-709, (Selected Papers of ACCV 2014 Workshops, Singapore, Nov. 2014), doi: 10.1007/978-3-319-16628-5_50.
- A.Sluzek, R.Kozera, [*Improving Performances of BoW-based Image Retrieval by Using Contextual Keypoint Descriptor*](#), Int. Conf. Machine Vision and Machine Learning MVML'2014, Prague, 2014.
- A.Sluzek, [*Local Detection and Identification of Visual Data: Selected Techniques and Applications*](#), LAP, Saarbrucken, 2013, ISBN 978-3-659-47133-9.
- A.Sluzek, *Affine-invariant Description of Keypoint Bundles for Detecting Partial Near-duplicates in Random Images*, [dx.doi.org/10.1109/ICECS.2013.6815406](https://doi.org/10.1109/ICECS.2013.6815406), IEEE Int. Conf. on Electronics, Circuits, and Systems ICECS 2013, Abu Dhabi, 2013.
- E.Salahat, H.Saleh, M.Baker, A.Sluzek, M.Al-Qutayri, M.Ismail, *Automated Real-Time Video Surveillance Algorithms for SoC Implementation: A Survey*, [dx.doi.org/10.1109/ICECS.2013.6815354](https://doi.org/10.1109/ICECS.2013.6815354), IEEE Int. Conf. on Electronics, Circuits, and Systems ICECS 2013, Abu Dhabi, 2013.
- A.Sluzek, [*Inverted Indexing in Image Fragment Retrieval using Huge Keypoint-Based Vocabularies*](#), 11th Int. Workshop on Content-based Multimedia Indexing (CBMI), Veszprem (Hungary), 2013.
- A.Sluzek, *Keypoint-based Approaches to CBVIR for Web Browsing and Social Network*, BCS International Conference 2013, Abu Dhabi, 2013.
- A.Sluzek, [*A Fast Scheme for Detecting, Localizing and Grouping Similarly Looking Faces in Random Images*](#), Int. Journal of Computer and Information Technology, vol. 2(4), 2013.
- A.Sluzek, [*A Novel Approach to Retrieval of Similar Patterns in Biological Images*](#), LNCS vol.8034, (ISVC 2013, Part II, Rhetymnion, 2013).
- A.Sluzek, [*Partial Near-duplicate Detection in Random Images by a Combination of Detectors*](#), LNCS vol.8192, (ACIVS 2013, Poznan).
- A.Sluzek, M.Paradowski, [*Is Visual Similarity Sufficient for Semantic Object Recognition?*](#), 7th Int. Symp. Advances in Artificial Intelligence and Applications AAIA'12, Wroclaw (Poland), 2012.
- A.Sluzek, M.Paradowski, [*Towards Vision-Based Understanding of Unknown Environments*](#), in: Human-computer Systems Interactions: Background and Application 2, Advances in Intelligent and Soft Computing, Vol.98/2012 (ed. Z.S. Hippe et al.), Springer Verlag, 2012.
- A.Sluzek, M.Paradowski, [*Visual Similarity Issues in Face Recognition*](#), International Journal of Biometrics, vol 4(1), 2012.
- A.Sluzek, M.Paradowski, [*Detection of Near-duplicate Patches in Random Images using Keypoint-based Features*](#), LNCS vol.7517, (ACIVS 2012, Brno).
- A.Sluzek, [*Large Vocabularies for Keypoint-Based Representation and Matching of Image Patches*](#), LNCS vol.7583, Oct. 2012, pp 229-238 (ECCV Workshops and Tutorials 2012, Florence).

- A.Sluzek, M. Paradowski, D. Yang, [Reinforcement of Keypoint Matching by Co-segmentation in Object Retrieval: Face Recognition Case Study](#), LNCS vol.7667, (ICONIP 2012, Doha).
- A.Sluzek, [A framework for junction detection using local Hough transforms](#), Int. Journal of Computer and Information Technology, vol. 1(2), 2012.
- M.Paradowski, A.Sluzek, [Local keypoints and global affine geometry: triangles and ellipses for image fragment matching](#), in: Innovations in Intelligent Image Analysis (eds. H.Kwasnicka, L.Jain), Springer Verlag, Vol. SCI339, 2011.
- P.Czapski, A.Sluzek, [System-level approaches to power efficiency in FPGA-based designs \(data reduction algorithms case study\)](#), Journal of Automation, Mobile Robotics & Intelligent Systems, vol. 5(2), 2011.
- H.Kwasnicka, M.Paradowski, M.Stanek, M.Spytkowski, A.Sluzek, [Image Similarities on the Basis of Visual Content – An Attempt to Bridge the Semantic Gap](#), LNAI vol. 6591, (eds N.T.Nguyen, C.G.Kim, A.Janiak), 2011.
- Y.H.Chua, C.S.Tan, Zh.H.Lee, T.Y.Chai, G. Seet, A.Sluzek, [Using MTF with fixed-zoning method for automated gated imaging system in turbid medium](#), Indian Journal of Geomarine Sciences, vol 40(2), 2011.
- Sluzek, M. Paradowski, [Assessment of Visibility Quality in Adverse Weather and Illumination Conditions](#), LNCS vol.6835, (DAGM 2011).
- M.Paradowski, A.Sluzek, [A Semi-local Topological Constraint for Efficient Detection of Near-duplicate Image Fragments](#), 7th Int. Conf. on Computer Recognition Systems (CORES 2011), May 2011, Wroclaw, Advances in Intelligent and Soft Computing, Vol. 95/2011, 2011.
- M.Paradowski, A.Sluzek, [Automatic Image Annotation by Image Fragment Matching](#), 6th Int. Symp. Advances in Artificial Intelligence and Applications (AAIA'11), Szczecin, 2011 (**best paper award**).
- Z.H.Lee, Y.H.Chua, C.S.Tan, X.Wang, C.W.Teoh, G.Seet, A.Sluzek, [Post-processing of Gated Images By Using Seed Growing Fusion Approach](#), [dx.doi.org/10.1109/STUDENT.2011.6089320](https://doi.org/10.1109/STUDENT.2011.6089320), 2011 IEEE Conf. on Sustainable Utilization and Development in Engineering and Technology (2011 IEEE STUDENT), Cyberjaya, 2011.
- A.Sluzek, M.Paradowski, [Improved Credibility of Keypoint Matching by Using Co-affine Pairs of Ellipses](#), in: Image Processing and Communications Challenges 3 (Advances in Intelligent and Soft Computing, 2011, Vol.102/2011), Bydgoszcz, 2011.
- D.Yang, A.Sluzek, [A Low-dimensional Local Descriptor Incorporating TPS Warping for Image Matching](#), Image and Vision Computing, Vol. 28(8), 2010.
- A.Sluzek, [Novel Machine Vision Methods for Outdoor and Built Environments](#), Automation in Construction, vol.19, 2010.
- C.S.Tan, G.Seet, A.Sluzek, X.Wang, C.T.Yuen, C.Y.Fam, H.Y.Wong, [Scattering noise estimation of range-gated imaging system in turbid condition](#), Optics Express, vol.18(20), 2010.
- A.Sluzek, D.Yang, M.Paradowski, [Beyond Keypoints: Novel Techniques for Content-based Image Matching and Retrieval](#), LNCS, Vol. 6113(part I), 2010.
- M.Paradowski, A.Sluzek, [Keypoint-based Detection of Near-duplicate Image Fragments using Image Geometry and Topology](#), LNCS, vol. 6375(part II), 2010.

- A.Sluzek, M.Paradowski, *Real-Time Retrieval of Near-duplicate Fragments in Images and Video-clips*, LNCS vol. 6474 (ACIVS 2010, Sydney), 2010.
- M.Paradowski, A.Sluzek, *Detection of Image Fragments Related by Affine Transforms: Matching Triangles and Ellipses*, [dx.doi.org/10.1109/ICISA.2010.5480532](https://doi.org/10.1109/ICISA.2010.5480532), Int. Conf. on Information Science and Applications (ICISA 2010), Seoul, 2010.
- M.S.Islam, A.Sluzek, *An Evaluation of Local Image Features for Object Class Recognition*, Int. Conf. on Computer Vision Theory & Applications VISAPP 2010, Angers (France), 2010.
- A.Sluzek, M.Paradowski, *A Vision-based Technique for Assisting Visually Impaired People and Autonomous Agents*, [dx.doi.org/10.1109/HSI.2010.5514498](https://doi.org/10.1109/HSI.2010.5514498), 3rd Int. Conf. on Human System Interaction HSI'10, Rzeszow (Poland), 2010.
- Y.H.Chua, C.S.Tan, X.Wang, C.W.Teoh, G.Seet, A.Sluzek, *Using MTF for automated gated imaging system in turbid medium*, [dx.doi.org/10.1109/RAMECH.2010.5513159](https://doi.org/10.1109/RAMECH.2010.5513159), IEEE Int. Conf. on Cybernetics/Intelligent Systems (CIS-2010) and Robotics, Automation & Mechatronics (RAM-2010), Singapore, 2010.
- A.Sluzek, M.Paradowski, D.Yang, M.S.Islam, E.Farahzadeh, *Novel Results in Detection, Analysis and Classification of Information in Visual Data*, 9th Int. Conf. on Information and Management Sciences (IMS 2010), 2010, Urumchi (China) https://www.researchgate.net/profile/Elahe_Farahzadeh/publication/276355091_Novel_Results_in_Detection_Analysis_and_Classification_of_Information_in_Visual_Data/links/5557f22008ae980ca60e2d86.pdf (**best paper award**).
- B.S.Khadem, E.Farahzadeh, D.Rajan, A.Sluzek, *Embedding Visual Words into Concept Space for Action and Scene Recognition*, British Machine Vision Conference BMVC 2010, Aberystwyth (UK), 2010.
- D.Yang, A.Sluzek, *Performance Evaluation of Low-dimensional SIFTs*, [dx.doi.org/10.1109/ICIP.2010.5654295](https://doi.org/10.1109/ICIP.2010.5654295), Int. Conf. on Image Processing ICIP 2010, Hongkong, 2010.
- M.Paradowski, A.Sluzek, *Automatic Visual Object Formation using Image Fragment Matching*, 5th Int. Symp. Advances in Artificial Intelligence and Applications (AAIA'10), Wisla (Poland), 2010 (**best paper award**).
- M.S.Islam, A.Sluzek, *Hierarchical Object Categorization with Automatic Feature Selection*, 5th Int. Symp. Advances in Artificial Intelligence and Applications (AAIA'10), Wisla (Poland), 2010.
- Y.H.Chua, C.S.Tan, C.W.Teoh, G.Seet, A.Sluzek, *Using MTF with fixed-zoning method for automated gated imaging system in turbid medium*, 3rd Int. Conf. on Underwater System Technology: Theory and Applications (USYS 2010), Cyberjaya (Malaysia), 2010.
- A.Sluzek, M.Paradowski, D. Yang, *Detection and Segmentation of Near-duplicate Fragments in Random Images*, [dx.doi.org/10.1109/ICARCV.2010.5707294](https://doi.org/10.1109/ICARCV.2010.5707294), 11th Int. Conf. on Control, Automation, Robotics and Vision ICARCV 2010, Singapore, 2010.
- H.Kwasnicka, M.Paradowski, M.Stanek, M.Spytkowski, A.Sluzek, *Intelligent approaches to searching similar images on the basis of visual content*, 10th Int. Conf. on Information ICI'10, Gamasa(Egypt), 2010.

SELECTED OLDER PUBLICATIONS

- D. Yang and A. Sluzek, *Aligned matching: an efficient image matching technique*, [dx.doi.org/10.1109/ICIP.2009.5414138](https://doi.org/10.1109/ICIP.2009.5414138), Proc. IEEE Conf. Image Proc ICIP 2009, Cairo, **2009**.
- A.Sluzek, *Building Local Features from Pattern-based Approximations of Patches: Discussion on Moments and Hough Transform*, EURASIP Journal on Image and Video Processing, Vol. 2009 (2009), Article ID 959536, **2009**
- M.S.Islam, A.Sluzek, *Relative scale method to locate an object in cluttered environment*, Image and Vision Computing, vol. 26, no.2, **2008**.
- A.Sluzek, M.S.Islam, *New Types of Keypoints for Detecting Known Objects in Visual Search Tasks*. In: Vision Systems, Applications (eds G.Obinata, A.Dutta), I-Tech, Vienna, ISBN 978-3-902613-01-1, pp 423-442, **2007**.
- G.Deepak, R.Mahesh, A.Sluzek, *Adaptable Area-Efficient Parallel Architecture for Grey and Color Image Convolvers*, [dx.doi.org/10.1109/ISSCS.2007.4292788](https://doi.org/10.1109/ISSCS.2007.4292788), 8th IEEE Int. Symposium on Signals, Circuits and Systems (ISSCS 2007), Iasy (Romania), **2007**.
- G.Deepak, P.K.Meher, A.Sluzek, *Performance Characteristics of Parallel and Pipelined Implementation of FIR Filters in FPGA Platform*, [dx.doi.org/10.1109/ISSCS.2007.4292697](https://doi.org/10.1109/ISSCS.2007.4292697), 8th IEEE Int. Symposium on Signals, Circuits and Systems (ISSCS 2007), Iasy (Romania), **2007**.
- A.Sluzek, *An Improved Detection Algorithm for Local Features in Gray-level Images*, in: Computer Vision and Graphics (Kluwer series on "Computational Imaging and Vision", vol.32), eds. K.Wojciechowski et al., Springer, **2006**.
- G.Deepak, R.Mahesh, A.Sluzek, *Design of an Area-Efficient Multiplierless Processing Element for Fast Two Dimensional Image Convolution*, [dx.doi.org/10.1109/ICECS.2006.379826](https://doi.org/10.1109/ICECS.2006.379826), 13th IEEE Int. Conf. on Electronics, Circuits and Systems (ICECS 2006), Nice (France), **2006**.
- A.Sluzek, *Corner-based Keypoints for Scale-invariant Detection of Partially Visible Objects*, Machine Graphics and Vision, vol. 15, no.3/4, **2006**.
- A.Sluzek, *On Moment-based Local Operators for Detecting Image Patterns*, Image and Vision Computing, vol. 23, no.3, **2005**.
- C.S.Tan, G.Seet, A.Sluzek, D.M.He, *A Novel Application of Range Gated Underwater LIDAR Imaging System (ULIS) in Near Target Turbid Medium*, Optics and Lasers in Engineering, vol. 43, no. 9, **2005**.
- C.S.Tan, A.Sluzek, G.Seet, *Model of Gated Imaging in Turbid Medium*, Optical Engineering, vol. 44, no. 11, **2005**.
- L.Zhu, A.Sluzek, M.S.Islam, *An Adaptive Edge Preserving Variational Method for Color Image Regularization*, VCIP 2005 Conf. On Visual Communications and Image Proc., Beijing, SPIE Proc. Vol. 5960, **2005**.
- A.Sluzek, H.Fujishima, C.S.Tan, *Real-Time Digital Control in Gated Imaging*, 5th EURASIP Conf. on Speech and Image Proc., Multimedia Comm. & Services, Smolenice (Slovakia), **2005**.
- M.S.Islam, A.Sluzek, L.Zhu, M.J.Er, *Towards Invariant Interest Point Detection in an Object*, WSCG'2005, 13th Int. Conf. in Central Europe on Comp.Graphic, Visualization and Comp.Vision. Plzen, **2005**.
- M.S.Islam, A.Sluzek, L.Zhu, *Detecting and Matching Interest Points in Relative Scale*, Machine Graphics & Vision, vol. 14, no. 3, **2005**.

- G.Seet, A.Sluzek, C.S.Tan, [*Quantitative Image Quality Evaluations of Enhanced Images in Turbid Water Medium*](#), 3rd Int. Conf. on Experimental Mechanics ICEM, Proc. SPIE Vol. 5852, **2005**.
- C.S.Tan, G.L.Seet, A.Sluzek, [*Practical Quantitative Assessment of Imaging System in Turbid Water Using a Modified Fidelity Index*](#), SPIE's 17th Annual AeroSense Symposium 2003, Orlando, **2003**.
- A.Sluzek, *Hardware Supported Technique for Detecting Multi-Corners in Digital Contours*, [dx.doi.org/10.1109/CAMP.2000.875991](https://doi.org/10.1109/CAMP.2000.875991), 5th IEEE Int. Workshop on Computer Architectures for Machine Perception CAMP2000, Padova (Italy), **2000**.
- W.Czajewski, A.Sluzek, *Development of a Laser-Based Vision System for an Underwater Vehicle*, [dx.doi.org/10.1109/ISIE.1999.801779](https://doi.org/10.1109/ISIE.1999.801779), ISIE'99 IEEE Int.Symposium on Industrial Electronics, Bled (Slovenia), **1999**.
- A.Sluzek, *Multi-level Contour Segmentation Using Multiple Segmentation Primitives*. [dx.doi.org/10.1109/ICPR.1998.711252](https://doi.org/10.1109/ICPR.1998.711252), ICPR'98 14th Int.Conf. on Pattern Recognition, Brisbane (Australia), **1998**.
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