

## CURRICULUM VITAE

### PERSONAL DETAILS

Name : Prof. Sergio A. VELASTIN (BSc., MSc., PhD., CEng., SMIEEE, FIET)  
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Citations : <http://velastin.org/savcv/citations.bib>  
This CV : <http://velastin.org/savcv/cvVelastin.pdf>

### MAIN HIGHLIGHTS

- Fellow of the Institution of Engineering and Technology (FIET), UK and Senior Member IEEE
- UK Chartered Engineer
- Full Professor (UK) of Applied Computer Vision
- Visiting Professor at Queen Mary University of London
- Creator of the International Conference on Pattern Recognition Systems (ICPRS)
- Past president and now Director for International Relations of the Chilean Association of Pattern Recognition
- International experience in Higher Education Institutions
- Marie Curie Research Professor (2015-2018)
- Member of International Advisory Boards at two leading universities in Malaysia: UM and UKM, QS-ranked 167 and 279 respectively.
- From 2000-2011, brought in €3.2M in external funding to Kingston University.
- Created two MSc courses (Kingston University) and helped marketing them for international students (India, South East Asia, Europe)
- Directed and managed an internationally-known research team (Digital Imaging Research Centre, Kingston University) of about 45 people (13 academic staff and 32 PhD students).
- Co-founder (2001) of Ipsotek Ltd (<http://www.ipsotek.com>), a well-known SME of video analytics systems, currently employing 45+ people. Winner of "CCTV System of the Year" IFSEC 2012 award for its "Tag and Track multi camera tracking system", done in conjunction with Kingston University and British Aerospace. Created the company and brought in a major project with a European Metro (€250K, 2003) and then a first round of private investment (€1M, 2005).
- Associate Editor of the IET's Computer Vision research journal.
- Technical coordinator of a major international project (EU-PRISMATICA, 2000-2003)
- Google Scholar: 6340 total citations (3357 since 2013), 746 citations for 2005 paper in IET Vision, Image and Sign. Proc. Journal, and h-index of 35<sup>1</sup>
- Conference Chair/Technical Chair (IDSS, ICDP, VIE, LACNEM, IVC, IPR, CCPR, ICPRS)
- Regular reviewer for CVIU, IET Electronic Letters; IET Computer Vision, IET Image Processing, Int J. of Robotics and Control, Machine Vision Applications, IEEE Trans Image Processing, EURASIP J Image and Video Processing, ICV, IEEE Trans. Intelligent Transport Systems, Int. J. Imaging Systems and Technology, Pattern Recognition and major conferences (CVPR, IVIC, ICPR, ECCV, etc.)
- Past elected member of the Board of Governors of the IEEE's Intelligent Transportation Systems Society.
- Creator of ViHaVi and MuHAVi human action recognition datasets requested for use by 270+ researchers worldwide.
- Past Chair IET's Vision and Imaging Professional Network

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<sup>1</sup> Source: Google Scholar (29.05.18)

- Creator and organiser of IET's International Conference on Imaging for Crime Detection and Prevention (ICDP), 7<sup>th</sup> ICDP held in November 2016 in Madrid, <http://www.icdp-conf.org>
- Chair of International Conference on Pattern Recognition Systems, <http://www.icprs.org> 2016
- Keynote speaker (ISVC, LACNEM, IVC, PANAM, IEEE Fusion)
- Guest Editor Special Issue Journal of Journal of Electronic Imaging (SPIE), 2015
- In addition to working experience in academia and as an entrepreneur, I have experience in industry as systems engineer and software manager.

## UNIVERSITY EDUCATION

- 1979..1982: PhD: Digital Processes Group, Department of Electrical Engineering and Electronics, UMIST. Thesis: "Software Development for a Vision System". Main application areas: pedestrian tracking, vehicular traffic, industrial inspection. Degree recognised in Chile by University of Chile ("Doctor en Ciencias con mención en Computación", 2013)
- 1978..1979: MSc. (Research): Digital Processes Group, Department of Electrical Engineering and Electronics, UMIST. Thesis: "Development of Software Techniques for the Analysis of Pedestrian Flow in Interior Circulation Areas".
- 1975..1978: BSc. in Electronics, Department of Electrical Engineering and Electronics, UMIST. Qualifications: Honours, First Class.

## MAIN PROFESSIONAL AND ACADEMIC ACTIVITIES:

- 2015..: UC3M-Conex Marie Curie Research Professor (project CLOSEVU: Close View Understanding, co-funded by the European Union's Marie Curie Programme and Banco Santander), Department of Computer Science, Universidad Carlos III de Madrid, Spain
- 2014..2014: Senior Research Fellow, Queen Mary University of London (working on EU Projects LASIE and REVERIE), 6 months
- 2013..2015: Research Full Professor (now Visiting Professor), Department of Informatic Engineering, Universidad de Santiago de Chile. Main duties: supervision of research students, procurement of externally-funded research projects, teaching Computer Vision module for Informatic Engineering degree (last year).
- 2010..2012: Professor of Applied Computer Vision, Kingston University (now Visiting Professor). UK
- 2007..2012: Director, Digital Imaging Research Centre, School of Computing and Information Systems, Kingston University
- 2001..2014: Co-founder of Ipsotek Ltd., CEO and Director of Research.
- 2001..2009: Reader (Associate Professor), Digital Imaging Research Centre, Faculty of Computing, Information Systems and Mathematics, Kingston University.

Main teaching modules: Java Programming, Computer Vision, Introduction to Computing (ICT), assist in the coordination of final year projects. Conception and Programme leader of MSc in Embedded Systems and MSc in Computer Vision and Image Analysis. Module leader for Digital Signal Processing and Digital Signal Processors.

Main administrative duties: Course Director: MSc in Embedded Systems and MSc in Computer Vision (also conceived these two courses), member of University Research Ethics Committees, Chair of Faculty's Research Ethics Committee, member of Faculty Research Committee, Member of inter-faculty Electronics Developments Steering Committee, Member of the Faculty of Engineering's Mechatronics Industrial Advisory Group, fully revised and implemented new guidelines for MSc projects.

Research Student Supervision (PhD): Co-Supervisor for "Video-based Human Action Recognition using Deep Learning", (Huy-Hieu Pham at Cerema and Paul Sabatier University,

France), Director of Studies for: "Tracking people in crowds across multiple cameras" (Damien Simmonet, completed), "Identification of unusual behaviour in crowds" (Beibei Zhan, completed), "Distributed Architecture for Visual Surveillance Systems" (Valera, Completed), "Multi camera tracking" (F Yin, completed), "Optimisation of visual surveillance algorithms using Digital Signal Processors" (Virk), "Visual surveillance for road traffic monitoring" (Buch, completed), "Tag and Track in multi-camera networks" (Colombo, completed).

1990..2001: Lecturer, Department of Electronic Engineering (Division of Engineering), King's College London. Senior Lecturer from September 1999.

Main teaching modules: Computer Programming, Software Systems, Product Development, Linear Circuits, Signals and Signal Processing, MATLAB labs, Computer Engineering II.

Main administrative duties: MSc. Organiser (Research stream: Computer Vision Engineering), Team Leader of the "Vision and Robotics Laboratory", Divisional IT Manager (350 desktops, 40+ Unix workstations, 2 Novell Servers, 11 Unix servers, 1 NT server, 600 users), Curricular design for subject area "Software Systems", Coordinator of an ERASMUS/Socrates exchange programme, Organiser of final year projects, Programme Leader for MEng/BEng degree "Computer Systems and Electronics" (CSE).

Research supervision (PhD), all completed: "Mahalanobis Distance Hough Transform with Extended Kalman Filtering", "Transputer-based computer architectures for cooperating robots", "Crowd monitoring using image processing", "Towards verification of MASCOT designs using Petri Nets", "Coloured Petri Nets for software design verification", "Modelling and Verification of MASCOT designs using LOTOS", "Real-time motion estimation for complex image scenes", "Pedestrian detection, tracking and behaviour classification".

1989..1990: Software Manager, Rosand Precision Ltd. Responsible for real-time software/firmware design and approval of final issues. Direct involvement with C (Windows, MS-DOS, Z80), Assemblers (Intel xx86, Z80), Pascal (MS-DOS), Source Code Control, PC hardware, worldwide customer support, software documentation, supervision of junior staff and contractors.

1988..1989: Senior Systems Engineer, Terrafix Ltd. (Land Navigation Systems). Basic research (Kalman filters), system design and implementation of dedicated Land Navigation System (vehicle location). Then, promoted to Software Manager (responsible for all the company's software products).

1986..1987: Senior Scientific Officer, Clinical Psychology Department, North Staffordshire Health Authority. Re-design of dedicated microprocessor system/PROLOG software for automated administration of standard intelligence tests.

1985..1986: Professor, Institute of Informatics, Universidad Austral de Chile (UACH), Valdivia, Chile.

Main teaching modules: Linear Systems Theory, Control systems.

Main administrative duties: Head of Engineering Group, Head of the Institute (15 academic staff), curricular design, member of university's Informatics Committee (short and long-term computing strategy for the university).

1982..1984: Research Fellow in Robotics, Department of Electronic and Electrical Engineering, University of Surrey. SERC-sponsored project: "The Programming and Control of Adaptive Industrial Robots". Design and Development of dedicated digital controller (hardware and software) for the HAL-90 Spraying Robot. Mathematical modelling (through symbolic programming) of robot kinematics. Vision sensors. Numerical simulation, 3-D graphics.

## RESEARCH GRANTS

1. CLOSEVU: Close View Understanding, co-funded by the **European Union's Marie Curie Programme** and Banco Santander), Department of Computer Science, Universidad Carlos III de Madrid, Spain, from Sept. 2015, duration 3 years.
2. LASIE: Large Scale Information Exploitation of Forensic Data , **European Commission** Framework 7 Security Programme, Duration 42 months, (17 partners), 42 months from May 2014, helped with conception and proposal, linked to Queen Mary University of London (€800K). Now advisor.
3. Chair of Excellence, Departamento de Informática, Universidad Carlos III de Madrid, Spain, funded by **Banco Santander**, Duration 6 months, started Feb. 2014, €60,000
4. OBSERVE (On-Board Surveillance for Effective Response in Vehicle Environments), funded by the **Chilean National Science and Technology Council** (Conicyt), Fondecyt Programme grant no. 1140209, Duration 3 years, started March 2014, in collaboration with University College London, INRIA, TecnoAccion, Chilean Ministry of Transport and Kingston University, €90,000
5. "Autonomous Pedestrian Detection", **Chilean Research Council**, P. Zegers (PI, Universidad de Los Andes), S.A. Velastin (Kingston University, International Collaborator), Duration 36 months, started March 2012.
6. ADDPRIV, STREP Project funded by the **European Commission** Framework 7, Duration 36 months, started December 2010 €400,000
7. SieVe, "Surveillance Video Data Mining", **EPSRC** (UK Research Council), Industrial Case with BAe Systems Ltd., J. Orwell and S.A. Velastin, Value €100,000, Duration 42 months (2010)
8. HAR, "Human Action Recognition", Industry, Contracted Research with Industrial Collaborator (**Bosch Research Labs**), S.A. Velastin, J.-C. Nebel and F Martinez, Value €135,000, Duration 6 months (2010)
9. PROTECTRAIL (Protection of European Railways from Security and Safety Threats), Integrated Project funded by the **European Commission** Framework 7 (€13M total, €100,000 for KU). 25 partners including major railway operators and manufacturers. Duration 48 months, (2010)
10. "Evaluation of Appearance-based Pedestrian Detection", Industry, Contracted Research with **LG Electronics**, D. Makris, S.A. Velastin, T. Ellis, Junaed Rahman, D Simonnet and F. Yin, Duration 4 months (2010), €100,000
11. "Tag and Track for Security and Forensics", funded by **British Aerospace/Ipsotek Ltd**, S.A. Velastin and J. Orwell, (€384,000 total, €120,000 for KU), Duration 12 months, (2009)
12. "Tracking individuals in crowds with a mixed network of static and PTZ (Pan-Tilt-Zoom) cameras", PhD Studentship funded jointly by **Faculty of CISM and Roke Manor Research (Siemens)**, S.A. Velastin, P. Remagnino and J. Orwell, Duration 36 months, (€78,000, 2009)
13. "A DVR for VCA (Video Contents Analysis)", Industry, Contracted Research with The **SYAC Group** (Italy), S.A. Velastin and T. Ellis, Value €14,000, Duration 18 months (2009)
14. FARM, "Framework for the Analysis of Rich Media", DBERR, Knowledge Transfer Partnership with **Pharos Ltd**, J. Orwell and S.A. Velastin, Value €120,000, Duration 24 months (2009)
15. "Experimental Study of Vehicle Passenger Interactions at Public Transport Stations", **Chilean Research Council** project No. 1080381, Rodrigo Fernández (PI, Universidad de Los Andes, Chile), S.A. Velastin (Kingston University, International Collaborator), Duration 36 months, started March 2008
16. "Classification of Vehicles and their Behaviour for Urban Traffic Scenes", Industry, PhD Sponsorship with **Transport for London**, S.A. Velastin and J. Orwell, €78,000, Duration 36 months (2007)
17. "Optimisation of Computer Vision Algorithms using Digital Signal Processors", Industry, PhD Sponsorship with **Ipsotek Ltd**, S.A. Velastin and W. Huang, Value €78,000, Duration 36 months (2007)
18. BARCO, "Robust wide-area multi-camera tracking of people and vehicles to improve CCTV visualisation", Industry, Contracted Research with **Barco View** (Belgium), S.A. Velastin and D. Makris, €78,000, Duration 36 months (2007)
19. CARETAKER: "Content Analysis and REtrieval Technologies to Apply Knowledge Extraction to massive Recordings", **EU-Framework 6** (IST Programme), S.A. Velastin and J. Orwell, Mar 2006-Sept 2008, €340,000. Partners included Thales Communications, INRIA, Multitel, Rome Public Transport.
20. "Visual Modelling of People Behaviours and Interactions for Professional Skills Training", **European Office of Aerospace Research & Development** (US Air Force Office of Scientific Research), P. Remagnino (PI), S.A. Velastin and S. Rush, \$45,000, January 2006 - December 2007
21. REASON: "Robust Methods for Monitoring and Understanding People in Public Spaces", **EPSRC**, Crime Prevention and Detection Technologies, November 2005-Jan 2009, €192,000 for KU (in

- collaboration with University College London (Centre for Transport Studies) and University of Reading (Computational Vision Research Group). Collaborators: Home Office, Thales Research UK, Crime Concern, Computer Recognition Systems Ltd.
22. "A UK-Japan Partnership on Ambient Intelligence", **EPSRC** Travel grant (Japan), €24,000, P. Remagnino (PI), S.A. Velastin and N. Monekosso, May 2005- April 2007
  23. "Modelling Crowd Dynamics", Industry, PhD Sponsorship with BT, S.A. Velastin and P. Remagnino, €20,000, Duration 24 months (2005)
  24. SERVE: "Surveillance, Evaluation, Research, Validation, and Exploitation", **EPSRC** Network, Crime Prevention and Detection Technologies Programme, S.A. Velastin (for Kingston University), T. Troscianko (Bristol) et al, £60,000 Duration 36 months (from Jan 2004).
  25. "Documentation, enhancements and testing of a MIPSAs System", **Ipsotek Ltd.**, Nov 03 - Jan 04, €11,000.
  26. "Getting the best use of CCTV in the Railways", **Rail Safety and Standards Board**, Jan-03 to Aug-03, in collaboration with Mott MacDonald Ltd. and Ipsotek Ltd., €116,000
  27. COHERENT: "COMputational HETeRogeneously timed NeTworks", **EPSRC**, July 01 - Oct 04, Jointly with Newcastle University, A.C. Davies (PI) and S.A. Velastin, €297,000
  28. "IPSATAC: An Implementation of a MIPSAs Surveillance System for Rome", **European Commission** (MIRACLES Project) and **ATAC** (Rome Transport Authority), 15 months from September 2002, €135,000.
  29. ADVISOR: "Annotated Digital Video for Surveillance and Optimised Retrieval" (networked vision and archiving systems for improved surveillance in public transport systems), **EU Framework 5**, 39 months from January 2000. In collaboration with Thales Research (UK) Ltd., University of Reading, INRIA, Bull (France), €105,000
  30. PRISMATICA: "Pro-active Integrated Systems for Security Management by Technological Institutional and Communication Assistance" (improvements to security in public transport systems), **EU Framework 5**, 36 months from April 2000. In collaboration with London Underground, Paris Metro, Lisbon Metro and other European operators. €620,000. S Velastin was Project's Technical Coordinator.
  31. PERSEC: "Assessment of Image Processing techniques as a means of improving Personal Security in Public Transport", S.A. Velastin (PI), R. Allsop (PI) and N. Tyler (both at Centre for Transport Studies, University College London), **EPSRC**, April 1999 for 36 months, €109,000.
  32. COMFORT (Asynchronous Communication Mechanisms for Real Time Systems), A.C. Davies (PI) and S.A. Velastin, in collaboration with Newcastle University. **EPSRC** April 1998-March 2001, £152,820.
  33. CROMATICA: "Crowd Management with Telematic Imaging and Communications Assistance", **EC Framework 4**, Telematics Programme. Main partners: London Underground, Paris Metro, Milan Metro, Metropolitan Police, BAA, UCL, INRETS (France). Jan 96 (36 months), 1 MECU. S.A. Velastin: Main programme conception, management of main workpackage (vision systems).
  34. DIAMOND: Data Interaction Architecture, Multiple Object Network Demonstrators, **British Aerospace**, S.A. Velastin (PI) and A.C. Davies, Dec. 1993, 12 months, £38,000. Collaboration continues to date.
  35. "Incident Detection and Data Gathering For Crowds in Confined Areas Using Image Processing", S.A. Velastin (PI) and A.C. Davies, R Allsop (PI) [Transport Studies Group, UCL] and A Penn [Bartlett School of Architecture and Planning, UCL], **SERC** Sept. 1993, 27 months, £84,935 (Total: £209,000)
  36. "Sensor Guided Automated Path Planning for Robot Manipulators", **King's College London** Research Strategy Fund, March 1993, £35,156
  37. "Mechatronic Teaching Material Development and Mobile Robotics Research", **King's College London** Academic Development Fund, March 1993, £7,210
  38. "Transputer-based Computer Architectures for Dual-robot Control". Equipment and travel grant from the **Royal Society**. Feb. 1992, £9,589
  39. "Pilot Study on Automatic Data-capture and Analysis of Crowds in Confined Areas Using Image Processing", S.A. Velastin (PI) and A.C. Davies, R Allsop (PI) [Transport Studies Group, UCL] and A Penn [Bartlett School of Architecture and Planning, UCL], **SERC** July 1992, 12 months, £16,577 (Total: £30,000)
  40. "Real-Time Sensor Integration for Industrial Robots using the Blackboard Model". Equipment grant by the **University of London** Central Research Fund. July 1991. £2,500

(directly involved in 8 successful EU project bids bringing in approx. €3M to my institutions)

## **OTHER**

1. Keynote speaker IEEE Fusion International Conference, Salamanca, Spain, July 2014.
2. Runner-up "Enterprise Champion", 2012, Kingston University London
3. Invited guest editor for special issues (IET, SPIE-JEI, ...)
4. Keynote speaker on International Visual Informatics Conference 2017 (IVIC'17), 2011 (IVIC'11) and 2009 (IVIC'09), Malaysia; International Symposium on Visual Computing (ISVC'11), September 2011, Las Vegas, USA; LACNEM 2010, Cali, Colombia; PANAM Transport Conference, Chile 2012; ITS-Chile 2012, LACNEM 2015 (Colombia).
5. Referee for the Swedish Knowledge Foundation
6. Past elected member and chair of the Executive Committee of the IET's Vision and Imaging Professional Network
7. Conference Chair of IET's International Conference on Visual Information Engineering, VIE-2007, London
8. Guest Editor for: IEE Procs on Vision, Imaging and Signal Processing, Pattern Recognition Letters, Machine Vision Applications, IET Computer Vision, IET Image Processing, SPIE's J. Electronic Imaging.
9. Conception, organiser and chair of the IEE's International Symposium on Intelligent Distributed Surveillance Systems (IDSS-04, IDSS-05) and the IET's International Symposium on Imaging for Crime Detection and Prevention (ICDP-2005, ICDP-2006, ICDP-2009, ICDP-2011, ICDP-2013, ICDP-2015 ICDP-2016, ICDP-2017).
10. Regular appearances in radio and television worldwide (BBC, Discovery, Sky, TF2, etc.) as an expert in pedestrian monitoring systems.
11. Pioneering work (PhD thesis 1981) on video-based monitoring of pedestrians, a field later called "Visual Surveillance" and commercially "Video Analytics"
12. Native language proficiency in Spanish and English.

## **MAIN CURRENT/PAST COLLABORATORS**

- INRIA (French National Institute for Research in Computer Science and Control)
- CEREMA and Paul Sabatier University (France)
- Kingston University London
- Queen Mary University London
- National University of Malaysia (UKM)
- University of Malaya (Malaysia)
- INRETS (French National Institute for Transport Research)
- University College London (Transport Studies)
- University of Reading (Computer Vision)
- University of Los Andes, Chile (Transport Studies, Machine Learning)
- University of Zaragoza, Spain (Computer Vision)
- Metropolitan Police (imaging for crime detection)
- Transport for London
- ATAC (Rome Transport)
- Roke Manor Research
- Thales France (Communications, Transport, Security)
- BARCO (Belgium)
- British Aerospace

## **MAIN PROFESSIONAL INTERESTS:**

Computer vision methods applied to improvements in safety and personal security in public and private environments. Human Action Recognition in the context of surveillance, assisted living and intelligent spaces. Interdisciplinary approaches (combining physical and social sciences and involving a range of stakeholders) to understand and tackle socially relevant applications such as personal security, assisted living, training and leisure.

## **PUBLICATIONS:**

### **Under preparation:**

1. Jorge Espinosa, Sergio A. Velastin and John William Branch. "Motorbike Classification in Video Sequences using Deep Learning"
2. R. Fernandez, M. Belloc, S.A. Velastin, M. Belloc, M.A. Jara. "Detection of People Boarding/Alighting from a Metropolitan Train using Computer Vision", to be submitted to the IEEE Trans. on Intelligent Transportation Systems.

### **Under review:**

1. Jorge Espinosa, Sergio A. Velastin and John William Branch. "Detection of Bicycles and Motorcycles in Urban Traffic Using Video Analysis: A Review", submitted to IEEE Trans on Intelligent Transportation Systems
2. Huy-Hieu Pham, Louahdi Khoudour, Alain Cruzil, Pablo Zegers and Sergio A. Velastin. "Video-based Human Action Recognition using Deep Learning: A Review", submitted to CVIU
3. Huy-Hieu Pham, Louahdi Khoudour, Alain Cruzil, Pablo Zegers, Sergio A. Velastin. "Learning Spatial and Temporal Dynamics of 3D Motions from Skeleton Sequences Using Deep Residual Networks", submitted to IET Computer Vision
4. Fiza Murtaza, Muhammad Haroon Yousaf and Sergio A Velastin. "TAB: Temporally Aggregated Bag-of-Discriminant-Words for Temporal Action Proposals", submitted to CVIU
5. Saima Nazir, Muhammad Haroon Yousaf, Jean-Christophe Nebel, Sergio A. Velastin. "Dynamic Spatio-Temporal Bag of Expression (D-STBoE) Model for Human Action Recognition", submitted to CVIU.
6. Nudrat Nida, Muhammad Haroon Yousaf, Aun Irtaza, Sergio A. Velastin. "Deep Temporal Motion Descriptor (DTMD) for Instructor Activity Recognition", submitted to Computer Applications in Engineering Education.

### **Monographs and Edited Books**

1. M. Mendoza, S.A. Velastin (Eds.), Progress in Pattern Recognition, Image Analysis, Computer Vision, and Applications, 22nd Iberoamerican Congress, CIARP 2017, Valparaíso, Chile, November 7-10, 2017, Proceedings, LNCS, Springer-Verlag, Vol. 10675, <http://www.springer.com/gp/book/9783319751924> ISBN 978-3-319-75193-1 (2018)
2. Badioze Zaman, H., Robinson, P., Smeaton, A.F., Shih, T.K., Velastin, S., Terutoshi, T., Jaafar, A., Mohamad Ali, N. (Eds.), "Advances in Visual Informatics", 5th International Visual Informatics Conference, IVIC 2017, Bangi, Malaysia, November 28-30, 2017, LNCS Vol. 10645, ISBN 978-3-319-70009-0, Springer <http://www.springer.com/978-3-319-70009-0>, (2017)
3. Halimah Badioze Zaman, Peter Robinson, Alan F. Smeaton, Timothy K. Shih, Sergio Velastin, Azizah Jaafar, Nazlena Mohamad Ali (Eds), "Advances in Visual Informatics", 4th International Visual Informatics Conference, IVIC 2015, Bangi, Malaysia, November 17-19 2015, LNCS Vol. 9429, SpringerHB Zaman, P Robinson, P Olivier, TK Shih, S.A. Velastin, Editors "Advances in Visual Informatics", Proceedings Third International Visual Informatics Conference, IVIC 2013, Selangor, Malaysia, November 13-15, ISBN: 978-3-319-02957-3 (Print) 978-3-319-02958-0 (Online)
4. HB Zaman, P Robinson, M. Petrou, P Olivier, TK Shih, S.A. Velastin, I Nystrom, Editors "Visual Informatics: Sustaining Research and Innovations", LNCS, Springer. ISBN 978-3-642-25190-0. (2011)
5. S. Lian, S.A. Velastin, H. T. Sencar, N. Nikolaidis, Editors, "Intelligent Multimedia Analysis for Security Applications", Springer-Verlag, ISBN-13: 978-3642117541, DOI: <http://dx.doi.org/10.1007/978-3-642-11756-5>, (2010)
6. S.A. Velastin, P. Remagnino, Editors, "Intelligent Distributed Surveillance Systems" The Institution of Electrical Engineers (IEE), ISBN/ISSN 0-86341-504-0 (2005)

## Journals

1. Huy-Hieu Pham, Louahdi Khoudour, Alain Cruzil, Pablo Zegers and Sergio A. Velastin. "Exploiting deep residual networks for human action recognition from skeletal data", *Computer Vision and Image Understanding*, in press, DOI: <https://doi.org/10.1016/j.cviu.2018.03.003> (2018)
2. Saima Nazir, Muhammad Haroon Yousaf, Jean-Christophe Nebel, Sergio A. Velastin. "A Bag of Expression Framework for Improved Human Action Recognition", *Pattern Recognition Letters*, **103** pp. 39-45, DOI: 10.1016/j.patrec.2017.12.024, (2018)
3. F. Murtaza, Muhammad Haroon Yousaf and Sergio A Velastin. "PMHI: Proposals From Motion History Images for Temporal Segmentation of Long Uncut Videos", *IEEE Signal Processing Letters*, Vol 25/2, pp. 179-183, doi: 10.1109/LSP.2017.2778190, (2018)
4. Saima Nazir, Muhammad Haroon Yousaf, Jean-Christophe Nebel, Sergio A. Velastin. "Evaluating Bag-of-Visual Features Approach using Spatio-Temporal Features for Action Recognition", *Elsevier's Computers and Electrical Engineering*, DOI 10.1016/j.compeleceng.2018.01.037, (2018)
5. C. Salvadori, M. Petracca, J. Martinez del Rincon, S.A. Velastin, D. Makris "An optimisation of Gaussian mixture models for integer processing units", *Journal of Real Time Image Processing* 13, no. 2, pp. 273-289. DOI: 10.1007/s11554-014-0402-5, (2017)
6. Zezhi Chen, Tim Ellis, Sergio A Velastin. "Vision Based Traffic Surveys in Urban Environments", Special section on Intelligent Transport Systems, *Journal of Electronic Imaging (SPIE)*, 2016, doi:10.1117/1.JEI.25.5.051206
7. Fiza Murtaza, Muhammad Haroon Yousaf, Sergio A. Velastin "Multi-view Human Action Recognition using 2D Motion Templates based on MHIs and their HOG Description", *IET Computer Vision*, 2016
8. R. Herrera-Acuña, V. Argyriou, and S.A. Velastin. "A Kinect-based 3D hand-gesture interface for 3D databases." *Journal on Multimodal User Interfaces*, 2(9), pp. 121-139, DOI 10.1007/s12193-014-0173-0 (2015).
9. F. Yin, D. Makris, S.A. Velastin, T. Ellis, "Calibration and Object Correspondence in Camera Networks with Widely Separated Overlapping Views", *IET Computer Vision journal*, 9(3) pp. 354-367, DOI: 10.1049/iet-cvi.2013.0301, (2015)
10. N. Buch, S.A. Velastin, "Local Feature Saliency Classifier for Real- Time Intrusion Monitoring", *SPIE's Opt. Eng.*, 53(7), 073108 (2014). DOI: 10.1117/1.OE.53.7.073108, (2014)
11. F. Yin, D. Makris, S.A. Velastin, T. Ellis, "Learning Multi-Planar Scene Models in Multi Camera Video Scenes", *IET Computer Vision journal*, 9(1), pp. 25-40, DOI: 10.1049/iet-cvi.2013.0261, (2015)
12. C. Salvadori, M. Petracca, J. Martinez del Rincon, S.A. Velastin, D. Makris "An optimisation of Gaussian mixture models for integer processing units", *Journal of Real Time Image Processing*, Springer-Verlag, pp. 1-7, DOI: 10.1007/s11554-014-0402-5 (2014)
13. M Lewandowski, D. Makris, S.A. Velastin, J.C. Nebel, "Structural Laplacian Eigenmaps for modelling sets of multivariate sequences" in '*IEEE Transactions on Systems, Man and Cybernetics, Part B*', DOI: 10.1109/TCYB.2013.2277664, (2014).
14. Davies, Anthony C., and Sergio A. Velastin. "PROGRESS IN COMPUTATIONAL INTELLIGENCE TO SUPPORT CCTV SURVEILLANCE SYSTEMS." *International Journal of Computing* 4, no. 3 (2014): 76-84.
15. D Simonnet, S.A. Velastin, E Türkbeyler, J. Orwell, "Backgroundless Detection of Pedestrians in Cluttered Conditions based on Monocular Images: A Review" in '*IET Computer Vision*', pp. 540-550 (11), *IET* (2012)
16. M. Valera Espina, S.A. Velastin, A Ellis and J.F. Ferryman - "Communication mechanisms and middleware for distributed video surveillance" *IEEE Transactions on Circuits and Systems for Video Technology*, IEEE, July, Vol 21/12, pp. 1795-1809, DOI: 10.1109/TCSVT.2011.2133850 (2011)
17. N. Buch, S.A. Velastin and J. Orwell - A Review of Computer Vision Techniques for the Analysis of Urban Traffic in *IEEE Transactions on Intelligent Transportation Systems*, 12. Vol 12/3 pp. 920-939, DOI 10.1109/TITS.2011.2119372 (2011)
18. L. Khoudour; El-M. El-Kourisi, S.A. Velastin, N. Buch, S Lim-Thiebot, F Fontaine, "An approach for protecting a critical transport infrastructure", *Proceedings of the Institution of Mechanical Engineers, Part F, Journal of Rail and Rapid Transit*, doi: 10.1177/2041301710395076, pp. 383-393, Vol. 225/4, (2011)
19. L Khoudour, D. Aubert, S.A. Velastin, V Leung, J. Orwell, "Video-based detection of specific events in public transport networks" in '*Studia Informatica Universalis*', 8(4), pp. 58-88, Hermann, (2010)
20. N. Buch, J. Orwell, S.A. Velastin, "Urban Road User Detection and Classification using 3D Wire Frame Models", *IET Computer Vision Journal*, Vol 4/2, pp. 105-116, DOI: 10.1049/iet-cvi.2008.0089, (2010)



21. V Leung, J. Orwell, S.A. Velastin, "Performance evaluation of tracking for public transport surveillance" in 'Annals of the British Machine Vision Association', (6), pp. 1-12, (2010)
22. F. Yin, D. Makris, S.A. Velastin, "Quantitative evaluation of different aspects of motion trackers under various challenges", *BMVA Annals* (5) pp. 1-11, (2010)
23. F. Yin, D. Makris, S.A. Velastin, "Time efficient ghost removal for motion detection in visual surveillance systems", *IET Electronic Letters*, 44/23, 1351-1353, DOI: 10.1049/el:20082118 (2008)
24. B. Zhan, N.D. Monekosso, P. Remagnino, S.A. Velastin, L Xu, "Crowd Analysis: a Survey" in 'Machine Vision and Applications', 19/5-6, pp. 345-357, DOI: 10.1007/s00138-008-0132-4 (2008)
25. H.M. Dee, S.A. Velastin, "How close are we to solving the problem of automated visual surveillance? A review of real-world surveillance, scientific progress and evaluative mechanisms" in 'Machine Vision and Applications', 19/5-6, pp. 329-343, DOI: 10.1007/s00138-007-0077-z (2008)
26. V. Leung, A. Colombo, J. Orwell, S.A. Velastin, "Modelling periodic scene elements for visual surveillance", *IET Computer Vision Journal*, 2/2, pp. 88-98, DOI: 10.1049/iet-cvi:20070070 (2008)
27. S.A. Velastin, "Editorial - Visual Information Engineering", *IET Computer Vision Journal*, 2/2, pp. 35-36, DOI: 10.1049/iet-cvi:20089012 (2008)
28. P. Remagnino, S.A. Velastin, G. Foresti, M Trivedi, "Novel Concepts and challenges for the next generation of video surveillance" in 'Machine Vision and Applications', 18(3-4), DOI: 10.1007/s00138-006-0059-6, pp. 135-137. (2007)
29. P. Remagnino, N.D. Monekosso, S.A. Velastin, "Ambient Intelligence" in 'Journal of Japan Society for Fuzzy Theory and', 18(1) February, pp. 67. (2006)
30. L.M. Fuentes, S.A. Velastin, "People tracking in surveillance applications" in 'Image and Vision Computing', 24(11) November, pp. 1165-1171. (2006)
31. S.A. Velastin, BA Boghossian, MA Vicencio-Silva, "A motion-based image processing system for detecting potentially dangerous situations in underground railway stations" in 'Transportation Research Part C: Emerging Technologies', 14(2) Elsevier, April, pp. 96-113. (2006)
32. S.A. Velastin, B. Boghossian, B. Lo, J. Sun, M.A. Vicencio-Silva, "PRISMATICA: Toward Ambient Intelligence in Public Transport Environments" in 'IEEE Transactions on Systems, Man, and Cybernetics - Part A', 35(1) IEE, January, pp. 164-182. (2005)
33. M. Valera-Espina, S.A. Velastin, "Intelligent distributed surveillance systems: A Review" in 'IEE Proceedings - Vision, Image and Signal Processing', 152(2) IEE, April 2005, pp. 192-204. ISBN/ISSN 1350-245X (2005)
34. L. Fuentes and S.A. Velastin, "Tracking-based Event Detection for CCTV Systems", *Pattern Analysis and Applications Special Issue on Video Based Event Detection*, 7(4) Springer, ISBN/ISSN 1433-755X (2005)
35. S.A. Velastin, B.P.L. Lo and J. Sun, "A Flexible Communications Protocol for A Distributed Surveillance System", *Journal of Network & Computer Applications*, Elsevier, Vol. 27/4 pp 221-253 (2004).
36. L. Fuentes and S.A. Velastin, "Vigilancia Avanzada: Del Tracking a la Detección de Sucesos", *Revista IEEE América Latina*, Vol.2 Issue 3, September, ISSN 1548-0992 (2004)
37. B.P.L. Lo, J. Sun and S.A. Velastin, "Fusing Visual and Audio Information in a Distributed Intelligent Surveillance System for Public Transport Systems", *Acta Automatica Sinica*, Vol. 29/3, pp. 393-407, May (2003)
38. E. Corvee, S.A. Velastin, G.A. Jones, "Occlusion Tolerant Tracking using Hybrid Prediction Schemes" in *Acta Automatica Sinica*, Vol. 29/3, May (2003)
39. S.A. Velastin, M.A. Vicencio-Silva, B. Lo and L. Khoudour, "A Distributed Surveillance System For Improving Security In Public Transport Networks", *Measurement and Control*, Vol. 35, No. 8, September, pp. 209-13, Special Issue on Remote Surveillance (2002)
40. B.A. Boghossian and S.A. Velastin, "Image Processing System for Pedestrian Monitoring using Neural Classification of Normal Motion Patterns", *Measurement and Control*, Vol. 32, Issue 9 (Special Issue on "Intelligent Vision Systems"), pp. 261- 264 (1999)
41. J.P. Deparis, S.A. Velastin and A.C. Davies, "The Cromatica Project", *The Kluwer International Series in Engineering and Computer Science. VLSI, Computer Architecture and Digital Signal Processing.*, No. 488: Advanced Video-Based Surveillance Systems, 203, (1999)
42. A.N. Marana, S.A. Velastin, L. da F. Costa, R.A. Lotufo: "Automatic estimation of crowd occupancy using texture and NN classification", *Safety Science*, Vol. 28, No. 3, pp. 165-175, (1998)
43. J.H. Yin, S.A. Velastin and A.C. Davies, "Image Processing Techniques for Crowd Density Estimation Using a Reference Image", *Recent Developments in Computer Vision, Lecture Notes in Computer Science.* , Springer-Verlag, No. 1035, 489-498. (1996)

44. F. Xia, S.A. Velastin and A.C. Davies, "Evaluation of the Data Interaction Architecture Demonstrator by means of a multiple mobile robot workspace simulation", *Microprocessors and Microsystems*, Vol. 19, No. 1, pp. 23-33 (1995)
45. A.C. Davies, J.Y. Yin and S.A. Velastin, "Crowd Monitoring using Image Processing", *IEE Electronic and Communications Engineering Journal*, Vol. 7, No. 1 (February), pp. 37-47 (1995)
46. D. Indyk and S.A. Velastin, "Survey of Range Vision Systems", *Mechatronics*, Vol. 4, No. 4, pp. 417-449, June (1994)
47. S.A. Velastin, "Modular Programming in C: An approach suitable for teaching", *Int. J. of Electrical Engineering Education*, Vol. 29, No. 3, July, pp. 243-254 (1992)

### Chapters in Books

48. Rodrigo Fernández, M.H. Yousaf, Tim Ellis, Zezhi Chen, Sergio A Velastin. "Traffic Flow Analysis", book chapter for *Computer Vision in Intelligent Transportation Systems*, Eds: R. Loce, R. Bala and M. Trivedi, Wiley/IEEE, ISBN 9781118971604, DOI: 10.1002/9781118971666 (2017)
49. C. Orrite-Urunuela, F Martinez, E Herrero, H Ragheb and S.A. Velastin - "Independent Viewpoint Silhouette-based Human Action Modelling and Recognition" in *Handbook on Soft Computing for Video Surveillance*, Sankar K. Pal, Alfredo Petrosino, Lucia Maddalena (Editors) Taylor & Francis, ISBN-13: 978-1439856840, (2012)
50. B. Zhan, P. Remagnino, N.D. Monekosso, S.A. Velastin, Chapter "The Analysis of Crowd Dynamics: From Observations to Modelling", in "Computational Intelligence, Collaboration, Fusion and Emergence", Christine L. Mumford and Lakhmi C. Jain (Eds), ISBN 978-3-642-01798-8, pp. 441-472 (2009)
51. B. Zhan, N.D. Monekosso, S. Rush, P. Remagnino, S.A. Velastin, Chapter "Augmenting Professional Training, an Ambient Intelligence Approach" in 'Intelligent Environments', Dorothy Monekosso, Yoshinori Kuno, Paolo Remagnino (Editors), Springer ISBN 978-1-84800-345-3, pp. 105-121, (2008)
52. M. Valera, S.A. Velastin, Chapter "A review of the state-of-the-art in distributed surveillance systems", In Velastin, Sergio A. and Remagnino, Paolo, (eds.) *Intelligent Distributed Video Surveillance Systems*. London, UK : Institution of Electrical Engineers. pp. 1-30. (IEE Professional Applications of Computing Series, no. 5) ISBN 9780863415043, (2006)
53. P. Remagnino, H Hagraas, N.D. Monekosso, S.A. Velastin, Chapter "Ambient Intelligence: a gentle introduction" in 'Ambient Intelligence a Novel Approach', P. Remagnino, G.L. Foresti and T. Ellis (Eds), Springer, ISBN 0-387-22990-6, (2005)
54. L.M. Fuentes, S.A. Velastin, Chapter "Assessment of Image Processing as a means of Improving Personal Security in Public Transport" in 'Video-Based Surveillance Systems, Computer Vision and Distributed Processing', Edited by P. Remagnino, G.A. Jones, N. Paragios and C.S. Regazzoni, Kluwer Academic Publishers, pp. 159-166. ISBN/ISSN 0-7923-7632-3 (2001)

### Peer-Reviewed Indexed Conferences

1. Huy-Hieu Pham, Louahdi Khoudourt , Alain Cruzil, Pablo Zegers, Sergio A. Velastin. "SKELETAL MOVEMENT TO COLOR MAP: A NOVEL REPRESENTATION FOR 3D ACTION RECOGNITION WITH INCEPTION RESIDUAL NETWORKS", IEEE International Conference on Image Processing, ICIP-2018, October 7-10, Athens, Greece (accepted)
2. Fiza Murtaza, Muhammad Haroon Yousaf, Sergio A. Velastin. "DA-VLAD: DISCRIMINATIVE ACTION VECTOR OF LOCALLY AGGREGATED DESCRIPTORS FOR ACTION RECOGNITION", IEEE International Conference on Image Processing, ICIP-2018, October 7-10, Athens, Greece (accepted)
3. Luis González, Sergio A Velastin and Gonzalo Acuña. "Human action recognition with support vector machine", 9<sup>th</sup> International Conference on Pattern Recognition Systems, ICPRS-2018, 22-24 May, Valparaíso, Chile (accepted)
4. Federico Angelini, Zeyu Fu, Sergio Velastin, Jonathon Chambers, Sayed Mohsen Naqvi. "'3D-HOG EMBEDDING FRAMEWORKS FOR SINGLE AND MULTI-VIEWPOINTS ACTION RECOGNITION BASED ON HUMAN SILHOUETTES", ICASSP, IEEE Int. Conf. on Acoustics, Speech and Signal Processing, Calgary, 15-20 April 2018 (accepted)
5. Jorge Espinosa, Sergio A. Velastin and John William Branch. "Vehicle Detection using Alex Net and Faster R-CNN Deep Learning Models: a Comparative Study", Keynote paper to 5th International Visual Informatics Conference 2017, November 2017, Malaysia. LNCS Vol. 10645, ISBN 978-3-319-70009-0, Springer <http://www.springer.com/978-3-319-70009-0>, pp. 3-18, (2017)

6. Sergio A. Velastin, Diego Gómez-Lira. "People Detection and Pose Classification inside a Moving Train using Computer Vision", 5th International Visual Informatics Conference 2017, November 2017, Malaysia, LNCS Vol. 10645, ISBN 978-3-319-70009-0, Springer <http://www.springer.com/978-3-319-70009-0>, pp. 319-330, (2017)
7. Muhammad Hanif, Fawad Hussain, Muhammad Haroon Yousaf, Sergio A. Velastin, Zezhi Chen: "Shadow Detection for Vehicle Detection in Urban Environments", Int. Conf. on Image Analysis and Recognition (ICIAR), July, Montreal, Canada (2017)
8. Huy-Hieu Pham, Louahdi Khoudour, Alain Cruzil, Pablo Zegers, Sergio A. Velastin: "Learning and Recognizing Human Action from Skeleton Movement with Deep Residual Neural Networks", 8<sup>th</sup> Int. Conf. on Pattern Recognition Systems, ICPRS-17, 11-13 July, Madrid, Spain (2017)
9. Jorge E. Espinosa, Sergio A. Velastin, John W. Branch: "Motorcycle Classification in Urban Scenarios using Convolutional Neural Networks for Feature Extraction", 8th Int. Conf. on Pattern Recognition Systems, ICPRS-17, 11-13 July, Madrid, Spain (2017)
10. Saima Nazir, Muhammad Haroon Yousaf, Sergio A. Velastin: "Inter and Intra Class Correlation Analysis (IlCCA) for Human Action Recognition in Realistic Scenarios", 8th Int. Conf. on Pattern Recognition Systems, ICPRS-17, 11-13 July, Madrid, Spain (2017)
11. Mubashir Noman, Muhammad Haroon Yousaf, Sergio A. Velastin: "An Optimized and Fast Scheme for Real-time Human Detection using Raspberry Pi, International Conference on Digital Image Computing: Techniques and Applications (DICTA-2016), 30 Nov-2 Dec, Australia
12. Sourtzinos P., Velastin S.A., Jara M., Zegers P., Makris D. (2016) People Counting in Videos by Fusing Temporal Cues from Spatial Context-Aware Convolutional Neural Networks. In: Hua G., Jégou H. (eds) Computer Vision - ECCV 2016 Workshops. ECCV 2016. Lecture Notes in Computer Science, vol 9914., pp. 655-667, Springer, Cham 10 October 2016, Amsterdam, DOI: 10.1007/978-3-319-48881-3\_46
13. Fiza Murtaza, Muhammad Haroon Yousaf, Sergio A. Velastin: "Multi-view Human Action Recognition Using Histograms of Oriented Gradients (HOG) Description of Motion History Images (MHIs)", 13th International Conference on Frontiers of Information Technology (FIT), Islamabad, Pakistan, 14-16 Dec 2015, DOI: 10.1109/FIT.2015.59
14. Daniel Quinteros, Sergio A Velastin, Gonzalo Acuña: "Characterisation of the spatial sensitivity of classifiers in pedestrian detection", 6<sup>th</sup> LatinAmerican Conference on Networked Electronic Media (LACNEM-2015), 23-25 Sept, Medellín, Colombia (2015)
15. Konrad Jablonski, Vasileios Argyriou, Darrel Greenhill, Sergio A. Velastin: "Evaluation Framework for Crowd Behaviour Simulation and Analysis based on Real Videos and Scene Reconstruction", 6th LatinAmerican Conference on Networked Electronic Media (LACNEM-2015), 23-25 Sept, Medellín, Colombia (2015)
16. J. Sepulveda, S.A. Velastin, "F1 Score Assesment of Gaussian Mixture Background Subtraction Algorithms Using the MuHAVi Dataset", 6<sup>th</sup> IET International Conference on Imaging for Crime Detection and Prevention (ICDP-15), 15-17 July, London (2015)
17. J. Sepulveda, S.A. Velastin, "Evaluation of Background Subtraction Algorithms using MuHAVi, a Multicamera Human Action Video Dataset", 6th Chilean Conference on Pattern Recognition, November 10-14, Talca, Chile (2014)
18. Carlos Orrite, Mario Rodríguez, Elías Herrero, Sergio Velastin, Gregory Rogez, "Automatic Segmentation and Recognition of Human Actions in Monocular Sequences" in *22nd International Conference on Pattern Recognition (ICPR)*, 24-28 August, Stockholm, Sweden (2014)
19. Raul A. Herrera-Acuña, Vasileios Argyriou, Sergio A. Velastin, "Toward a 3D Hand Gesture Multi-threaded Programming Environment", in *Advances in Visual Informatics*, HB Zaman, P Robinson, P Olivier, TK Shih, S.A. Velastin (Editors), Proceedings Third International Visual Informatics Conference, IVIC 2013, Selangor, Malaysia, November 13-15, pp. 1-12, ISBN: 978-3-319-02957-3 (Print) 978-3-319-02958-0 (Online)
20. Raul Herrera-Acuña, Vasileios Argyriou and Sergio A. Velastin. "Graphical interfaces for development exploiting the third dimension using Kinect." In Proceedings of the 9th International Conference on Intelligent Environments, vol. 17, pp. 356-367. Athens, Greece, 2013.
21. Rob Dupre, Raul A Herrera Acuna, Vasileios Argyriou and Sergio Velastin: "3D Interaction environment for free view point TV and games using multiple tablet computers", BAGS Workshop, In Computer Vision and Pattern Recognition Workshops (CVPRW), pp. 682-687. CVPR, June 23-27, Oregon, USA (2013)
22. S. Pedagadi, J. Orwell, S.A. Velastin, "Local Fisher Discriminant Analysis for Pedestrian Re-identification", CVPR 2013: Computer Vision and Pattern Recognition, pp. 3318 - 3325, IEEE, June 23-27, Oregon, USA. (2013)

23. M Lewandowski, D Simonnet, D. Makris, S.A. Velastin, J. Orwell, "Tracklet Reidentification in Crowded Scenes using Bag of Spatio-Temporal Histograms of Oriented Gradients", 5th Mexican Conference on Pattern Recognition, Mexican Conference on Pattern Recognition, pp. 94-103, Springer LNCS, June 26-29, Querétaro, Mexico. (2013)
24. RA Herrera-Acuña, V. Argyriou, S.A. Velastin, "Portable Multi Touch TableTop: a composite approach for industrial applications", 2013 CONSTANTINIDES INTERNATIONAL WORKSHOP ON SIGNAL PROCESSING, IET, Jan 25, Imperial College, London. (2013)
25. Z. Chen, S.A. Velastin, T. Ellis, "Vehicle detection, tracking and classification in urban traffic", 15th International IEEE Conference on Intelligent Transportation Systems (ITSC), 2012, Anchorage, USA, 16-19 Sept, pp.951-956, DOI: 10.1109/ITSC.2012.6338852, (2012)
26. R. Herrera-Acuña, V. Argyriou, S.A. Velastin, "The Evolution of Multi Touch Tabletop Systems", Latin American Conference on Networked Electronic Media (LACNEM), Chile, 2012
27. R. Herrera-Acuña, C. Fidas, V. Argyriou, S.A. Velastin, "Toward a Two-Handed Gesture-Based Visual 3D Interactive Object-Oriented Environment for Software Development", 8th International Conference on Intelligent Environments (IE), Guanajuato, Mexico, pp. 359 - 362, 26-29 June (2012)
28. D Simonnet, M Lewandowski, S.A. Velastin, J. Orwell, "Tracking Pedestrians in Crowded Scenes using Dynamic Time-Warped Appearance Features", Workshop on Pattern Recognition and Crowd Analysis, ICPR 2012, Tsukuba, Japan.
29. Z. Chen, T. Ellis, S.A. Velastin, "Confidence Based Active Learning for Vehicle Classification in Urban Traffic", IV Chilean Workshop on Pattern Recognition, Valparaiso, Chile (2012)
30. D Simonnet, M Lewandowski, S.A. Velastin, J. Orwell, E Turkbeyler, "Re-Identification of Pedestrians in Crowds using Dynamic Time Warping", 1st International Workshop on Re-Identification, ECCV 2012, European Computer Vision Conference, Oct 07-13, DOI: 10.1007/978-3-642-33863-2\_42, pp. 423-432, Firenze, Italy.
31. C. Salvadori, D. Makris, M. Petracca, J Martínez del Rincón, S.A. Velastin, "Gaussian Mixture Background Modelling Optimisation for Micro-controllers", International Symposium on Visual Computing (ISVC), July 16-18, Crete, pp. 241-251, DOI: 10.1007/978-3-642-33179-4\_24, Greece. (2012)
32. J.C. Nebel, M Lewandowski, J Thevenon, F Martinez, S.A. Velastin, "Are Current Monocular Computer Vision Systems for Human Action Recognition Suitable for Visual Surveillance Applications?", International Symposium on Visual Computing (ISVC), LNCS 6939, Springer, Sept 26-28, Las Vegas, USA, pp. 290-299. ISBN 978-3-642-24030-0. (2011)
33. Z. Chen, T. Ellis, S.A. Velastin, "Vehicle Type Categorization: A comparison of classification schemes", 14th IEEE International Conference on Intelligent Transportation Systems, IEEE, Oct 5-7, Washington DC, USA, pp. 74-79. DOI: 10.1109/ITSC.2011.6083075, ISBN 978-1-4577-2196-0. (2011)
34. A Martinez Uso, G Salgues, S.A. Velastin, "Evaluation of Unsupervised Segmentation Algorithms for Silhouette Extraction in Human Action Video Sequences", 2nd International Visual Informatics Conference, LNCS 7066, Springer, Nov 9-11, Selangor, Malaysia, pp. 11-22. DOI 10.1007/978-3-642-25191-7. (2011)
35. M.M Fraz, P. Remagnino, A. Hoppe, S.A. Velastin, S A Barman, "A Supervised Method for Segmentation of Blood Vessels in Retinal Images", 2011 IEEE International Conference on Signal and Image Processing Applications (ICSIPA), pp. 410-415, DOI: 10.1109/ICSIPA.2011.6144129, (2011)
36. D Simonnet, S.A. Velastin, J. Orwell, E Turkbeyler, "*Selecting and Evaluating Data for Training a Pedestrian Detector for Crowded Conditions*", 2011 IEEE International Conference on Signal and Image Processing Applications (ICSIPA), Nov, Kuala Lumpur, Malaysia, pp. 174-179, DOI: 10.1109/ICSIPA.2011.6144127 (2011)
37. F. Yin, D. Makris, J. Orwell, S.A. Velastin, "Learning Non-Coplanar Scene Models by Exploring the Height Variation of Tracked Objects", ACCV2010, November 8-12, Queenstown, New Zealand, (2010)
38. S Singh, S.A. Velastin, H Ragheb, "MuHAVi: A Multicamera Human Action Video Dataset for the Evaluation of Action Recognition Methods", 2nd Workshop on Activity monitoring by multi-camera surveillance systems (AMMCSS), August 29, Boston, USA, pp. 48-55, DOI: 10.1109/AVSS.2010.63 (2010)
39. F.M. Martins, J. Orwell, S.A. Velastin, "OpenFARM: an Open Framework for the Analysis of Rich Media", International Conference on Image Processing, Computer Vision, & Pattern Recognition (ICCV'10), USA, July 12-15, (2010)
40. D Simonnet, S.A. Velastin, "Pedestrian detection based on Adaboost algorithm with a pseudo-calibrated camera", International Conference on Image Processing Theory, Tools and Applications, July 7-10, Paris, pp. 54-59, DOI: 10.1109/IPTA.2010.5586744, (2010)

41. S.A. Velastin, "CCTV Video Analytics: Recent Advances and Limitations" (Keynote), 1st International Visual Informatics Conference, IVIC-09, LNCS Springer-Verlag, Nov 11-13, Kuala Lumpur, Malaysia, (2009)
42. F. Martinez-Contreras, C. Orrite-Urunuela, E. Herrero-Jaraba, H Ragheb, S.A. Velastin, "Recognizing Human Actions using Silhouette-Based HMM", IEEE Advanced Video and Signal Surveillance Conference, Genoa, pp. 43-48, DOI: 10.1109/AVSS.2009.46 (2009)
43. N. Buch, M. Cracknell, J. Orwell, S.A. Velastin, "Vehicle Localisation and Classification in Urban CCTV Streams", 16th World Congress on Intelligent Transport Systems, September, Stockholm, (2009)
44. N. Buch, J. Orwell, S.A. Velastin, "3D Extended Histogram of Oriented Gradients (3DHOG) for Classification of Vehicles and Pedestrians in Urban Scenes", British Machine Vision Conference, London, (2009)
45. N. Buch, F. Yin, J. Orwell, D. Makris, S.A. Velastin, "Urban Vehicle Tracking using a Combined 3D Model Detector and Classifier", 13th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems KES2009, Part I, LNAI 5711 Springer, September, Santiago, Chile, pp. 169-176. DOI: 10.1007/978-3-642-04595-0\_21, (2009)
46. V. Leung, J. Orwell, S.A. Velastin, "Performance evaluation of re-acquisition methods for public transport surveillance", 10<sup>th</sup> International Conference on Control, Automation, Robotics and Vision, ICARCV 2008, pp. 705-712 DOI: 10.1109/ICARCV.2008.4795604 (2008)
47. B. Zhan, P. Remagnino, N.D. Monekosso, S.A. Velastin, "Self-Organizing Maps for the Automatic Interpretation of Crowd Dynamics", 4th International Symposium on Advances in Visual Computing, pp. 440-449 (2008)
48. H Ragheb, S Velastin, P Remagnino, T Ellis, "A Novel Approach for Fast Action Recognition using Simple Features", 8<sup>th</sup> International IEEE Workshop on Visual Surveillance, VS-2008 (2008)
49. F. Yin, D. Makris, S.A. Velastin, "Real-time Ghost Removal for Foreground Segmentation Methods", 8<sup>th</sup> International IEEE Workshop on Visual Surveillance, VS-2008 (2008)
50. F Martínez, E Herrero, H Ragheb, S Velastin, "Independent Viewpoint Silhouette-based Human Action Modelling and Recognition", 1<sup>st</sup> International Workshop on Machine Learning for Vision-Based Systems, Marseilles, France (2008)
51. H. Ragheb, S.A. Velastin, P. Remagnino, T. Ellis, "Human Action Recognition using Robust Power Spectrum Features", IEEE International Conference on Image Processing, ICIP, pp. 753-756, DOI: 10.1109/ICIP.2008.4711864, (2008)
52. H. Ragheb, S.A. Velastin, P. Remagnino, T. Ellis, "ViHASi: virtual human action silhouette data for the performance evaluation of silhouette-based action recognition methods", Proceeding of the 1st ACM workshop on Vision networks for behavior analysis, pp. 77-84 DOI: 10.1109/ICDSC.2008.4635730 (2008)
53. S. Boragno, B. Boghossian, D. Makris, S.A. Velastin, "Object classification for real-time video-surveillance applications", IET Visual Information Engineering Conference, X'ia, China, pp. 192-197, DOI: 10.1049/cp:20080307, (2008)
54. N. Buch, J. Orwell, S.A. Velastin, "Detection and Classification of Vehicles for Urban Traffic Scenes", Visual Information Engineering 2008, IET, July, Xi'an, China, pp. 182-187, DOI: 10.1049/cp:20080305. (2008)
55. N. Buch, S.A. Velastin, "Human Intrusion Detection using Texture Classification in Real- Time", BMVC workshop on Tracking Humans for the Evaluation of their Motion in Image Sequences, THEMIS 2008, September, Leeds, UK, pp. 1-6. (2008, joint best paper)
56. F. Yin, D. Makris, S.A. Velastin, "Performance Evolution of Object Tracking Algorithms", 10<sup>th</sup> IEEE International Workshop on Performance Evaluation of Tracking Systems, PETS, Rio de Janeiro, (2007)
57. A. Colombo, V Leung, J. Orwell, S.A. Velastin, "Markov Models of Periodically Varying Backgrounds for Change Detection", Visual Information Engineering 2007, IET, July, London, (2007)
58. J. Annesley, A. Colombo, J. Orwell, S.A. Velastin, "A profile of MPEG-7 for visual surveillance", Advanced Video and Signal Based Surveillance (AVSS2007), IEEE, September, London, pp. 482-487, Digital Object Identifier: 10.1109/AVSS.2007.4425358 (2007)
59. S Boragno, BA Boghossian, J. Black, D. Makris, S.A. Velastin, "A DSP-based system for detecting vehicles stopping in prohibited area", Advanced Video and Signal Based Surveillance (AVSS2007), September, London, UK, 22. pp. 260-265, Digital Object Identifier: 10.1109/AVSS.2007.4425320 (2007)
60. Fei Yin, D. Makris, S.A. Velastin, "Performance Evaluation of Object Tracking Algorithms", 10th IEEE International Workshop on Performance Evaluation of Tracking and Surveillance (PETS2007), October, Rio de Janeiro, Brazil, (2007)
61. S.A. Velastin, C Xu, "Image Feature Extraction Using a Method Derived from the Hough Transform with Extended Kalman Filtering", Second Pacific Rim Symposium, PSIVT 2007, Advances in Image and Video

- Technology: Lecture Notes in Computer Science 4872 Springer, December, Santiago, Chile, pp. 191-204. ISBN/ISSN 3-540-77128-X, DOI: 10.1007/978-3-540-77129-6\_20, (2007)
62. B. Zhan, P. Remagnino, S.A. Velastin, N.D. Monekosso, L Xu, "A quantitative comparison of two new motion estimation algorithms", International Symposium on Visual Computing (ISVC), Springer, November, Lake Tahoe, Nevada, pp. 424-431, DOI: 10.1007/978-3-540-76858-6\_42, (2007)
  63. B. Zhan, P. Remagnino, S.A. Velastin, F. Bremond, M Thonnat, "Matching gradient descriptors with Topological Constraints to characterise the Crowd dynamics", IET Visual Information Engineering 2006, IET, September, pp. 441-445. ISBN/ISSN 0863416713 (2006)
  64. B. Zhan, P. Remagnino, L Xu, S.A. Velastin, N.D. Monekosso, "Motion Estimation with Edge Continuity Constraint for Crowd Scene Analysis", International Symposium on Visual Computing (ISVC) 2006, (2006)
  65. J. Annesley, V Leung, S.A. Velastin, A. Colombo, J. Orwell, "Fusion of Multiple Features for Identity Estimation", International Conference on Imaging for Crime Detection and Prevention (ICDP), Visual Information Engineering IET, June, pp. 534-439. ISBN/ISSN 086341647/0537-9989 (2006)
  66. C Carincotte, X Desurmont, B Ravera, F. Bremond, J. Orwell, S.A. Velastin, JM Odobez, B Corbucci, J Palo, J Cernocky, "Toward Generic Intelligent Knowledge Extraction from Video and Audio: The EU-Funded CARETAKER Project", International Conference on Imaging for Crime Detection and Prevention (ICDP-2006), Visual Information Engineering IET, June, pp. 470-475. ISBN/ISSN 086341647/0537-9989 (2006)
  67. J.R. Renno, D. Greenhill, S.A. Velastin and G.A. Jones, "*Learning The Depth Structure of A Monitored Scene*", 6th International Workshop on Image Analysis for Multimedia Interactive Services, April 13-15, Montreux, Switzerland, (2005)
  68. B. Zhan, P. Remagnino and S.A. Velastin, "*Analysing Crowd Intelligence*", Second AIXIA Workshop on Ambient Intelligence, September, Milan, Italy, (2005)
  69. B. Zhan, P. Remagnino and S.A. Velastin, "*VISUAL ANALYSIS OF CROWDED PEDESTRIAN SCENES*", XLIII Congresso Annuale AICA 2005, October, Udine, Italy, pp. 549-555. (2005)
  70. A.C. Davies and S.A. Velastin, "*A Progress Review of Intelligent CCTV Surveillance Systems*", 3rd IEEE Workshop on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications, IDAACS IEEE, September, Sofia, Bulgaria, pp. 417-423. ISBN/ISSN 0-7803-9446-1 (2005)
  71. S.A. Velastin and A.C. Davies, "*Intelligent CCTV Surveillance: Advances and Limitations*", Measuring Behavior 2005, Noldus, September, Wageningen, Netherlands, (2005), (*invited keynote presentation*)
  72. P Bruneaut, A Cavallaro, T Kelliher, L Marcenaro, F Porikli, S.A. Velastin and F Ziliani, "*Performance Evaluation Of Event Detection Solutions: the CREDS experience*", IEEE International Conference on Advanced Video and Signal Based Surveillance, September, Como, Italy, pp. 201-206. (2005)
  73. J. Black, BA Boghossian and S.A. Velastin, "*A Real Time Surveillance System for Metropolitan Railways*", IEEE International Conference on Advanced Video and Signal Based Surveillance, September, Como, Italy, pp. 189-194. (2005)
  74. B. Zhan, P. Remagnino and S.A. Velastin, "*Mining paths of complex crowd scenes*", Advances in Visual Computing: First International Symposium, ISVC 2005 (Eds. G Bebis, R Boyle, D Koracin, B Parvin), Lecture Notes in Computer Science (Vol. 3804/2005) Springer-Verlag GmbH, December, Nevada, USA, pp. 126-133. ISBN/ISSN 3-540-30750-8 (2005)
  75. J-L Bruyelle and S.A. Velastin: "Video Surveillance systems for public transport environments", Measuring Behavior 2005, Wageningen, The Netherlands, September, (2005)
  76. J. Sun, S.A. Velastin, B. Lo, M.A. Vicencio-Silva and L. Khoudour, "A Distributed Surveillance System to Improve Personal Security in Public Transport", in *Knowledge-Based Media Analysis for Self-Adaptive and Agile Multimedia Technology* (P Hobson, E Izquierdo, Y Kompatsiaris & N E O'Connor: Eds), Proceedings of the European Workshop on the Integration of Knowledge, Semantics and Digital Media Technology (EWIMT-04), ISBN 0-902-23810-8, 25-26 November 2004, London, pp. 7-14, (2004)
  77. S.A. Velastin, B. Lo, J. Sun, L. Khoudour and M.A. Vicencio-Silva: "PRISMATICA: A Multi-Sensor Surveillance System for Public Transport Networks", 12<sup>th</sup> IEE Road Transport Information and Control Conference, 22-24 April 2004.
  78. M. Valera Espina, S.A. Velastin, "*Real-time architecture for large distributed surveillance systems*", IEE Intelligent Distributed Surveillance Systems, IEE, February, London, pp. 41-45. ISBN/ISSN 0863413927 (2004)
  79. R. Munoz, S.A. Velastin, "LOTOS modelling of some MASCOT communication protocols", Jornadas Chilenas de Computación 2003, November, Chillan, Chile, (2003)
  80. S.A Velastin, B. Lo, J. Sun, L. Khoudour and Maria Alicia Vicencio-Silva: "Multi-Sensory Tools to Improve Personal Security in Public Transport Networks", Workshop on Ambient Intelligence, AI\*IA 2003 - 8th National Congress of Italian Association for Artificial Intelligence, Pisa, Italy, 23 September (2003).

81. L.M. Fuentes and S.A. Velastin, "From Tracking to Advanced Surveillance", IEEE International Conference on Image Processing (ICIP 2003), 14-17 September, Barcelona, Spain (2003)
82. L.M. Fuentes, S.A. Velastin, "Tracking people for automatic surveillance applications", 1st Iberian Conference on Pattern Recognition and Image Analysis, IBPRIA2003, 4-6 June, Mallorca, Spain. Proceedings in Lecture Notes in Computer Science LNCS 2652, ISBN 3-540-40217-9, ISSN 0302-9743, pp. 238-245 (2003)
83. M. Coimbra, M. Davies, S.A. Velastin: "Pedestrian Detection Using MPEG-2 Motion Vectors", 4th European Workshop on Image Analysis for Multimedia Interactive Services (WIAMIS2003), 9-11 April, London, UK (2003)
84. B. Lo, S.A. Velastin, M.A. Vicencio-Silva, J. Sun: "An Intelligent Distributed Surveillance System For Public Transport", Symposium on Intelligent Distributed Surveillance Systems, IEE, London 26<sup>th</sup> February, pp. 10/1-10/5, (2003)
85. M. Valera, S.A. Velastin: "An Approach For Designing A Real-Time Intelligent Distributed Surveillance System", Symposium on Intelligent Distributed Surveillance Systems, IEE, London 26<sup>th</sup> February, pp. 6/1-6/5 (2003)
86. L.M. Fuentes and S.A. Velastin, "Foreground segmentation using luminance contrast", 2001 WSES International Conference on Speech, Signal and Image processing, SSIP 01, 04/09/2001, (2001)
87. L.M. Fuentes and S.A. Velastin, "People tracking in surveillance applications", 2nd IEEE International Workshop on Performance Evaluation on Tracking and Surveillance, PETS 2001, Kauai (Hawaii-USA), 14/12/2001, (2001)
88. L.M. Fuentes and S.A. Velastin, "Assessment of Image Processing Techniques as a means of Improving Personal Security in Public Transport", 2<sup>nd</sup> European Workshop on Advanced Video-based Surveillance, AVBS 2001, Kingston upon Thames, UK, 4<sup>th</sup> September (2001)
89. L. Khoudour, J. Hindmarsh, D. Aubert, S.A. Velastin and C. Heath, "Enhancing Security Management in Public Transport using Automatic Incident Detection", in *Urban Transport VII: Urban Transport and the Environment in the 21st Century*, (Proceedings of 7<sup>th</sup> International Conference on Urban Transport 2001, 14-16 May, Lemnos, Greece), Ed. L. J. Sucharov, ISBN: 1-85312-865-1, WIT Press (2001)
90. B. Lo, S.A. Velastin: "Automatic Congestion Detection System for Underground Platforms", 2001 International Symposium on Intelligent Multimedia, Video & Speech Processing, IEEE, Hong-Kong, 2-4 May, (2001)
91. J. Menendez, S.A. Velastin "A Method for obtaining Neural Network Training Sets in Video Sequences", 3<sup>rd</sup> IEEE Workshop on Visual Surveillance, 1<sup>st</sup>-2<sup>nd</sup> July 2000, Dublin, Ireland (2000)
92. B.A. Boghossian, S.A. Velastin: "Motion-Based Machine Vision Techniques for the Management of Large Crowds", IEEE 6th International Conference on Electronics, Circuits and Systems (ICECS '99), 5-8 September, pp. 961-964, Cyprus (1999)
93. S.A. Velastin, B.A. Boghossian and A. Lazzarato: "Detection of potentially dangerous situations involving crowds using image processing", Intelligent Industrial Automation, IIA99 (special session on vision-based intelligent systems for surveillance and traffic control), June 1 - 4, 1999, Genoa, Italy, (1999)
94. A.N. Marana, L. da F. Costa; R. Lotufo and S.A. Velastin, "Estimating Crowd Density with Minkowski Fractal Dimension", IEEE International Conference On Acoustics Speech And Signal Processing, March, Arizona, USA, 520-6149; 1999; VOL 6, pp. 3521-3524 (1999)
95. B.A. Boghossian, S.A. Velastin: "Evaluation of motion based algorithms for automated crowd management", Workshop on Performance Characterisation and Benchmarking of Vision Systems, International Conference on Vision Systems, ICVS, January, Spain, pp. 80-96 (1999)
96. A.N. Marana, L. da F. Costa; R. Lotufo and S.A. Velastin, "On the Efficacy of Texture Analysis for Crowd Monitoring", SIBGRAPH'98, pp. 354-361, Rio de Janeiro, Brazil, October (1998).
97. B.A. Boghossian and S.A. Velastin, "Real-time Motion Detection of Crowds in Video Signals", IEE Colloquium on High Performance Architecture for Real-time Image Processing, 12 February, pp. 12/1-12/6, London (1998)
98. L. Khoudour, J.P. Deparis, J.L. Bruyelle, F. Cabestaing, D. Aubert, S. Bouchafa, S.A. Velastin, M.A. Vicencio-Silva, M. Wherett, "The Project Cromatica", 9<sup>th</sup> ICIAP-97 (International Conference on Image Analysis and Processing), 17-18 September, Firenze, Italy in *Lecture Notes in Computer Science*, pp. 757 - 764, ISBN:3-540-63508-4 (1997)
99. H. Schmidt and S.A. Velastin, "Fuzzy Control for a Robot Gripper System to Handle Slipping Objects", EUFIT'97, 5<sup>th</sup> European Congress on Intelligent techniques and soft computing, Aachen, Germany, Sep. 8-11, (1997)

100. A.N. Marana, L. da F. Costa, S.A. Velastin and R.A. Lotufo, "Automatic estimation of crowd density using texture", International Workshop on Systems and Image Processing, IWSIP'97, May 28-30, Poland (1997)
101. A.N. Marana, L. da F. Costa, S.A. Velastin and R.A. Lotufo, "Oriented Texture Classification Based on Self-Organizing Neural Network and Hough Transform", IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP'97), April 21-24, Munich, Germany, Vol. 4. pp. 2773-6, (1997)
102. A.N. Marana, L. da F. Costa, S.A. Velastin and R.A. Lotufo, "Estimation of crowd density using image processing", IEE Coll. on Image Processing for Security Applications, London, March 10, (1997).
103. M. Lopez, S.A. Velastin S.A and M. Rodriguez, "Towards automatic measurement of passenger density in an urban train carriage using image processing", 8<sup>th</sup> IFAC Symp. on Transportation Systems, Crete, June (1997)
104. E.M. Reinhoudt and S.A. Velastin, "A dynamic predicting algorithm for estimating bus arrival time", 8<sup>th</sup> IFAC Symp. on Transportation Systems, Crete, June (1997).
105. J.P. Deparis, S.A. Velastin, A.C. Davies (1996): "Telematic Tools to Help Automation in Public Transport. Example of an EC research project: Cromatica", 5th Int. Conf. on Automated People Movers (APMs), APM96, pp. 227-238, 10-14 June, Paris, France, (1996)
106. J. Yin, X. Zhang, S.A. Velastin and A.C. Davies: "Incident detection in pedestrian traffic using image processing", 8th Int. Conf. on Road Traffic Monitoring and Control, IEE, pp. 115-119, 23-25 April, London, UK (1996)
107. J. Turán, A.C. Davies and S.A. Velastin: "Crowd Motion Detection using the Inverse Rapid Transform", 2nd International Workshop on Image and Signal Processing: Theory, Methodology and Applications, pp. 73-75, 8-10 November, Budapest, Hungary (1995)
108. J.H. Yin, S.A. Velastin and A.C. Davies, "A Calibration Approach for Estimation of Crowd Density Using Image Processing", 2nd International Workshop on Image and Signal Processing: Theory, Methodology and Applications, pp. 87-92, 8-10 November, Budapest, Hungary (1995)
109. F. Xia and S.A. Velastin, "Representing Petri Nets with Mascot Constructs", Second Latin American Seminar on Advanced Control (LASAC'95) and Fourth Seminar on System Identification, Parameter Estimation and Adaptive Control (SISEPCA'95), 27-29 September, Santiago, Chile, pp. 25-34 (1995)
110. H. Schmidt and S.A. Velastin, "Fuzzy Controlled Robot Gripper System for Slipping of Objects", Second Latin American Seminar on Advanced Control (LASAC'95) and Fourth Seminar on System Identification, Parameter Estimation and Adaptive Control (SISEPCA'95), 27-29 September, Santiago, Chile, pp. 127-132 (1995)
111. C. Xu and S.A. Velastin, "An Extended Kalman Filtering Strategy for Image Feature Extraction", VII European Signal Processing Conference, EUSIPCO-94, Edinburgh, UK, Sept. 13-16 (1994)
112. J.H. Yin, S.A. Velastin and A.C. Davies, "Measurement of Crowd Density using Image Processing", VII European Signal Processing Conference, EUSIPCO-94, Edinburgh, UK, Sept. 13-16 (1994)
113. S.A. Velastin, J.H. Yin, M.A. Vicencio-Silva, A.C. Davies, R.E. Allsop and A. Penn, "Image Processing Techniques for On-line Analysis of Crowds in Public Transport Areas", IFAC Symposium on Transportation Systems: Theory and Application of Advanced Technology (IFAC/IFORS TS'94), pp. 163-168, 24-26 August 1994, Tianjin, China (1994)
114. C. Xu and S.A. Velastin "A Hough-like transform with Kalman Filter refinement", 2nd Biennial European Joint Conf. on Engineering Systems Design and Analysis (ESDA-94), 4-7 July 1994, London, UK, Vol. 5, pp. 495-500 (1994)
115. M. Fini and S.A. Velastin: "An Analytical Least Squares Hough Transform", IEEE International Symposium on Circuits and Systems (ISCAS94), 30 May - 2 June 1994, London, UK, Vol. 3, pp. 13-16 (1994)
116. C. Xu and S.A. Velastin, "The Mahalanobis Distance Hough Transform with Extended Kalman Filter Refinement", IEEE International Symposium on Circuits and Systems (ISCAS94), 30 May - 2 June 1994, London, UK, Vol. 3, pp. 5-8 (1994)
117. M. Fini and S.A. Velastin, "An Analytical Least Squares Hough Transform with an Implementation on a Transputer Network", IEEE International Symposium on Industrial Electronics (ISIE94), May 25-27 1994, Santiago, Chile, pp.252-257 (1994)
118. A. Rupp and S.A. Velastin, "A Gripper and Sensor System for Controlled Slip and Force", IEEE International Symposium on Industrial Electronics (ISIE94), May 25-27 1994, Santiago, Chile. pp. 329-334 (1994)
119. S.A. Velastin, C. Xu, "Line and Circle Detection by the Weighted Mahalanobis Distance Transform with Extended Kalman Filtering", IEEE International Symposium on Industrial Electronics (ISIE94), May 25-27 1994, Santiago, Chile, pp. 258-263 (1994)



120. F. Xia, S.A. Velastin, A.C. Davies, "The DORIS System Design Approach to a Parallel Simulation of Multiple Robots", IEEE International Conference on Robotics and Automation, San Diego, California, May 8-13 1994, Vol. 3, pp. 2482-2487, (1994)
121. C. Xu, S.A. Velastin, "A comparison between the standard Hough Transform and the Mahalanobis distance Hough Transform", Third European Conference on Computer Vision (ECCV94), 2-6 May 1994, Stockholm, Sweden (1994)
122. S.A. Velastin, J.H. Yin, A.C. Davies, M.A. Vicencio-Silva, R.E. Allsop, A. Penn, "Automated Measurement of Crowd Density and Motion using Image Processing", 7th IEE International Conference on Road Traffic Monitoring and Control, 26-28 April 1994, London, UK, pp. 127-132 (1994)
123. S.A. Velastin, J.H. Yin, M.A. Vicencio-Silva, A.C. Davies, R.E. Allsop, A. Penn, "Analysis of Crowd Movements and Densities in Built-up Environments using Image Processing", IEE Colloquium on Image Processing for Transport Applications, 9 December 1993, London, UK, Digest No. 1993/236, pp. 8/1-8/6 (1993)
124. F. Xia, S.A. Velastin, A.C. Davies, "Simulation of workspace with multiple robots using the Data Interaction Architecture Demonstrator", Int. Workshop on Systems Engineering for Real Time Applications (SERTA '93), Cirencester, UK, 13-14 Sept. 1993, pp. 25-30 (1993)
125. C. Xu, S.A. Velastin, "The Weighted Mahalanobis Distance Hough Transform and its Application for the Detection of Circular Segments", IEE Colloquium on Hough Transforms, 7th May, London, UK, Digest No. 1993/106, pp. P3/1-P3/4 (1993)
126. C. Xu, S.A. Velastin, "A Hough Transform with Integral Kalman Filter Refinement", IEE Colloquium on Hough Transforms, 7th May, London, UK, Digest No. 1993/106, pp. P4/1-4/4 (1993)
127. C. Xu, S.A. Velastin, "Optimum Thresholding by Extended Kalman Filtering", 8SCIA, Norway, May (1993)
128. L. da F. Costa, S. Velastin, M. Sandler, "Applying Image Analysis Techniques to Optimize the Production of Cork Stoppers", 5th Brazilian Symposium on Graphical Computing and Image Processing (SIBGRAPI 92), Aguas de Lindoia (SP), Nov., pp. 13-16 (1992)
129. T. Hamdi, S.A. Velastin, "Evaluation of Ada and Transputers for Real-Time Inverse Kinematics for the RTX robot", 9th Brazilian Conference on Automatic Control, Vitoria, Brazil, Sept., Vol. 1, pp. 177-182 (1992)
130. T. Hamdi, S.A. Velastin, "A Parallel Solution of Inverse Kinematics for the RTX Robot using Ada and Transputers", IEEE/RSJ Int. Conference on Intelligent Robots and Sensors, Raleigh, USA, July, pp. 1208-1212 (1992)
131. S.A. Velastin, "An approach to modular programming in C", Third IEE Int. Conf. on Software Engineering for Real-Time Systems, Cirencester, UK, Sept., pp.227-232 (1991)
132. T. Hamdi, S.A. Velastin, "A Real-time solution of Robot Inverse Kinematics using ADA and Transputers", Ada UK International Conference, Brighton, UK, Oct. (1991).
133. S.A. Velastin, R.C. Fairwood, "Functional Characterisation of Dynamic System using PROLOG", IMA Conf. on Robotics Loughborough, UK, July (1989)
134. M. Lopez, S.A. Velastin, "Desarrollo de herramientas de software: una interfase para el SPSS", X Taller de Ingenieria de Sistemas, Universidad de Chile, Santiago, Chile (1987)
135. J.R. Coury, S.A. Velastin, R. Clift, "Modelagem de um Filtro Granular em Leito Fixo", Parts I and II, Anais do XII ENEMP, Maringa (PR), Brazil (1984)
136. S.A. Velastin, M.G. Hartley, "Development of a Grey-Level Vision System", IEE International Conference on Electronic Image Processing, York, UK, pp. 42-46 (1982)

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