

# Francesco Setti

## *curriculum vitae*

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Francesco Setti is currently an Associate Professor at the Department of Engineering for Innovation Medicine of the University of Verona and Associate Researcher of the Institute of Cognitive Science and Technology (ISTC-CNR). Previously he was Post-Doc Research Fellow at the Vision, Image Processing & Sound (VIPS) Lab of the University of Verona, at the Laboratory for Applied Ontology (LOA) of the Institute of Cognitive Science and Technologies (ISTC) of the Italian National Research Council (CNR) in Trento, and earlier at the Measurement Instrumentation and Robotics Group of the University of Trento running the individual PAT-EU Cofund Marie Curie Action project ABILE. He has a strong background in Computer Vision, Pattern Recognition, Machine Learning and Mechatronics; he graduated in Mechatronics Engineering at the University of Trento and he received the PhD in Science, Technologies and Measurements for Space at the University of Padua. During his career he spent 3 months as visiting PhD student at Instituto Superior Tecnico in Lisbon working with Dr. Alessio Del Bue, and 1 year at Queen Mary University of London under the supervision of Prof. Lourdes de Agapito. He is co-author of 16 journal articles and more than 45 papers in international peer-reviewed conferences and workshops. He is member of the Editorial Board of Cognitive Processing journal. He also serves as reviewer for top ranked journals and conferences like Computer Vision and Image Understanding, CVPR, ICCV, ICPR, ICRA, IROS, IJCAI, and ACM Multimedia.

He is co-founder and active team member of the spin-off company Qualyco S.r.l. implementing AI solutions to smart manufacturing. He previously co-founded two start-up companies: one working on robotics and mechatronics (Robosense S.r.l.) and one on high-tech instrumentations for sports and fitness (Libon S.r.l.).

## Research Interests

Currently, his main research focus is on developing machine learning systems for Human-Robot cooperation in surgical and industrial environments. In details, he focuses on three main topics:

**Active Vision** – let a robot move to efficiently explore the scene and recognize objects within its workspace; this will allow to overcome problems like occlusions, limited field of view and limited resolution of the cameras, and brings to learn more robust models of objects and environments.

**Cognitive Robotics** – to allow a robot to perceive the environment it's operating with, understand what's happening around it, and make decisions about how to behave next; this is the fundamental ability of every autonomous cooperative robot.

**Industry 4.0** – to develop computer vision and machine learning techniques to process industrial data and provide manufacturing automation with new capabilities in the field of industrial quality control, process monitoring, anomaly detection, and many others.

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## Higher Education

- 2007–2010 **Ph.D. in Science, Technologies and Measurements for Space**, *CISAS – University of Padua*, Padua – Italy  
Thesis: *Methods and applications of sensor fusion for mechatronic systems*, supervised by Prof. M. De Cecco
- 2005–2006 **M.S. in Mechatronics Engineering**, *University of Trento*, Trento – Italy  
Thesis: *Progettazione e sviluppo di un sistema basato su telecamera per la misura di posizione ed assetto relativi* (italian), supervised by Prof. M. De Cecco
- 2001–2005 **B.A. in Industrial Engineering**, *University of Trento*, Trento – Italy  
Thesis: *Analisi e simulazione del comportamento di un sistema ABS basato su controllore Sliding Mode* (italian), supervised by Prof. F. Biral

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## Research Experience

### Professional History

- Sept. 2021 – present **Senior Assistant Professor (RTDb)**, *Dept. of Computer Science*, University of Verona  
Research activity on machine learning techniques applied to smart manufacturing, social and collaborative robotics and data science.
- June 2015 – present **Associate Member**, *Institute of Cognitive Science and Technology (ISTC)*, Italian National Research Council (CNR)
- April 2018 – March 2021 **Junior Assistant Professor (RTDa)**, *Dept. of Computer Science*, University of Verona  
Research activity on machine learning techniques to implement an artificial agent to act as assistant surgeon in robotic minimally invasive surgery – project **SARAS**
- June 2015 – March 2018 **Post-Doc Research Fellow**, *Dept. of Computer Science*, University of Verona  
Research activity on object recognition and behaviour modeling based on the integration of statistical pattern recognition and formal ontologies.  
Research activity on detection, localization, tracking and fine-grained species recognition of birds in low resolution images – project **BCMS**  
Design and production management of Multimedia infopoints – project **TOTEM**
- Sept. 2012 – May 2015 **Post-Doc Research Fellow**, *Institute of Cognitive Science and Technology (ISTC)*, Italian National Research Council (CNR)  
Research activity on integrating Knowledge Representation and Ontologies into Computer Vision and Pattern Recognition techniques – project **VisCoSo**  
Research activity on behaviour analysis of spectators crowds – project **OZ**
- July 2010 – June 2012 **Marie Curie Fellow**, *Dept. of Electrical Engineering and Computer Science*, Queen Mary University of London and *Dept. of Mechanical and Structural Engineering*, University of Trento  
Research activity on automatic modeling of human body from multiple view video captured data (MoCap) – project **ABILE**
- April 2010 – June 2010 **Post-Doc Research Fellow**, *Dept. of Mechanical and Structural Engineering*, University of Trento  
Research activity: realization of a computer vision based system for 3D reconstruction and segmentation of human body – project **VERITAS**

June – **Visiting Ph.D. student**, *Instituto Superior Tecnico*, Universidade Tecnica de Lisboa  
September 2009 Research activity: 3D points cloud registration and articulated motion segmentation, supervised by Dr. Alessio Del Bue

### Projects

April 2022 – **VISaVIS – Video Sonification on A wearable to support VISually impaired people**, cofunded by *European Comfort S.r.l.* and *University of Verona* through the “*Joint Research 2022*” programme.

Principal Investigator.

*The project aims at designing the proof-of-concept of a new wearable device to help Blind and Visually Impaired People (BVIPs) in recognizing the form of the surrounding environment, thus facilitating their movement in indoor scenarios. The device is intended to create, at run-time, a sound representation of the environment captured by an RGBD camera worn by the user. The underpinning idea is that, through the sonification of the video images captured by the camera, the user will progressively learn to associate the perceived sound to information like the distance, the dimension, and the format of the obstacles he/she is framing.*

September 2021 – **GEYEDANCE – AI guidance for robot-assisted eye surgery**, funded by *EU* through the *Horizon Europe* programme.

Responsible for data management.

*The goal of this project is to improve robots' capability to assist surgeons in retina surgeries. This means translating methods from artificial intelligence to the area of surgical robotics together to be used for advanced user support to reduce the surgeon's mental and physical load. The project's work is to build on the CE-certified robot platform PSS from project partner Preceyes and a prototype for a Common-Path OCT system with extended measurement depth provided by partner ACMIT.*

September 2021 – **Vision/AI systems to support manual operations on a laser cutting machine**, funded by *Prima Industrie S.p.A.*

August 2022 Computer vision and machine learning expert.

*This project aims to develop an assistive technology based on computer vision and mixed reality to help a human operator sort pieces produced by a laser cutting machine. The machine outputs a large sheet of metal with several objects cut; the user is asked to extract those objects and locate them in the correct basket, according to the relative order. Our system is able to recognize the object picked by the user and represent the correct basket with color coding. The system is also designed to be integrated with Prima Power machines and is ready to be implemented on augmented reality devices.*

January 2021 – **OPERA 4.0 – Observation of business processes, with objective guarantees of privacy protection, for the prevention of errors and risk situations in an automatic manner at the time of Industry 4.0**, funded by *Fondazione Cariverona*.

– December 2023 Computer vision and machine learning expert.

*The project proposes to develop an industrial monitoring system compliant with privacy regulations and aimed at preventing human errors and dangerous conditions. The main feature is a multidisciplinary approach whose innovative elements are: (1) Formal definition of the business process for a priori analysis of all the vulnerabilities to prevent production errors or health risks; (2) Application of intelligent visual sensors to people monitoring; and (3) Evaluation of the impact on privacy of the monitoring actions.*

- April 2018 – **SARAS – Smart Autonomous Robotic Assistant Surgeon**, funded by EU  
 December 2021 through the Horizon 2020 programme.  
 Responsible for system integration and validation, project management and dissemination and communication management.  
*The goal of this project is to develop the next-generation of surgical robotic systems. These will allow a single surgeon to execute Robotic Minimally Invasive Surgery (R-MIS) without the need of an expert assistant surgeon, thereby increasing the social and economic efficiency of a hospital while guaranteeing the same level of safety for patients. The robot developed by the SARAS project will be called solo-surgery system and will consist of a pair of cooperating and autonomous robotic arms holding the surgical instruments.*
- April 2017 – **BCMS – Bird Concentration Monitoring System**, funded by The Edge Company.  
 March 2018 Responsible for algorithms development, preliminary testing, and dissemination and communication management.  
*The project is a feasibility study for a distributed vision system to monitor bird activity in an airport environment. The activity focus is on foreground/background segmentation of small objects, classification of deformable objects (i.e. birds) in extremely low resoled images, multiple target tracking, and fine-grained object categorization. Testing is devoted not only on performance analysis, but also on the complexity evaluation in order to run the application on embedded hardware. Dissemination and communication is targeted to the scientific community as well as on the stakeholders.*
- Nov. 2015 – **TOTEM – Software and hardware design of Multimedia Infopoints for the project “Alta via della montagna veronese”**, funded by Provincia di Verona.  
 present Responsible for project management, mechanical design, production management and verification.  
*The project aims at the design of 9 multimedia infopoints to be located in touristic places on the mountain side of the Verona province. The activity focuses on the mechanical design of a Cor-Ten structure, project management, support for delivery of public calls for manufacturing, and product verification.*
- Sept. 2012 – **VisCoSo – Detection of Crisis in Socio-Material Systems via VISual-COgnitive-SOcial Processes**, funded by Provincia Autonoma di Trento.  
 April 2016 Scientific Participant: main expert of computer vision and pattern recognition.  
*The project focus is on the detection of critical situations that happens in the entanglement of visual-cognitive-social processes, the process of seeing a scene, forming a belief or an expectation and engaging in an interaction. The scenario of the project is that of designed socio-material systems in which behavior and practices are partly constrained by norms. The complexity of such systems makes it very hard to cope with critical situations, as they emerge from the interplay between all participants. The main outcome of this project is a new ontological model that captures the insights coming from different disciplines, reached with their own specific paradigms, making use of their own concepts and methodologies. This theoretical artifact is meant to be practically used within the system and co-evolving with it.*

Nov. 2013 – **OZ – Osservare l’attenZione (Observing attention)**, funded by University of Trento, Winter Universiade “Trentino 2013”.

Scientific Participant: data acquisition design and management, main expert of people detection and counting, disseminations.

*The project aims to develop a technology able to understand how much and how the attention of a spectator crowd is attracted by a sport event. The system is based on computer vision and pattern recognition models driven by an ontological engine. The experimental setup is built with a distributed system of cameras, reaching the goal to be cheap and non-invasive. The main outcome of this project is a fully annotated video dataset of spectator crowd and synchronized hockey matches. The dataset is used worldwide as a benchmark for several low level and high level video analysis applications such as people detection, people counting, head pose estimation, crowd clustering and highlights detection.*

July 2010 – **ABILE – Structure from Motion per la stima delle abilità motorie**, Marie Curie Actions – COFUND, progetto “Trentino”

Principal Investigator.

*The project aims at developing a marker based motion capture system for the measurement of motion abilities of humans. The motion capture setup is composed by a distributed system of stereocameras to monitor a working volume of  $3 \times 3 \times 2$  meters. The person is asked to wear a specifically designed suit with colored dots; the color pattern is designed to for patches of unique color sequences, which makes the stereo matching extremely robust. The person is then asked to perform specific atomic movements, body limbs are recognized by motion segmentation and joint angles are automatically estimated.*

January 2010 – June 2010 **VERITAS – Virtual and Augmented Environments and Realistic User Interactions To achieve Embedded Accessibility DesignS**, Integrated Project (IP) within the 7th Framework Programme, Theme FP7-ICT-2009.7.2, Accessible and Assistive ICT.

Scientific Participant: main expert of non-rigid 3D reconstruction with multiple cameras for human motion analysis.

*The project VERITAS aims to develop, validate and assess tools for built-in accessibility support of ICT and non-ICT products under a holistic framework. The objective is to introduce simulation based and virtual-reality testing at all designing stages of assistive technologies products in different application areas. VERITAS wants to ensure that future products are systematically designed for all, including people with disabilities and older people and plans to promote its results to the appropriate standards organisations for consideration and potential adoption.*

### Funding

120,000 EUR **Marie Curie Actions – COFUND, progetto “Trentino”**, ABILE – Structure from Motion per la stima delle abilità motorie, Queen Mary University of London & University of Trento  
2010-2012

47,500 EUR **University of Verona – Joint Research 2022**, VISaVIS – Video Sonification on A wearable to support VISually impaired people, Cofund by European Comfort S.r.l., University of Verona

### Talks and seminars

- RISS'20 **Keynote speech: Video-surveillance in the COVID Times**, *International Workshop on Research & Innovation for Secure Societies – in conj. with ICPR*, online, January 2021
- ERF'20 **Invited speech: Embodied AI in robotic surgery - challenges & opportunities**, *Workshop on Machine Intelligence for Automation within Operating Rooms – in conj. with European Robotic Forum*, online, March 2020
- CAIP'19 **Tutorial: Active Object Recognition: a survey of a (re-)emerging domain**, *International Conference on Computer Analysis of Images and Patterns (CAIP)*, Salerno – Italy, September 2019
- ISMR'19 **A Multirobots Teleoperated Platform for Artificial Intelligence Training Data Collection in Minimally Invasive Surgery**, *International Symposium on Medical Robotics*, Atlanta, GA – USA, April 2019
- ERF'19 **Invited speech: Cognitive control in surgical robotics**, *Workshop on Machine Intelligence for Automation within Operating Rooms – in conj. with European Robotic Forum*, Bucharest – Romania, March 2019
- SSPandBE'17 **Indirect Match Highlights Detection with Deep Convolutional Neural Networks**, *International Workshop on Social Signal Processing and Beyond – in conj. with ICIAP*, Catania – Italy, September 2017
- GIRPR'16 **Research activity report at VIPS lab**, *GIRPR Annual meeting*, Grado – Italy, June 2016
- TWSF'14 **OZ – Osservare l'attenZione**, *Trentino Winter Sport Forum – Winter Universiade “Trentino 2013”*, Baselga di Piné – Italy, September 2014
- VIGTA'13 **“Tell Me More”: How Semantic Technologies Can Help Refining Internet Image Search**, *International Workshop on Video and Image Ground Truth in Computer Vision Applications*, St. Petersburg – Russia, July 2013
- JVRC'11 **How do human beings move? A lesson from driver models**, *Joint Virtual Reality Conference*, Nottingham – UK, July 2011
- M&Q'09 **Stima dello stato di cottura di una pizza in produzione automatica mediante colorimetria (italian)**, *VI Congresso “Metrologia & Qualità”*, Turin – Italy, September 2009

## Teaching Experience

### Teacher

- 2021–2024 **Machine Learning for Data Science**, *Master Degree in Data Science*, University of Verona  
 Foundations of Machine Learning, Bayesian decision theory, Supervised and unsupervised learning, Deep learning.
- 2021–2024 **Process Monitoring**, *Master Degree in Computer Engineering for Robotics and Smart Industry*, University of Verona  
 Measurement theory and industrial instrumentation; univariate and multivariate data visualization; anomaly detection; root cause analysis.

- 2022–2024 **Advanced Programming for Artificial Intelligence**, *Master Degree in Artificial Intelligence*, University of Verona  
Python programming, Deep Learning Frameworks, Meta Learning, Continual Learning
- 2021–2023 **Computers Architecture Exercises**, *Bachelor Degree in Computer Science*, University of Verona  
Practical exercises on binary algebra, Finite state machines, memories, microinstructions.
- 2015–2020 **Laboratory of Computers Architecture**, *Bachelor Degree in Computer Science*, University of Verona  
Logical optimization, combinational and sequential circuit synthesis with SIS; Low-level programming with Assembly x86 AT&T.
- Teaching Assistant**
- 2008–2009 **Mechanical and Thermal Measurements**, *Bachelor Degree in Industrial Engineering*, University of Trento

## Professional Activities

### Abilitazione Scientifica Nazionale

- 01/B1 Awarded with the National Scientific Qualification as Associate Professor of Computer Science (09/07/2020 to 09/07/2029)
- 09/H1 Awarded with the National Scientific Qualification as Associate Professor of Information Processing Systems (30/07/2020 to 30/07/2029)

### Memberships

- IEEE Institute of Electrical and Electronics Engineers, since 2020 (member no. 94189079)
- CVPL Computer Vision, Pattern Recognition and Machine Learning (ex GIRPR, italian chapter of IAPR), since 2016 (card no. 635)
- IAPR International Association of Pattern Recognition, since 2016
- CVF The Computer Vision Foundation, since 2017 (card no. 5237)
- BMVA British Machine Vision Association and Society for Pattern Recognition, since 2011
- INSTICC Institute for Systems and Technologies of Information, Control and Communication, since 2017 (card no. 22501)

### Workshop/Conference Organization

- Area chair International Conference on Pattern Recognition (ICPR2020)
- Session chair International Conference on Computer Vision Theory and Applications (VI-SAPP2018)
- Organizing Committee International Workshop on Industrial Machine Learning – @ICPR2020-2022 (2 editions)  
Industrial Session – @ICIAP2019  
International Workshop on Computer Vision + Ontology Applied Cross-disciplinary Technologies (CONTACT) – @ECCV2014

Program Group And Crowd Behavior Analysis And Understanding (GROW) – @CVPR2015  
Committee IEEE Int. Workshop on Computer Vision in Sports (CVsports) – @ICCV2015 and  
@CVPR2017-2021 (6 editions)  
IEEE Int. Workshop on Multimodal Learning Applications (MULA) – @CVPR2018  
International Conference on Applications and Systems of Visual Paradigms (VISUAL)  
from 2019 to 2021

### Editor

Editorial Board Cognitive Processing  
Associate Editor Electronics – Special Issue: Machine Learning applied to Medical Image Analysis  
(2020)  
Journal of Imaging – Special Issue: Industrial Machine Learning Application (2022)

### Reviewer

Journals IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)  
IEEE Transactions on Industrial Informatics (TII)  
Computer Vision and Image Understanding (CVIU)  
IEEE Access  
IEEE Transactions on Circuits and Systems for Video Technology  
Neurocomputing  
Pattern Recognition Letters  
PLoS–One  
Conferences ACM–Multimedia  
IEEE International Conference on Robotics and Automation (ICRA)  
IEEE International Conference on Computer Vision (ICCV)  
IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)  
European Conference on Computer Vision (ECCV)  
Asian Conference on Computer Vision (ACCV)  
International Joint Conference on Artificial Intelligence (IJCAI)

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## Languages

Italian Native speaker  
English Fluent

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## Programming skills

Expert Python, Matlab,  $\LaTeX$ , LabView  
Comfortable C/C++, Processing, HTML, CSS, Assembly, SIS  
Frameworks Scikit-learn, openCV, Keras, Tensorflow, PyTorch, NumPy, Pandas

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## Patents

- [P1] *A method of view frustum detection, corresponding system and computer program product.*  
Priority to IT102016000103076A (13/10/2016)  
Publication of DE112017005182T8 (07/11/2019, Active)  
Publication of WO2018069826A1 (19/04/2018)  
Publication of US20190250702A1 (15/08/2019, Pending)
- [P2] *A Procedure To Predict A Trajectory And A Frustum View, Corresponding System And Computer Product.*  
Application Number: IT 102018000003102 (27/02/2018)
- [P3] *Apparatus and method for assisting visually impaired persons.*  
Application Number: PCT/IB2023/057622 (27/07/2023)
- [P4] *Metodo e sistema di rilevamento di difetti visuali di oggetti da ispezionare, preferibilmente applicabile a linee di produzione.*  
Application Number: IT 102023000025263 (28/11/2023)

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## Publications

Metrics (source: Google Scholar on April 11th, 2024)

Citations 1220  
H index 17  
i-10 index 29

### Journal Papers

- [J17] A. Avogaro, F. Cunico, B. Rosenhahn, and F. Setti. "Markerless human pose estimation for biomedical applications: A survey". In: *Frontiers in Computer Science* 5 (July 2023), p. 1153160. DOI: 10.3389/fcomp.2023.1153160.
- [J17] L. Brusini, F. Stival, F. Setti, E. Menegatti, G. Menegaz, and S. F. Storti. "A Systematic Review on Motor-Imagery Brain-Connectivity-Based Computer Interfaces". In: *IEEE Transactions on Human-Machine Systems* 51.6 (2021), pp. 725–733. DOI: 10.1109/THMS.2021.3115094.
- [J17] F. Cruciani, L. Brusini, M. Zucchelli, G. R. Pinheiro, F. Setti, I. B. Galazzo, R. Deriche, L. Rittner, M. Calabrese, and G. Menegaz. "Interpretable deep learning as a means for decrypting disease signature in multiple sclerosis". In: *Journal of Neural Engineering* 18.4 (2021), 0460a6. DOI: 10.1088/1741-2552/ac0f4b.
- [J17] G. De Rossi, M. Minelli, S. Roin, F. Falezza, A. Sozzi, F. Ferraguti, F. Setti, M. Bonfè, C. Secchi, and R. Muradore. "A first evaluation of a multi-modal learning system to control surgical assistant robots via action segmentation". In: *IEEE Transactions on Medical Robotics and Bionics* 3.3 (2021), pp. 714–724. DOI: 10.1109/TMRB.2021.3082210.
- [J17] F. Falezza, N. Piccinelli, G. De Rossi, A. Roberti, G. Kronreif, F. Setti, P. Fiorini, and R. Muradore. "Modeling of Surgical Procedures Using Statecharts for Semi-Autonomous Robotic

- Surgery". In: *IEEE Transactions on Medical Robotics and Bionics* 3.4 (2021), pp. 888–899. DOI: 10.1109/TMRB.2021.3110676.
- [J17] M. Cristani, A. Del Bue, V. Murino, F. Setti, and A. Vinciarelli. "The Visual Social Distancing Problem". In: *IEEE Access* 8 (May 2020), pp. 126876–126886. DOI: 10.1109/ACCESS.2020.3008370.
- [J17] A. Leporini, E. Oleari, C. Landolfo, A. Sanna, A. Larcher, G. Gandaglia, N. Fossati, F. Muttin, U. Capitano, F. Montorsi, A. Salonia, M. Minelli, F. Ferraguti, C. Secchi, S. Farsoni, A. Sozzi, M. Bonfé, N. Sayols, A. Hernansanz, A. Casals, S. Hertle, F. Cuzzolin, A. Dennison, A. Melzer, G. Kronreif, S. Siracusano, F. Falezza, F. Setti, and R. Muradore. "Technical and Functional Validation of a Teleoperated Multirobots Platform for Minimally Invasive Surgery". In: *IEEE Transactions on Medical Robotics and Bionics* 2.2 (2020), pp. 148–156. DOI: 10.1109/TMRB.2020.2990286.
- [J17] I. Hasan, F. Setti, T. Tsesmelis, V. Belagiannis, S. Amin, A. Del Bue, M. Cristani, and F. Galasso. "Forecasting People Trajectories and Head Poses by Jointly Reasoning on Tracklets and Vislets". In: *IEEE Transactions on Pattern Analysis and Machine Intelligence* In Press (2019). DOI: 10.1109/TPAMI.2019.2949414.
- [J17] F. Setti and M. Cristani. "Evaluating the Group Detection Performance: The GRODE Metrics". In: *IEEE Transactions on Pattern Analysis and Machine Intelligence* 41.3 (Feb. 2019), pp. 566–580. DOI: 10.1109/TPAMI.2018.2806970.
- [J17] F. Setti, D. Conigliaro, M. Tobanelli, and M. Cristani. "Count on Me: Learning to Count on a Single Image". In: *IEEE Transactions on Circuits and Systems for Video Technology* 28.8 (Aug. 2018), pp. 1798–1806. DOI: 10.1109/TCSVT.2017.2656718.
- [J17] F. Setti, D. Conigliaro, P. Rota, C. Bassetti, N. Conci, N. Sebe, and M. Cristani. "The S-Hock dataset: A new benchmark for spectator crowd analysis". In: *Computer Vision and Image Understanding* 159 (June 2017), pp. 47–58. DOI: 10.1016/j.cviu.2017.01.003.
- [J17] N. Biasi, F. Setti, A. Del Bue, M. Tavernini, M. Lunardelli, A. Fornaser, M. Da Lio, and M. De Cecco. "Garment-Based Motion Capture (GaMoCap): high density capture of human shape in motion". In: *Machine Vision and Applications* 26.7-8 (Nov. 2015), pp. 955–973. DOI: 10.1007/s00138-015-0701-2.
- [J17] D. S. Cheng, F. Setti, N. Zeni, R. Ferrario, and M. Cristani. "Semantically-driven automatic creation of training sets for object recognition". In: *Computer Vision and Image Understanding* 131 (Feb. 2015), pp. 56–71. DOI: 10.1016/j.cviu.2014.07.005.
- [J17] F. Setti, C. Russell, C. Bassetti, and M. Cristani. "F-formation Detection: Individuating Free-standing Conversational Groups in Images". In: *PLoS ONE* 10.9 (Sept. 2015), e0139160. DOI: 10.1371/journal.pone.0139160.
- [J17] F. Setti, R. Bini, M. Lunardelli, P. Bosetti, S. Bruschi, and M. De Cecco. "Shape measurement system for single point incremental forming (SPIF) manufactures by using trinocular vision and random pattern". In: *Measurement Science and Technology* 23.11 (Oct. 2012), p. 115402. DOI: 10.1088/0957-0233/23/11/115402.
- [J17] M. De Cecco, M. Pertile, L. Baglivo, M. Lunardelli, F. Setti, and M. Tavernini. "A unified framework for uncertainty, compatibility analysis, and data fusion for multi-stereo 3-D shape estimation". In: *IEEE Transactions on Instrumentation and Measurement* 59.11 (Sept. 2010), pp. 2834–2842. DOI: 10.1109/TIM.2010.2060930.

### Book chapters

- [B3] F. Cruciani, L. Brusini, M. Zucchelli, G. Retuci Pinheiro, F. Setti, R. Deriche, L. Rittner, M. Calabrese, I. Boscolo Galazzo, and G. Menegaz. "Explainable deep learning for decrypting disease signatures in multiple sclerosis". In: *Explainable Deep Learning AI*. 2023. Chap. 6, pp. 97–123. DOI: 10.1016/B978-0-32-396098-4.00012-0.
- [B3] F. Setti and M. Cristani. "The GRODE Metrics". In: *Group and Crowd Behavior for Computer Vision*. 2017. Chap. 16, pp. 371–390.

### Conference Papers

- [C48] L. Capogrosso, F. Girella, F. Taioli, M. Dalla Chiara, M. Aqeel, F. Fummi, F. Setti, and M. Cristani. "Diffusion-Based Image Generation for In-Distribution Data Augmentation in Surface Defect Detection". In: *International Conference on Computer Vision Theory and Applications (VISAPP)*. Feb. 2024. DOI: 10.5220/0012350400003660.
- [C48] M. Bolpagni and F. Setti. "Autism Spectrum Disorder Identification from Visual Exploration of Images". In: *International Conference on Image Analysis and Processing (ICIAP)*. Sept. 2023. DOI: 10.1007/978-3-031-43148-7\_7.
- [C48] L. Corradi, A. Manenti, F. Del Bonifro, F. Setti, and D. Del Sorbo. "A Deep Natural Language Inference Predictor Without Language-Specific Training Data". In: *International Conference on Image Analysis and Processing (ICIAP)*. Sept. 2023. DOI: 10.1007/978-3-031-43153-1\_15.
- [C48] F. Cunico, L. Capogrosso, A. Castellini, F. Setti, P. Pluchino, F. Zordan, V. Santus, A. Spagnoli, S. Cordibella, G. Gennari, M. Borgo, A. Sozza, S. Troiano, R. Flor, A. Zanella, A. Farinelli, L. Gamberini, and M. Cristani. "The Post-pandemic Effects on IoT for Safety: The Safe Place Project". In: *Design, Automation & Test in Europe Conference & Exhibition (DATE)*. Apr. 2023. DOI: 10.23919/DATE56975.2023.10136924.
- [C48] M. Onofrei, F. Castellini, G. Pravadelli, C. Drioli, and F. Setti. "Video Sonification to Support Visually Impaired People: The VISaVIS Approach". In: *International Conference on Image Analysis and Processing (ICIAP)*. Sept. 2023. DOI: 10.1007/978-3-031-43153-1\_42.
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