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 Gender Male | Date of birth 18/07/1988 (Italy)

Citation Scores (Scopus) (Google Scholar)	<i>Documents: 37</i>	<i>Total citations: 359</i>	<i>h-index: 11</i>
	<i>Documents: 39</i>	<i>Total citations: 493</i>	<i>h-index: 13</i>

EDUCATION

November 2015 - October 2018 (3 years)	<i>Ph.D in Mathematics & Computer Science (XXXI cycle)</i> Level 8 EQF University of Catania (Italy) <i>Thesis title</i> “Methods for Sentiment Analysis and Social Media Popularity of Crowdsourced Visual Contents” <i>Main topics:</i> Computer Vision, Machine Learning, Sentiment Analysis Scholarship granted by Telecom Italia <i>Tutor:</i> Prof. Sebastiano Battiato
October 2012 – March 2015	<i>M.S. in Computer Science - 110/110 magna cum laude</i> Level 7 EQF University of Catania (Italy) <i>Specific Courses:</i> Image Processing, Multimedia, Pattern Recognition, Computer Vision, Computer Graphics, Computer Forensics. <i>Average Grade: 30/30</i> 8 full marks with distinction
October 2007 – July 2012	<i>B.S. in Computer Science - 110/110 magna cum laude</i> Level 6 EQF University of Catania (Italy) <i>Average Grade: 29/30</i> 7 full marks with distinction
Sept 2002 – June 2007	<i>Industrial Engineer in Computer Science - 100/100</i> Level 5 EQF
<i>Certifications</i>	
August 5, 2016	Machine Learning by Stanford University on Coursera certificate. <i>Final Grade: 96,1%</i>
May 2019	“Processi di apprendimento, innovazione e metodologie didattiche” (6 hours of frontal lessons). University of Catania (Italy).
June 25, 2018	“Gli strumenti di supporto agli studenti nei processi di apprendimento e di inserimento nella vita universitaria” (4 hours of frontal lessons). University of Catania (Italy).
Jan 15, 2019	24 CFU credits on anthropo-psycho-pedagogical disciplines and teaching methodologies.
March 2011 – June 2011	Certification of examination at “The Mainframe” course held by IBM Executive IT Specialist Angelo Barbarino - <i>IBM Italia spa</i> (IBM Mainframe, Hybrid Systems, Platform Selection, Cloud Computing).

AWARDS

February 2022	IEEE Senior Membership recognition.
02 August 2021	Certificate of recognition for the most downloaded papers in April 2021 (2 nd ranked out of 1094) and May 2021 (2 nd ranked out of 935) in <i>IET Image Processing Journal</i> (link).
30 April 2021	Best Poster Presentation at the International Conference on Image Processing and Vision Engineering – <i>IMPROVE 2021</i> (link).
23 July 2015	Archimede’s prize conferred by University of Catania for the excellence of the academic career (link).

Institutional Activity

Doctorate committee member of the doctorate programme in Computer Science (cycle XXXVII) of the University of Catania.

Committee member for the admission to the MD programme in Data Science for Management, University of Catania. Academic Year 2021-2022.

Teaching committee member for the Doctorate programme in Computer Science, University of Catania, AY 2021-2022.

Committee member for the promotion of the MD programme in Data Science for Management, University of Catania. Since 2020.

Committee member of the POLA. Smart Working Strategies, of the Department of Mathematics and Computer Science, University of Catania. Since 2022.

Committee member for several research grants assignment on different topics related to Computer Vision, Machine Learning and AI. Department of Mathematics and Computer Science, University of Catania. Since 2020.

Chairing Activity

October 2022

Area Chair – ACM Multimedia 2022 *the 30th ACM International Conference on Multimedia*.

August 2022

Publication Chair for MMforWILD (Multimedia FORensics in the WILD) – ICPR 2022 Workshop.

July 2021

Workshop Chair - International Workshop on Microscope Image Processing (MIP 2021) – SIGMAP 2021 Workshop.

April 2021

Session Chair - Image Processing and Vision Engineering - IMPROVE 2021 (International Conference on Image Processing and Vision Engineering).

April 2021

Workshop Chair for IMPROVE 2021 (International Conference on Image Processing and Vision Engineering).

January 2021

Session Chair for Pollen Grain Classification Challenge – ICPR 2020 Challenge.

September 2020

Publication Chair for MMforWILD (Multimedia FORensics in the WILD) – ICPR 2020 Workshop.

16-18 September 2019

Session Chair for MULTIFORESEE 2019 (MULTI-modal Imaging of FOREnsic SciEnce Evidence tools for Forensic Science).

18-23 February 2017

Session Chair for PCMA (Patterns for Crowdsourced Media Analysis) PATTERNS2017.

Invited Talks

May 2022

Invited speaker – ICIAP 2021 - International Conference on Image Analysis and Processing - Tutorial: An Introduction on Deepfakes Creation and Detection Approaches.

April 2022

Invited speaker - IMPROVE 2022 - International Conference on Image Processing and Vision Engineering - Tutorial: Deepfakes and Adversarial Machine Learning.

27 January 2022

Invited speaker - Smart Robot Workshop @ UNISA – Computer Vision e Robotica: Case studies@UniCT. <https://mivia.unisa.it/smartrobot/#program>

10-24 October 2021

Invited Guest Lecturer - University of Hertfordshire - School of Physics Engineering and Computer Science, UK – Topics: Artificial Intelligence, GAN, Deepfakes and Adversarial Machine Learning.

21 Sept. 2019

Invited speaker – Scuola di Formazione Politica per il Bene Comune – Incontro su “Rapporto persona-algoritmo: quali prospettive per la libertà” – Catania, Italia, 21 Settembre 2019.

26 July 2019

Invited Lecturer at SIGMAP 2019 – Topic: *Sentiment Analysis on Social Media*.

Challenges Organization

23-27 May 2022

IAPR International Conference on Image Analysis and Processing (ICIAP 2021)
Deepfake Images Detection and Reconstruction Challenge

25-28 October 2020

IEEE International Conference on Image Processing (ICIP 2020)
Challenge Session – Predicting Social Image Popularity Dynamics

13-18 September 2020

IAPR International Conference on Pattern Recognition (ICPR 2020)
Challenge Session – Pollen Grain Classification Challenge

Editor Activity

Guest Editor of IJERPH – Special Issue on “The Role of Technology, CyberPsychology, Images and Social Media in Cigarettes and Tobacco Habits”. - **Guest Editors:** A. Ortis, S. Battiato, P. Caponnetto.

Guest Editor of SENSORS – Special Issue on “Artificial Intelligence and Multimodal Technology for Health Applications”.

Guest Editor of MTAP – Multimedia Tools and Applications. Special Issue on “*Interdisciplinary Forensics: Government, Academia and Industry Interaction*”.

Editor-in-Chief: Borko Furth – **Lead Guest Editor:** Sebastiano Battiato – **Guest Editors:** Martina Marchetti-Deschmann, Simona Francese, **Alessandro Ortis**.

Co-editor of the proceedings related to the competition “Pollen Grain Classification Challenge” in conjunction with ICPR 2020 - 25th International Conference on Pattern Recognition. Lecture Notes in Computer Science LNCS 2021, Volume 12668 - Part VIII Pages 469-479.

Editor of PATTERNS 2017 - The Ninth International Conferences on Pervasive Patterns and Applications. IARIA Conference. Athens, Greece, February 19-23, 2017.

Editors: H. Manaert (University of Antwerp, Belgium), Y. Iwahori (Chubu University, Japan), A. Mirnig (University of Salzburg, Austria), **A. Ortis** (University of Catania, Italy), C. Perez (Paris School of Business, France), J. Daykin (Aberystwyth University, Mauritius Branch Camp, Mauritius).

Topic Editor of Sensors (MDPI Journal)

Organization/Committee Membership at International Events

Local Committee Member of IFOSS 2022 (International Summer School on Forensics) – Ragusa, Italy

Program Committee Member of ISHAPE 2022 (International workshop on Intelligent Systems in Human and Artificial PEception) – Lecce, Italy

Program Committee Member of CompSysTech 2020 (International Conference on Computer Systems and Technologies) – Ruse, Bulgaria

Program Committee Member of SIGMAP 2020 (International Conference on Signal Processing and Multimedia Applications)

Program Committee Member of CVCS 2020 (Colour and Visual Computing Symposium)

Program Committee Member of MMforWILD 2020 (Multimedia FOREnsics in the WILD) – ICPR 2020 Workshop.

Scientific Organizing Committee Member of MULTIFORESEE 2019 (MULTI-modal Imaging of FOREnsic SciEnce Evidence tools for Forensic Science).

Program Committee Member of EMERGING 2019 (The Eleventh International Conference on Emerging Networks and Systems Intelligence)

Program Committee Member of EPIC 2018 (International Workshop on Egocentric Perception, Interaction and Computing)

Program Committee Member of PATTERNS 2018 (Tenth International Conferences on Pervasive Patterns and Applications)

Program Committee Member of PATTERNS 2017 (Ninth International Conferences on Pervasive Patterns and Applications)

Peer reviewer for the
following Journals and
Conferences

verified peer review record at
<https://publons.com/a/1463360>

IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2020-2022
IEEE Winter Conference on Applications of Computer Vision, 2019
IEEE Access, 2019-2022
IEEE Transactions on Affective Computing (TAC), 2019
IEEE Transactions on Multimedia (TMM), 2018
European Conference on Computer Vision (ECCV), 2022
ACM Computing Surveys (CSUR), 2019
ACM International Conference on Multimedia Retrieval (ACM ICMR), 2020-2022
Pattern Recognition (PR), 2018, 2019
IAPR International Conference on Pattern Recognition (ICPR), 2020
European Conference on Computer Vision (ECCV), 2018, 2019
Artificial Intelligence Review (Springer Nature), 2017-2022
Multimedia FORensics in the WILD (MMforWILD) – ICPR Workshop, 2020,2022.
IET Image Processing (IET-IP), 2019
Multimedia Tools and Applications Journal (MTAP), 2018, 2019
Pattern Recognition Letters (PRL), 2018, 2019
Journal of Electronic Imaging (JEI), 2016, 2018
Open Computer Science, 2019-2022
MDPI Sensors (SENSC9), 2019
MDPI Information (INFOGG), 2019
MDPI Biosensors (BIOSHU), 2018, 2019
MDPI Bioengineering, 2022
Cyberpsychology, Behaviour, and Social Networking, 2020
Int. Conference on Signal Processing and Multimedia Applications (SIGMAP), 2020-2022
Egocentric Perception Interaction and Computing Workshop (EPIC), 2018
Computer Vision and Image Understanding Journal (CVIU), 2015
IET Computer Vision (IET-CVI), 2016, 2018, 2019
Expert Systems with Applications, 2018
Workshop on Assistive Computer Vision and Robotics (ACVR), 2017, 2018
IEEE Winter Conference on Applications of Computer Vision (WACV), 2018, 2019, 2020
Artificial Intelligence Review (AIRE), 2018
Open Computer Science (OPENCS), 2019, 2020
Vision for Interaction and Behaviour understanding (VIBE), 2018
International Conferences on Pervasive Patterns and Applications (PATTERNS), 2017/18
International Conference on Image Analysis and Processing (ICIAP), 2017-2022
International Conference on Computer Vision Theory and Applications (VISAPP) 2017/18

Conferences & Workshops
(2015-2022)

Ital-IA – Convegno Nazionale CINI sull'Intelligenza Artificiale 2022 – *Online*
Smart Robot Workshop @ UNISA, Salerno
IMPROVE 2021 Int. Conference on Image Processing and Vision Engineering, *Virtual*
ICPR 2020 International Conference on Pattern Recognition, *Virtual*
IEEE International Conference on Image Processing 2020 - ICIP - *Abu Dhabi, SA*
MULTIFORESEE 2019 (MULTI-modal Imaging of FOREnsic SciEnce Evidence tools for Forensic Science) – *Catania, IT*
International Conference on Image Analysis and Processing 2019 – *Trento, IT*
SIGMAP International Conference on Signal Processing and Multimedia Applications
Ital-IA – Convegno Nazionale CINI sull'Intelligenza Artificiale 2019 – *Rome, IT*
Data Science and Social Research 2019 – *Milan, IT*
Content Based Multimedia Indexing 2018 – *La Rochelle, FR*
International Workshop on Computer Vision 2018 – *Modena, IT*
International Conference on Image Analysis and Processing 2017 – *Catania, IT*
International Conference on Pervasive Patterns and Applications 2017 – *Athens, GR*
Variational Inequalities, Nash Equilibrium Problems and Applications 2016 – *Catania, IT*
ACM International Conference on Multimedia Retrieval 2016 – *New York, USA*
ACM Multimedia 2015 – *Brisbane, AUS*

International Schools

07-13 July 2019
27 Aug- 7 Sep 2018
29 Jul- 4 Aug 2018
8-14 July 2018
29 May- 01 June 2017
11-15 July 2017

04-10 September 2016
01-06 August 2016
17-23 July 2016
12-18 July 2015
13-19 July 2014
14-20 July 2013

International Computer Vision Summer School – *Computer Vision - Where are we?*, Sampieri, IT
Machine Learning Summer School (MLSS). *Madrid, ES*
Medical Imaging Summer School – *Medical Imaging meets Deep Learning*. Favignana, IT
International Computer Vision Summer School – *Computer Vision after Deep Learning*. Sampieri, IT
Multimedia Security – Held by Prof. S. Battiato at the ICT Doctoral School. *Trento, IT*
International Computer Vision Summer School – *From Representation to Action and Interaction*.
Sampieri, IT
S3P IEEE-EURASIP Summer School on Signal Processing – *Semantics in Media*. Trento, IT
Medical Imaging Summer School – *Medical Imaging meets Machine Learning*. Favignana, IT
International Computer Vision Summer School – *What happens next?* Sampieri, IT
International Computer Vision Summer School – *Learning to see*. Sampieri, IT
International Computer Vision Summer School – *From Fundamentals to Applications*. Sampieri, IT
International Computer Vision Summer School – *Computer Vision and Machine Learning*. Sampieri

Membership at International Associations/Societies

IEEE Senior Member

- IEEE Signal Processing Society Membership. Since 2016.
- IEEE Young Professional Membership. Since 2022.
- IEEE Information Theory Society Membership. Since 2022.
- IEEE System Council Membership. Since 2022.
- IEEE Member - Membership No.: 93903579. Since 2016.

Member of the of the Public-Private Joint Research Laboratory between STMicroelectronics and the of the University of Catania. 2019-now

Member of the Interest Group for Data Science in Food Safety Risk Assessment of the EFSA (European Food Safety Authority). September 2021-now.

Member of CoEHAR (Center of Excellence for the acceleration of Harm Reduction)

Member of ILhM Centre - (Innovation Leadership and healthcare management)

Member of CINI and its national laboratories on "Smart Cities"; "Artificial intelligence and intelligent Systems"; "Cybersecurity";

Member of Reviewer Board of SENSORS (MDPI Journal)

Member of COST (European Cooperation in Science and Technology).

Member of REPRIZE: expert reviewers for research projects funded by the Italian Ministry of Education, Universities and Research (MIUR).

Member of CVPL: Italian association for the research in Computer Vision Pattern recognition and machine Learning.

Researcher at Image Processing Laboratory (IPLAB) – University of Catania

Member of INSTICC (Institute for Systems and Technologies of Information, Control and Communication) Membership N.:18607

Member of SIGMM (Special Interest Group in Multimedia) - Membership No.: 7355131

Short Bio

I am Research Fellow at the University of Catania. I have been working in the field of Computer Vision research since 2012, when I joined to the IPLab (Image Processing Laboratory) and started a research internship at STMicroelectronics, working on the problem of stereoscopic image compression. As result, I published two conference papers and an International Patent [US9183644B2]. The experiences and further extensions of this work have been published in a journal paper [J2].

In 2015, after my master's degree (summa cum laude), I was awarded the Archimede Prize for Excellence in Academic Career conferred by the University of Catania. Along the way I have done another research internship at TIM (Telecom Italia), working on crowdsourced image/video analysis. During this experience, I published several works on the field of computer vision, multimedia, and pattern recognition applied to multi-modal crowdsourced data (e.g., images, text, GPS, etc.).

After the internship, the company decided to extend our collaboration granting me a PhD scholarship, and in January 2019 I have achieved the PhD in Mathematics and Computer Science at the University of Catania (XXXI cycle). The PhD thesis investigates several aspects related to Visual Sentiment Analysis applied to crowdsourced images/videos. I spent part of my PhD research at the Imperial College in London, under the supervision of Prof. Catarina Sismeiro, working on the analysis of social media advertising contents. Since 2017, I have been publishing several works on the topics of crowdsourced media analysis, multi-source video stream analysis and understanding, image/text sentiment analysis, including conference papers and journals [J6, J7, J8, J12].

In the meantime, I have been collaborating with several research groups working on different topics such as autonomous driving of Unmanned Aerial Vehicles (UAV) and physiological signal analysis. In particular, in 2017 I participated to the MBZIRC challenge, which aimed to develop solutions to make an UAV able to autonomous land on top of a moving vehicle. Our ranked fourth in the challenge, and the achieved results have been reported on two papers.

Due to the results achieved during my PhD, I was requested to organize the special issue on Patterns for Crowdsourced Media Analysis at PATTERNS 2017 and I was invited as lecturer at SIGMAP 2019, where I presented a tutorial about Sentiment Analysis on Social Media. Furthermore, I am currently organizing a Challenge on Predicting Social Image Popularity Dynamics that will be held in conjunction with the IEEE ICIP 2020 conference. I have also worked on other computer vision topics such as skin lesion analysis [J10], context-aware image resizing and how Convolutional Neural Networks are influenced by input pre-processing.

As fellow researcher, my duties have been extended and I have also started to work on multidisciplinary research topics. Between 2018 and 2019 I worked on the field of physiological signal analysis publishing two journals [J9, J11] and one conference paper about PPG/ECG analysis and blood pressure estimation. Since 2019 I am a collaborator of CoEHAR (research Center of Excellence for the Acceleration of HArm Reduction), and since 2021 I'm member of the CoEHAR scientific board. The results of this line of research have been reported on three journal papers [J3, J4, J5]. In the context of CoEHAR, I am in charge of the research activities of two projects related to food recognition for dietary assessment and smart smoking detection, respectively.

In the meantime, I have been working on several research projects that involve the combination of physiological signals and image analysis for Advanced Driver Assistance Systems (ADAS+), the development of smart tools for clinical decision support systems (DL4HEALTH), the definition of algorithms for smart manufacturing (SATURN), among others. Currently I have a collaboration with a group of agrobiologists and the Ferrero Hco Company, which aims to develop systems to perform the automatic analysis and diagnosis of pollen grains from microscope images. Our first results have been reported on two conference papers. I have also organized and chaired the Pollen Grain Classification Challenge at IAPR ICPR 2020.

RESEARCH
EXPERIENCE

September 2020 – now

February 2019 – August
2020

January – April 2017

PUBLICATIONS

Journals

Research Fellow (RTDa) – University of Catania

Sviluppo di Tecnologie e sistemi avanzati per la sicurezza dell'auto mediante piattaforme ADAS-ADAS+ (Advanced Driver Assistance Systems).

Contract Researcher (Post-doc)

University of Catania – Department of Mathematics and Computer Science

Visiting Researcher

Visiting Researcher at the Imperial College London

Analysis of Social Media data for Sentiment Analysis and Engagement evaluation

- J1. Rundo, F., Anfuso, I., Amore, M. G., Ortis, A., Messina, A., Conoci, S., & Battiato, S. (2022). **Advanced eNose-driven pedestrian tracking pipeline for intelligent car driver assisting system: preliminary results**. *Sensors*, 22(2), 674.
- J2. Ortis A, Grisanti M, Rundo F, Battiato S. **A Benchmark Evaluation of Adaptive Image Compression for Multi Picture Object Stereoscopic Images**. *Journal of Imaging*. 2021; 7(8):160.
- J3. Tomaselli V, Battiato S, Ortis A, Cantone GG, Urso S, Polosa R. **Methods, Developments, and Technological Innovations for Population Surveys**. *Social Science Computer Review*. March 2021. doi:10.1177/0894439321994218
- J4. Allegra, D., Battiato, S., Ortis, A., Urso, S., Polosa, R. (2020). **A Review on Food Recognition Technology for Health Applications**. *Health psychology research* 8.3 172-187.
- J5. Ortis A, Caponnetto P, Polosa R, Urso S, Battiato S. **A Report on Smoking Detection and Quitting Technologies**. *International Journal of Environmental Research and Public Health*. 2020; 17(7):2614. Digital Health Section.
- J6. Ortis, A.; Farinella, G. M.; Battiato, S.: **Survey on Visual Sentiment Analysis**, IET Image Processing, 2020, DOI: 10.1049/iet-ipr.2019.1270. IET Digital Library, <https://digital-library.theiet.org/content/journals/10.1049/iet-ipr.2019.1270>.¹
- J7. A. Ortis, G. M. Farinella, G. Torrisi and S. Battiato, **Exploiting objective text description of images for visual sentiment analysis**. *Multimedia Tools and Applications* (2020): 1-24. <https://doi.org/10.1007/s11042-019-08312-7>.
- J8. A. Ortis, G. M. Farinella and S. Battiato, **Predicting Social Image Popularity Dynamics at Time Zero**, In *IEEE Access*, vol. 7, pp. 171691-171706, 2019. doi: 10.1109/ACCESS.2019.2953856.
- J9. Rundo, F., Ortis, A., Battiato, S., Conoci, S. **Advanced Bio-Inspired System for Noninvasive Cuff-Less Blood Pressure Estimation from Physiological Signal Analysis**. *MDPI Computation* 6.3 (2018): 46.
- J10. Rundo, F., Conoci, S., Banna, G. L., Ortis, A., Stanco, F., & Battiato, S. (2018). **Evaluation of Levenberg–Marquardt neural networks and stacked autoencoders clustering for skin lesion analysis, screening and follow-up**. *IET Computer Vision*, 12(7), 957-962.
- J11. Rundo, Francesco, Conoci, Sabrina, Ortis, Alessandro, Battiato, Sebastiano (2018). **An advanced bio-inspired photoplethysmography (PPG) and ECG pattern recognition system for medical assessment**. *MDPI SENSORS*, vol. 18.
- J12. Ortis, A., Farinella, G. M., D'Amico, V., Adesso, L., Torrisi, G., & Battiato, S. (2017). **Organizing egocentric videos of daily living activities**. Elsevier, *Pattern Recognition*, 72, 207-218.

Under review

- J13. S. Battiato, P. Caponnetto, R. Leotta, G. Marotta, A. Midolo, A. Ortis, R. Polosa. **Development and user evaluation of a food-recognition app (FoodRec): Experimental Data and Qualitative Analysis**. Submitted to *Behaviour & Information Technology Journal*.
- J14. R. Leotta, A. Ortis, S. Battiato. **Real-time Driver Monitoring on Automotive-grade Devices**. Submitted to *Frontiers in Computer Science*.

Patents

[US9183644B2] - S. Battiato, G. Di Giore, A. Ortis, F. Rundo – **Methods and Systems for treatment of Stereoscopic Images, corresponding Computer Programs Products, and Storage Carrier**.

¹ 2nd most downloaded paper of IET Image Processing Journal (https://www.dmi.unict.it/ortis/awards/IET_IP_certificate.pdf).

US Patent US9183644B2 – Status: Granted (10 Nov 2015)
EU Patent TO2012A000647 – Status: Issued (09 Jan 15)

Software Products

Author of software protected by copyright: “DISTANTIA” - Applicazione, metodi e sistemi per la rilevazione della distanza tra dispositivi.

Proceedings

- P1. Hussain, M., Ortis, A., Polosa, R., & Battiato, S. (2022). **User-Biased Food Recognition for Health Monitoring**. In International Conference on Image Analysis and Processing (pp. 98-108). Springer, Cham.
- P2. R. Zuccarà, A. Ortis, S. Battiato. **Recognition of complex gestures for real-time emoji assignment**. Accepted at ICIAP 2022.
- P3. M.A. Napoli Spatafora, A. Ortis, S. Battiato. **MixUp Data Augmentation for COVID-19 Infection Percentage Estimation**. Accepted at ICIAP 2022.
- P4. Cauli, N., Ortis, A., & Battiato, S. (2022). **Fooling a Face Recognition System with a Marker-Free Label-Consistent Backdoor Attack**. In International Conference on Image Analysis and Processing (pp. 176-185). Springer, Cham.
- P5. Napoli Spatafora, M. A., Ortis, A., & Battiato, S. (2022). **Towards an Efficient Facial Image Compression with Neural Networks**. In International Conference on Image Analysis and Processing (pp. 512-523). Springer, Cham.
- P6. A. Cillo, C. Ulu, E. Borgonovo, A. Ortis, S. Battiato. **Should Advisors Signal Access to Algorithms?** Accepted at the Foundations of Utility and Risk Conference 2022.
- P7. Trenta F., Ortis A., Battiato S. (2021) **Fine-Grained Image Classification for Pollen Grain Microscope Images**. In Computer Analysis of Images and Patterns. CAIP 2021. Lecture Notes in Computer Science, vol 13052. Springer, Cham. https://doi.org/10.1007/978-3-030-89128-2_33
- P8. Battiato S., Caponnetto P., Giudice O., Hussain M., Leotta R., Ortis A. and Polosa R. (2021). **Food Recognition for Dietary Monitoring during Smoke Quitting**. In Proceedings of the International Conference on Image Processing and Vision Engineering - Volume 1: IMPROVE, ISBN 978-989-758-511-1, pages 160-165. <https://doi.org/10.5220/0010492701600165>
- P9. Devaram R.R., Ortis A., Battiato S., Bruna A.R., Tomaselli V. (2021) **Real-Time Thermal Face Identification System for Low Memory Vision Applications Using CNN**. In: Del Bimbo A. et al. (eds) Pattern Recognition. ICPR International Workshops and Challenges. ICPR 2021. Lecture Notes in Computer Science, vol 12665. Springer, Cham. https://doi.org/10.1007/978-3-030-68821-9_44
- P10. Battiato S. et al. (2021) **Pollen Grain Classification Challenge 2020**. In: Del Bimbo A. et al. (eds) Pattern Recognition. ICPR International Workshops and Challenges. ICPR 2021. Lecture Notes in Computer Science, vol 12668. Springer, Cham. https://doi.org/10.1007/978-3-030-68793-9_34
- P11. Battiato, S., Conoci, S., Leotta, R., Ortis, A., Rundo, F., & Trenta, F. (2020, November). **Benchmarking of Computer Vision Algorithms for Driver Monitoring on Automotive-grade Devices**. In 2020 AEIT International Conference of Electrical and Electronic Technologies for Automotive (AEIT AUTOMOTIVE) (pp. 1-6). IEEE.
- P12. Battiato, S., Ortis, A., Trenta, F., Ascari, L., Politi, M., Siniscalco, C. (2020). **Detection and Classification of Pollen Grain Microscope Images**. CVPR Workshop on Computer Vision for Microscopy Image Analysis (CVMI).
- P13. Battiato, S., Ortis, A., Trenta, F., Ascari, L., Politi, M., Siniscalco, C. (2020). **Pollen13K: A Large Scale Microscope Pollen Grain Image Dataset**. *IEEE International Conference on Image Processing (ICIP)*.
- P14. Ortis A., Farinella G.M., Battiato S. (2019) **Prediction of Social Image Popularity Dynamics**. In: Ricci E., Rota Bulò S., Snoek C., Lanz O., Messelodi S., Sebe N. (eds) Image Analysis and Processing – ICIAP 2019. ICIAP 2019. Lecture Notes in Computer Science, vol 11752. Springer, Cham.
- P15. Rotondo T., Ortis A., Battiato S. (2019) **Generalised Gradient Vector Flow for Content-Aware Image Resizing**. In: Ricci E., Rota Bulò S., Snoek C., Lanz O., Messelodi S., Sebe N. (eds) Image Analysis and Processing – ICIAP 2019. ICIAP 2019. Lecture Notes in Computer Science, vol 11752. Springer, Cham.
- P16. Tang H., Ortis A., Battiato S. (2019) **The Impact of Padding on Image Classification by Using Pre-trained Convolutional Neural Networks**. In: Ricci E., Rota Bulò S., Snoek C., Lanz O., Messelodi S., Sebe N. (eds) Image Analysis and Processing – ICIAP 2019. ICIAP 2019. Lecture Notes in Computer Science, vol 11752. Springer, Cham.
- P17. Ortis, A.; Farinella, G. and Battiato, S. (2019). **An Overview on Image Sentiment Analysis: Methods, Datasets and Current Challenges**. In

Proceedings of the 16th International Joint Conference on e-Business and Telecommunications - Volume 1: SIGMAP, ISBN 978-989-758-378-0, pages 290-300.

- P18. Rundo, F.; Ortis, A.; Battiato, S. and Conoci, S. (2019). **Advanced Multi-neural System for Cuff-less Blood Pressure Estimation through Nonlinear HC-features**. In Proceedings of the 16th International Joint Conference on e-Business and Telecommunications - Volume 1: SIGMAP, ISBN 978-989-758-378-0, pages 321-325. DOI: 10.5220/0007909403210325
- P19. Ortis, A., Farinella, G. M., Torrasi, G., Battiato, S. (2018). **Visual Sentiment Analysis Based on Objective Text Description of Images**. In Proceeding of 2018 International Conference on Content-Based Multimedia Indexing (CBMI) (pp. 1-6). IEEE. DOI: 10.1109/CBMI.2018.8516481
- P20. G. Armano, S. Battiato, D. Bennato, L. Boratto, S. M. Carta, T. Di Noia, E. Di Sciascio, A. Ortis, D. Reforgiato (2018). **NewsVallum: Semantics-Aware Text and Image Processing for Fake News Detection system**. Proceedings of the 26th Italian Symposium on Advanced Database Systems.
- P21. S. Battiato, Giovanni M. Farinella, Filippo L. M. Milotta, A. Ortis, F. Stanco, V. D'Amico, L. Adesso, G. Torrasi (2017). **Organizing Videos Streams for Clustering and Estimation of Popular Scenes**. In Proceeding of International Conference on Image Analysis and Processing. ICIAP. LNCS Vol. 10484, Springer. Cham, 2017. p. 51-61.
- P22. S. Battiato, L. Cantelli, F. D'Urso, G. M. Farinella, L. Guarnera, D. Guastella, C. D. Melita, G. Muscato, A. Ortis, F. Ragusa, C. Santoro (2017). **A System for Autonomous Landing of a UAV on a Moving Vehicle**. In Proceeding of International Conference on Image Analysis and Processing. ICIAP. LNCS Vol. 10484, Springer, Cham, 2017. p. 129-139.
- P23. Cantelli, D. C. Guastella, C. D. Melita, G. Muscato, S. Battiato, F. D'Urso, G. M. Farinella, A. Ortis and C. Santoro (2017). **Autonomous Landing of a UAV on a Moving Vehicle for the MBZIRC**. In Proceeding of The 20th International Conference on Climbing and Walking Robots and Support Technologies for Mobile Machines, 2017 (p. 197). World Scientific.
- P24. M. Cavallo, E. Guardo, A. Ortis, M. Sapienza, and G. La Torre (2017). **Mass Events Monitoring Through Crowdsourced Media Analysis**. In proceedings of The Ninth International Conferences on Pervasive Patterns and Applications. PATTERNS 2017. Athens, Greece. (pp. 54-57). IARIA, 2017.
- P25. Ortis, A., Farinella, G. M., D'Amico, V., Adesso, L., Torrasi, G., & Battiato, S. (2016). **Organizing egocentric videos for daily living monitoring**. In proceedings of the ACM MM International Workshop on Lifelogging Tools and Applications (LTA '16). Association for Computing Machinery, New York, NY, USA, 45–54.
- P26. S. Battiato, G.M. Farinella, F.L.M. Milotta, A. Ortis, L. Adesso, A. Casella, V. D'Amico, G. Torrasi (2016). **The Social Picture**, In Proceedings of the 2016 ACM on International Conference on Multimedia Retrieval (ICMR '16). Association for Computing Machinery, New York, NY, USA, 397–400.
- P27. A. Ortis, G. M. Farinella, D. D'amico, L. Adesso, G. Torrasi, S. Battiato (2015). **RECFusion: Automatic Video Curation Driven by Visual Content Popularity**, In Proceedings of the 23rd ACM international conference on Multimedia (MM '15). Association for Computing Machinery, New York, NY, USA, 1179–1182.
- P28. Ortis, A., Battiato, S. (2015). **A New Fast Matching Method for Adaptive Compression of Stereoscopic Images**. In Three-Dimensional Image Processing, Measurement (3DIPM), and Applications – IS&T/SPIE Electronic Imaging. Vol. 9393. International Society for Optics and Photonics, 2015.
- P29. Ortis A., Rundo F., Di Giore G., Battiato S. (2013) **Adaptive Compression of Stereoscopic Images**. In: Petrosino A. (eds) Image Analysis and Processing – ICIAP 2013. ICIAP 2013. Lecture Notes in Computer Science, vol 8156. Springer, Berlin, Heidelberg.

Projects Participation

2020 – now	Research collaboration Georgetown University (Washington) and Bocconi (Milan) on the prediction of popularity of social media contents related to the decision theory and behavioural studies.
2021 – now	Joint research agreement with Huawei Technologies Laboratory. Grenoble, FR
June 2022 – now	ARTES 5.0 Advanced Robotics and enabling digital TEchnologies & systems 5.0 – RESTART ITALY - EU Call DIGITAL-2021-EDIH-01.
April 2022 - now	Just Smart “Giustizia Smart: Strumenti e modelli per ottimizzare il lavoro dei giudici – JustSmart” PON “Governance e Capacità Istituzionale 2014-2020”. CUP B25F22000000001.
June 2018 – Dec 2021	ADAS+ - Sviluppo di Tecnologie e Sistemi Avanzati per la Sicurezza dell'Auto mediante piattaforme Advanced Driver Assistance System - PON Ricerca e Innovazione 2014-2020. Partners: STMicroelectronic (<i>leading</i>), UNICT, INST, DMNS, DMN-CNR IPCF, DMN-UNIPA, UNICP, Innovaal, INN-CNNR IMM, INN-MR&D, MTA Advanced Automotive Solution, IU.NET, IU-UNIBO, IU-UNIMORE.
2020 – now	MAMI-MED - La coorte Mamma&Bambino: un approccio Multisetoriale Alla salute Materno-Infantile Mediante valutazione dell'Esposoma nelle Donne - Piano di incentivi per la ricerca di Ateneo 2020/2022 (Pia.ce.ri.). Inter-department project: DGFI, CHIRMED, DMI, DEI.
July 2020 - now	EPIRADIOCLINF - Impatto di caratteristiche epidemiologiche, radiologiche, cliniche e molecolari nella diagnosi e nel management delle polmoniti COVID-19 – EPIRADIOCLINF: un approccio di studio integrato.
May 2019 - now	SATURN - Smart mAnufacTURiNg – Progetto MISE PON Fabbrica Intelligente. Partners: STMicroelectronics (<i>leading</i>), Mediterranea Impianti, UNICT.
December 2019 – now	DL4HEALTH – Deep Learning for Health- PO FESR SICILIA 2014-2020 - Azione 1.1.5. Partners: Quipo (<i>leading</i>), Net Service, Delisa, Aucta Cognitio, Nextra Consulting, UNICT Poli, UNICT DMI, Cerid.
Begins on April 2020	SALIRE – Sound Algorithms for Low-latency Intelligent Recognition of Event - PO FESR SICILIA 2014-2020 - Azione 1.1.5. Partners: Trilogic srl (<i>leading</i>), Noviacom soc.coop., Medilink srl, UNICT.
October 2012 – May 2014	Farm.PRO - Design and development of a web based learning platform (Farm.PRO project – PO/FESR Misura 4.1.1.1 - http://iplab.dmi.unict.it/projects/farmpro).
July 2019 - now	In Charge of the Project's Research Activities Principal Invesgigator (April 2021-now) - Eclat SRL - Food Recognition Technology – CoEHAR project founded by the Foundation for a Smoke-Free World (FSFW COE1-05).
July 2019 - now	SenseQuit: A novel smart smoking monitoring system – CoEHAR project founded by the Foundation for a Smoke-Free World (EG-008 EU-PATH_RFP).
December 2018	Eclat SRL – Evaluation of methods for automatic smoke activity detection.
Research and Development Consultant	
January 2019 – February 2019	Image Processing LABORatory – Machine learning for temporal data mining.
October 2018 – Nov 2018	iCtLab SRL - Design and development of video analysis algorithms.
Sept 2015 – Oct 2015	vEyes - virtual Eyes project – ONLUS - http://www.veyes.it/ Design and development of object recognition algorithms on Android devices.

July 2015 – August 2015	INGV and University of Catania – Department of Mathematics and Computer Science. Research activity in the project “ <i>Multidisciplinary analysis of the relationships between tectonic structures and volcanic activity</i> ” (INGV-DPC 2012-2013).
January 2015 – July 2015	Telecom Italia – Joint Open Lab Wave (Wireless Applications in multi-deVice Ecosystems). Design and development of an automatic video curation algorithm driven by scene popularity. (<i>Internship</i>).
October 2011 – April 2012	ST Microelectronics – Catania Site (Italy). Development of a compression algorithm for stereoscopic images (patented). Development of a C library to handle and analyse Multi-Picture Object files (MPO) working on embedded ST systems. (<i>Internship</i>).
TEACHING EXPERIENCE	
Academic Year 2021/2022	<p><i>Visiting Lecturer (10-24 October 2021)</i> University of Hertfordshire - School of Physics Engineering and Computer Science, UK <i>Adjunct Professor of Statistical Laboratory [SECS-S/01]</i> University of Catania – Degree Course in Data Science for Management <i>Adjunct Professor of Programmazione 2 [INF/01]</i> University of Catania – Degree Course in Computer Science <i>University Master Course Teaching</i> University of Catania – First level Master’s Degree course on Cybersecurity & Defence: “<i>Culture and Governance of Cybersecurity</i>” <i>Master Teaching</i> UPA – Master in Data Science for Digital Communication</p>
Academic Year 2020/2021	<p><i>University Master Course Teaching</i> University of Catania – First level Master’s Degree course on Cybersecurity & Defence: “<i>Cybersecurity & Defence</i>”. <i>Master Teaching</i> UPA – Master in Data Science for Digital Communication <i>Adjunct Professor of Programmazione 2 [INF/01]</i> University of Catania – Degree Course in Computer Science <i>Adjunct Professor of Basics of Computing [INF/01]</i> University of Catania – Degree Course in Data Science for Management</p>
Academic Year 2019/2020	<p><i>Adjunct Professor of Statistical Laboratory [SECS-S/01]</i> University of Catania – Degree Course in Data Science for Management</p>
Academic Years since 2019/2020 to 2021/2022	<p><i>PhD Courses</i> Analysis of Social Media Contents (12 hours).</p> <p><i>PhD Students Tutorship</i></p>
Nov 2021 – now	Maria Ausilia Napoli Spatafora – <i>PhD Candidate</i> <i>Efficient Facial Image Compression with Neural Networks</i>
Nov 2020– now	Marco Grisanti – <i>PhD Candidate</i> Development of an integrated multitasking system for the collection, management and automatic processing and inference of heterogeneous multisource data.
Nov 2020 – now	Valerio Puglisi – <i>PhD Candidate</i>
Nov 2020 – now	Salvatore Giurato – <i>PhD Candidate</i> Advanced Artificial Intelligence and Machine Learning algorithms for 5G Services in a multi-sensor data environments
Jan 2020 – now	Mazhar Hussain – <i>PhD Candidate</i> Research food recognition for dietary monitoring and health.
Nov 2019 – now	Tang Hongxiang – <i>PhD Candidate</i> Research on licence plate recognition on real world scenarios.
Academic Year 2020/2021	<p><i>Degree Thesis co-tutorship</i> Gabriele Raciti – <i>BD: VAR e Fuorigioco: analisi tecnica e incertezza delle misure</i></p>

Academic Year 2018/2019

Federica Russo – MD: Geometric Distortion Correction for Projected Images
 Stefano Trepiccione – MD: Simulazione stazione di controllo Camera DOME mediante visore VR.
 Giovanni Martucci – BD: Sviluppo di sistemi di re-identification in ambito Smart City.
 Andrea Cammarata – BD: Rilevare le fake news con il NLP.

Qualified Tutor

Qualified tutor Activity for the course “Informatica 1” (20 hours), University of Catania

Academic Year 2018/2019

Tutor

Tutor Activity for the course “Informatica di base (A-L)” (28 hours), University of Catania
 Tutor Activity for the course “Informatica di base (M-Z)” (28 hours), University of Catania
 Tutor Activity for the course “Informatica 1” (20 hours), University of Catania

Academic Year 2018/2019
 Academic Year 2018/2019
 Academic Year 2017/2018

April – May 2021

Teaching Contract

Steve Jobs Academy - Teacher of the course “Data Analysis 2” (30 hours)

May – June 2020

Teaching Contract

Steve Jobs Academy - Teacher of the course “Data Analysis 2” (30 hours)

10 June 2019 – 05 Jul 2019

Teaching Contract

TREE S.r.l. - Teacher for the course “Coding” on Java and OOP (28 hours)

12 Nov 2018 - 05 Dec 2018

Teaching Contract

TREE S.r.l. - Teacher for the course “Internet of Things” on Data Science (16 hours)

FURTHER INFORMATION

Mother Language

Italian

Other Languages

COMPRENSION		SPEAKING		WRITING
Listening	Reading	Interaction	Oral production	
B2	B2	B2	B2	B2

English

Nov. – Dec. 2015
 Nov. 2015 – May 2016

English Course “HOW TO WRITE IT” – writing scientific English (16 hours)
 English Course Level B1 (80 hours)

Computer Science Skills

Years experience in designing and developing image/video analysis and processing algorithms with Matlab, Python, Android and C/C++ for Computer Vision and Image Processing solutions, as well as Signal Analysis algorithms. Experience with Machine Learning and Deep Learning frameworks such as Caffe, Pytorch, TensorFlow and solid knowledge of Deep Learning architectures and learning algorithms. Solid programming languages knowledge: **C/C++**, **Java**, **Python**, R, Lua, web-based programming, functional programming, 2D and 3D graphics applications, 3D printing.

TALKS & SEMINARS
 Held at University courses

Sentiment Analysis & NLP– 25-Jan-19 – Social Media Management
 Social Image Platforms APIs – 31-Oct-18 – Social Media Management
 Long-Short Term Memory – 13-Jun-18 – Machine Learning
 Recommender Systems – 17-Jan-18 – Social Media Management
 Sentiment Analysis & NLP– 20-Dec-17 – Social Media Management
 Social Image Platforms APIs – 6-Nov-17 – Social Media Management
 Single-View Metrology – 25-May-16 – Computer Vision
 Stereovision & Epipolar Geometry – 04/20-Apr-16 – Computer Vision
 Artificial Neural Networks – 25-Jan-16 - Social Media Management

Talks for PhD students

Sequence to Sequence Learning with Neural Networks – 25/03/20 – University of Catania
 Generative Adversarial Networks – 25/03/19 – University of Catania
 Learning to forget (LSTM) – 14/05/18 – University of Catania
 Distributed representations of words (word2vec) – 12/12/16– University of Catania
 Ask Your Neurons: A Neural-based Approach to Answering Questions about Images – 11/03/16 – University of Catania.

Other Activities

Volunteer teacher for the project “Programma il futuro” (2016) for students of the Italian primary and secondary school.

Personal Data

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV.