

EUROPEAN CURRICULUM VITAE FORMAT



PERSONAL INFORMATION

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COSTANTE GABRIELE
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EDUCATION AND TRAINING

- Dates (from – to)
Date of qualification
- Name and type of organization providing education and training
- Principal subjects/occupational skills covered

November 2012 – February 2016
12/02/2016
Department of Engineering, University of Perugia, via G. Duranti 93, 06125, Perugia (PG), Italy
Ph.D in Information Engineering
Research activities and studies on Machine Learning and Computer Vision approaches for Robotic applications.

- Title of qualification awarded

Ph.D in Information Engineering
Title of the thesis: “Perception for Robot Navigation: from Visual Learning to Active Vision”

- Dates (from – to)
Date of qualification
- Name and type of organization providing education and training
- Title of qualification awarded

November 2015
University of Perugia, Perugia (PG), Italy

Professional certification – Information Engineering

- Dates (from – to)
Date of qualification
- Name and type of organization providing education and training
- Principal subjects/occupational skills covered
- Title of qualification awarded

November 2010 – 18 July 2012
18/07/2012
Department of Engineering, University of Perugia, via G. Duranti 93, 06125, Perugia (PG), Italy
Automation, Computer Engineering, Robotics, Telecommunications

MSc in Information and Automation Engineering with vote 110/110 cum laude
Title of the thesis: “Online Learning Techniques for Semantic Robot Localization”

- Dates (from – to)
Date of qualification
- Name and type of organization providing education and training

October 2007 – 4 November 2010
04/11/2010
Department of Engineering, University of Perugia, via G. Duranti 93, 06125, Perugia (PG), Italy

- Principal subjects/occupational skills covered
- Title of qualification awarded
- Dates (from – to)
- Name and type of organization providing education and training
- Title of qualification awarded

Electronic and Computer Engineering, Control Engineering

BSc in Information and Electronic Engineering with vote 110/110 cum laude
Title of the thesis: "Development and Implementation of algorithms for EKF-based SLAM"

September 2002 – July 2007

Liceo Scientifico Galeazzo Alessi, Perugia (PG), Italy

High School Diploma with vote 100/100

CURRENT EMPLOYMENT

- Dates (from - to)
- Name and address of the employer
- Type of company or sector
- Occupation or position held
 - Main activities and responsibilities

29/11/2022 – present

Department of Engineering, University of Perugia, via G. Duranti 93, 06125, Perugia (PG), Italy

Research and Education

Associate Professor – full-time (art. 24 c.3-b L.240/10)

Research activity on Robotics, Machine Learning, Computer Vision and Control Theory - Teaching activities - Management of thesis and internship activities - Management of research projects with companies on the topics of Robotics, Machine Learning, Computer Vision and Control Theory

WORK EXPERIENCE

- Dates (from – to)
- Name and address of the employer
- Type of company or sector
- Occupation or position held
 - Main activities and responsibilities

29/11/2019 – 28/11/2022

Department of Engineering, University of Perugia, via G. Duranti 93, 06125, Perugia (PG), Italy

Research and Education

Researcher (RTD-B) – full-time (art. 24 c.3-b L.240/10)

Research activity on Robotics, Machine Learning, Computer Vision and Control Theory - Teaching activities - Management of thesis and internship activities - Management of research projects with companies on the topics of Robotics, Machine Learning, Computer Vision and Control Theory

- Dates (from – to)
- Name and address of the employer
- Type of company or sector
- Occupation or position held
- Main tasks and responsibilities

01/01/2019 – 28/11/2019

Department of Engineering, University of Perugia, via G. Duranti 93, 06125, Perugia (PG), Italy

Research and Education

Research Fellow art. 22 of law 30 December 2010, n.240 in the project entitled: "*Machine learning tools applied to robotics and automation*"

Research activity on Robotics, Machine Learning, Computer Vision and Control Theory - Management of thesis and internship activities - Management of research projects with companies on the topics of Robotics, Machine Learning, Computer Vision and Control Theory

- Dates (from – to)
- Name and address of the employer
- Type of company or sector

15/12/2015 – 14/12/2018

Department of Engineering, University of Perugia, via G. Duranti 93, 06125, Perugia (PG), Italy

Research and Development

Occupation or position held	Research Fellow art. 22 of law 30 December 2010, n.240 in the project entitled: <i>"Development of technologies for knowledge transfer and adaptation between intelligent systems for home automation applications"</i>
Main tasks and responsibilities	Research activity on Robotics, Machine Learning, Computer Vision and Control Theory - Management of thesis and internship activities - Management of research projects with companies on the topics of Robotics, Machine Learning, Computer Vision and Control Theory
Dates (from – to)	01/04/2014 – 30/04/2015
Name and address of the employer	Robotics and Perception Group, University of Zurich, Zurich, Switzerland
Type of company or sector	Research and Development
Occupation or position held	Visiting Researcher (Research Internship)
Main tasks and responsibilities	Research activity on navigation based on Computer Vision algorithms for aerial drones

EDITORIAL BOARDS

Period	February 2020 - present
Role	Associate Editor for the journal
Website	https://www.ieee-ras.org/publications/ra-l/ra-letters-editorial-board
Journal	IEEE Robotics and Automation Letters (IEEE RA-L)

SCIENTIFIC COMMITTEES

Period	December 2021 - present
Role	Chair of the Working Group on Artificial Vision
Website	https://i-rim.it/it
Association	Italian Institute of Robotics and Intelligent Machines (I-RIM)
Period	From September 2023 – January
Role	Conference Associate Editor – Visual Perception and Learning
Website	https://2024.ieee-icra.org/
Conference	25th IEEE International Conference on Robotics and Automation (ICRA 2024)
Period	From February to September 2020
Role	Conference Associate Editor
Website	https://www.micc.unifi.it/icpr2020/
Conference	25th International Conference on Pattern Recognition (ICPR) 2020

SEMINARS BY INVITATION, WORKSHOP AND PARTICIPATION IN CONFERENCES AS CHAIR

Date	21/10/2023
Workshop title	Organizer of the workshop "Artificial Perception: state of the art and beyond"
Event	Italian Conference of Robotics and Intelligent Machines (I-RIM 3D)

Date	07/10/2022
Workshop title	Organizer of the Workshop “Artificial Perception: from current state of the art in research and industry to the next frontiers”
Event	Italian Conference of Robotics and Intelligent Machines (I-RIM 3D)
Date	07/11/2023
Special Session title	Organizer of the special session “Robotics for Agro-Forestry and Landscape Applications”
Event	2023 IEEE International Workshop on Metrology for Agriculture and Forestry
Date	05/11/2023
Seminar title	"Autonomous Mobile Robots for Crop Monitoring"
Event	IEEE international Workshop on Metrology for Agriculture and Forestry
Date	12/07/2022 and 23/06/2023
Seminar title	"Deep Reinforcement Learning: fundamentals and applications to mobile robotics"
Context	National Ph.D. on Artificial Intelligence
Date	25/05/2021
Seminar title	"Robotics and Artificial Intelligence for Precision Agriculture"
Event	Open School "Copernicus, Agriculture 4.0 and environmental and business sustainability"
Date	06/10/2020
Seminar title	"Machine Learning"
Place	Umbria Digital Innovation Hub
Date	10/02/2020
Seminar title	"Introduction to Machine Learning and Data Analysis"
Place	Department of Chemistry of the University of Turin
Activity	Session Chair (by invitation) – Session Title: “Mobile Robots”
Conference	20 th International Conference on Advanced Robotics (ICAR) – 2021 (<i>virtual edition</i>)

SCIENTIFIC PUBLICATIONS

BOOK CHAPTERS (1):

1. “EXPLOITING PHOTOMETRIC INFORMATION FOR PLANNING UNDER UNCERTAINTY”, COSTANTE G., DELMERICO J., WERLBERGER M., VALIGI P., SCARAMUZZA D., ROBOTICS RESEARCH, SPRINGER, CHAM, 2018. 107-124.

ARTICLES IN INTERNATIONAL JOURNALS (38):

1. “AI-DRIVEN GROUND ROBOTS: MOBILE EDGE COMPUTING AND MMWAVE COMMUNICATIONS AT WORK “ BARUFFA, G.; DETTI, A.; RUGINI, L.; CROCKETTI, F.; BANELLI, P.; COSTANTE, G.; & VALIGI, P. IEEE OPEN JOURNAL OF THE COMMUNICATIONS SOCIETY, 2024.

2. "QUADROTOR CONTROL SYSTEM DESIGN FOR ROBUST MONOCULAR VISUAL TRACKING." LEOMANNI, M.; FERRANTE, F.; DIONIGI, A.; COSTANTE, G.; VALIGI, P.; & FRAVOLINI, M. L. IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY, 2024
3. "D-VAT: END-TO-END VISUAL ACTIVE TRACKING FOR MICRO AERIAL VEHICLES." DIONIGI, A.; FELICIONI, S.; LEOMANNI, M.; & COSTANTE, G. IEEE ROBOTICS AND AUTOMATION LETTERS, 2024.
4. "AI-DRIVEN BLIND SOURCE SEPARATION FOR FAST OPERATIONAL MODAL ANALYSIS OF STRUCTURES." HERNÁNDEZ-GONZÁLEZ, I. A.; GARCÍA-MACÍAS, E.; COSTANTE, G.; & UBERTINI, F. MECHANICAL SYSTEMS AND SIGNAL PROCESSING, 2024.
5. "VISION-BASED TOPOLOGICAL LOCALIZATION FOR MAVs." FELICIONI, S.; RIZZO, B. M.; TORTORICI, C.; & COSTANTE, G. IEEE ROBOTICS AND AUTOMATION LETTERS, 2023.
6. "MA-VIED: A MULTISENSOR AUTOMOTIVE VISUAL INERTIAL EVENT DATASET." MOLLIKA, G.; FELICIONI, S.; LEGITTIMO, M.; MELI, L.; COSTANTE, G., & VALIGI, P. IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS, 2023.
7. "DATA-DRIVEN AND UNCERTAINTY-AWARE ROBUST AIRSTRIP SURFACE ESTIMATION", CROCETTI, F.; FRAVOLINI, M.L.; COSTANTE, G.; VALIGI, P.; NEURAL COMPUTING AND APPLICATIONS, 2023.
8. "DEVELOPMENT AND ANALYSIS OF A UWB RELATIVE LOCALIZATION SYSTEM", BRUNACCI, V.; DE ANGELIS, A.; COSTANTE, G.; CARBONE, P.; IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, 2023.
9. "FORECASTING CONSUMER CONFIDENCE THROUGH SEMANTIC NETWORK ANALYSIS OF ONLINE NEWS", FRONZETTI, COLLADON, A.; GRIPPA, F.; GUARDABASCIO, B.; COSTANTE, G.; RAVAZZOLO, F.; SCIENTIFIC REPORTS, 2023.
10. "A CONVEX PROGRAMMING APPROACH TO MULTIPOINT OPTIMAL MOTION PLANNING FOR UNICYCLE ROBOTS", LEOMANNI, M.; MOLLIKA, G.; DIONIGI, A.; VALIGI, P.; COSTANTE, G.; IEEE CONTROL SYSTEMS LETTERS, 2023.
11. "ARD-VO: AGRICULTURAL ROBOT DATA SET OF VINEYARDS AND OLIVE GROVES", CROCETTI, F.; BELLOCCHIO, E.; DIONIGI, A.; FELICIONI, S.; COSTANTE, G.; FRAVOLINI, M.L.; VALIGI, P.; JOURNAL OF FIELD ROBOTICS, 2023.
12. "INTEGRATING SPARSE LEARNING-BASED FEATURE DETECTORS INTO SIMULTANEOUS LOCALIZATION AND MAPPING—A BENCHMARK STUDY", MOLLIKA, G.; LEGITTIMO, M.; DIONIGI, A.; COSTANTE, G.; VALIGI, P.; SENSORS, 2023.
13. "A BENCHMARK ANALYSIS OF DATA-DRIVEN AND GEOMETRIC APPROACHES FOR ROBOT EGO-MOTION ESTIMATION", LEGITTIMO, M.; FELICIONI, S.; BAGNI, F.; TAGLIAVINI, A.; DIONIGI, A.; GATTI, F.; VERUCCHI, M.; COSTANTE, G.; BERTOOGNA, M.; JOURNAL OF FIELD ROBOTICS, 2023.
14. "ROBUST MULTIPLE FAULT ISOLATION BASED ON PARTIAL-ORTHOGONALITY CRITERIA", CARTOCCI, N.; CROCETTI, F.; COSTANTE, G.; VALIGI, P.; FRAVOLINI, M.L.; INTERNATIONAL JOURNAL OF CONTROL, AUTOMATION AND SYSTEMS, 2022.
15. "AIRCRAFT ROBUST DATA-DRIVEN MULTIPLE SENSOR FAULT DIAGNOSIS BASED ON OPTIMALITY CRITERIA", CARTOCCI, N.; NAPOLITANO, M. R.; CROCETTI, F.; COSTANTE, G.; VALIGI, P.; FRAVOLINI, M.L.; MECHANICAL SYSTEMS AND SIGNAL PROCESSING, 2022.
16. "DATA-DRIVEN FAULT DIAGNOSIS TECHNIQUES: NON-LINEAR DIRECTIONAL RESIDUAL VS. MACHINE-LEARNING-BASED METHODS", CARTOCCI, N.; NAPOLITANO, M. R.; CROCETTI, F.; COSTANTE, G.; VALIGI, P.; FRAVOLINI, M.L. SENSORS, 2022.
17. "A NOVEL VISION-BASED WEAKLY SUPERVISED FRAMEWORK FOR AUTONOMOUS YIELD ESTIMATION IN AGRICULTURAL APPLICATIONS", BELLOCCHIO, E.; CROCETTI, F.; COSTANTE, G.; FRAVOLINI, M.L.; VALIGI, P.; ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE, 2022.
18. "TIME-OPTIMAL CONTROL OF A MULTIDIMENSIONAL INTEGRATOR CHAIN WITH APPLICATIONS", LEOMANNI, M.; COSTANTE, G.; FERRANTE, F.; IEEE CONTROL SYSTEMS LETTERS, 2022.
19. "AUTONOMOUS SINGLE-IMAGE DRONE EXPLORATION WITH DEEP REINFORCEMENT LEARNING AND MIXED REALITY", DEVO, A.; MAO, J.; COSTANTE, G.; LOIANNO, G.; IEEE ROBOTICS AND AUTOMATION LETTERS, 2022.

20. "E-VAT: AN ASYMMETRIC END-TO-END APPROACH TO VISUAL ACTIVE EXPLORATION AND TRACKING", DIONIGI, A.; DEVO, A.; GUIDUCCI, L.; COSTANTE, G., IEEE ROBOTICS AND AUTOMATION LETTERS, 2022.
21. "ENHANCING CONTINUOUS CONTROL OF MOBILE ROBOTS FOR END-TO-END VISUAL ACTIVE TRACKING", DEVO, A.; DIONIGI, A.; COSTANTE, G., ROBOTICS AND AUTONOMOUS SYSTEMS, 2021.
22. "A COMPREHENSIVE CASE STUDY OF DATA-DRIVEN METHODS FOR ROBUST AIRCRAFT SENSOR FAULT ISOLATION", CARTOCCI, N.; NAPOLITANO, M. R.; COSTANTE, G.; FRAVOLINI, M. L., SENSORS, 2021.
23. "DATA-BASED DESIGN OF ROBUST FAULT DETECTION AND ISOLATION RESIDUALS VIA LASSO OPTIMIZATION AND BAYESIAN FILTERING", CASCIANELLI, S.; COSTANTE, G.; CROCETTI, F.; RICCI, E.; VALIGI, P.; FRAVOLINI, M. L., ASIAN JOURNAL OF CONTROL, 2021.
24. "UNCERTAINTY ESTIMATION FOR DATA-DRIVEN VISUAL ODOMETRY", COSTANTE, G.; MANCINI, M., IEEE TRANSACTIONS ON ROBOTICS, 2020.
25. "TOWARDS GENERALIZATION IN TARGET-DRIVEN VISUAL NAVIGATION BY USING DEEP REINFORCEMENT LEARNING", DEVO, A.; MEZZETTI, G.; COSTANTE, G.; FRAVOLINI, M. L.; VALIGI, P., IEEE TRANSACTIONS ON ROBOTICS, 2020.
26. "INTERVAL PREDICTION MODELS FOR DATA-DRIVEN DESIGN OF AERIAL VEHICLE'S ROBUST ADAPTIVE CONTROLLERS", FRAVOLINI, M. L.; COSTANTE, G.; YUCELEN, T.; NAPOLITANO, M. R., JOURNAL OF GUIDANCE, CONTROL, AND DYNAMICS, 2020.
27. "COMBINING DOMAIN ADAPTATION AND SPATIAL CONSISTENCY FOR UNSEEN FRUITS COUNTING: A QUASI-UNSUPERVISED APPROACH", BELLOCCHIO, E.; COSTANTE, G.; CASCIANELLI, S.; FRAVOLINI, M. L.; VALIGI, P., IEEE ROBOTICS AND AUTOMATION LETTERS, 2020.
28. "DEEP REINFORCEMENT LEARNING FOR INSTRUCTION FOLLOWING VISUAL NAVIGATION IN 3D MAZE-LIKE ENVIRONMENTS", DEVO, A.; COSTANTE, G.; VALIGI, P., IEEE ROBOTICS AND AUTOMATION LETTERS, 2020.
29. "WEAKLY SUPERVISED FRUIT COUNTING FOR YIELD ESTIMATION USING SPATIAL CONSISTENCY", ENRICO BELLOCCHIO E., CIARFUGLIA T. A., COSTANTE G., VALIGI P., IEEE ROBOTICS AND AUTOMATION LETTERS, 2019.
30. "THE ROLE OF THE INPUT IN NATURAL LANGUAGE VIDEO DESCRIPTION", CASCIANELLI S., COSTANTE G., DEVO A., CIARFUGLIA T. A., VALIGI P., FRAVOLINI M. L., IEEE TRANSACTIONS ON MULTIMEDIA, 2019.
31. "LS-VO: LEARNING DENSE OPTICAL SUBSPACE FOR ROBUST VISUAL ODOMETRY ESTIMATION", COSTANTE G., CIARFUGLIA T. A., IEEE ROBOTICS AND AUTOMATION LETTERS, 2018.
32. "J-MOD2: JOINT MONOCULAR OBSTACLE DETECTION AND DEPTH ESTIMATION", MANCINI M., COSTANTE G., VALIGI P., CIARFUGLIA T. A., IEEE ROBOTICS AND AUTOMATION LETTERS, 2018.
33. "FULL-GRU NATURAL LANGUAGE VIDEO DESCRIPTION FOR SERVICE ROBOTICS APPLICATIONS", CASCIANELLI S., COSTANTE G., CIARFUGLIA T. A., VALIGI P., FRAVOLINI M. L., IEEE ROBOTICS AND AUTOMATION LETTERS, 2018.
34. "TOWARDS DOMAIN INDEPENDENCE FOR LEARNING-BASED MONOCULAR DEPTH ESTIMATION", MANCINI, M.; COSTANTE, G.; VALIGI, P.; CIARFUGLIA, T.A.; DELMERICO, J; SCARAMUZZA, D., IEEE ROBOTICS AND AUTOMATION LETTERS, 2017.
35. "ROBUST VISUAL SEMI-SEMANTIC LOOP CLOSURE DETECTION BY A COVISIBILITY GRAPH AND CNN FEATURES", CASCIANELLI, S.; COSTANTE, G.; BELLOCCHIO, E.; VALIGI, P.; FRAVOLINI, M. L.; CIARFUGLIA, T. A., ROBOTICS AND AUTONOMOUS SYSTEMS, 92, 53- 65, 2017.
36. "EXPLORING REPRESENTATION LEARNING WITH CNNs FOR FRAME-TO-FRAME EGOMOTION ESTIMATION", COSTANTE, G.; MANCINI, M.; VALIGI, P.; CIARFUGLIA, T.A., IEEE ROBOTICS AND AUTOMATION LETTERS, 2016. BEST VISION PAPER FINALIST NELLA CONFERENZA INTERNATIONAL CONFERENCE ON ROBOTICS AND AUTOMATION, 2016.
37. "TRANSFERRING KNOWLEDGE ACROSS ROBOTS: A RISK SENSITIVE APPROACH", COSTANTE, G.; CIARFUGLIA, T.A.; VALIGI, P; RICCI, E., ROBOTICS AND AUTONOMOUS SYSTEMS, ELSEVIER, 2015.

38. "EVALUATION OF NON-GEOMETRIC METHODS FOR VISUAL ODOMETRY, CIARFUGLIA", T.A.; COSTANTE, G.; VALIGI, P; RICCI, E., ROBOTICS AND AUTONOMOUS SYSTEMS, ELSEVIER, 2014

ARTICLES IN CONFERENCES (27):

1. "EXPLORING DEEP REINFORCEMENT LEARNING FOR ROBUST TARGET TRACKING USING MICRO AERIAL VEHICLES." DI-ONIGI, A.; LEOMANNI, M.; SAVIOLO, A.; LOIANNO, G.; & COSTANTE, G. 21ST IEEE INTERNATIONAL CONFERENCE ON ADVANCED ROBOTICS (ICAR), 2023
2. "ENHANCING WEAKLY SUPERVISED YIELD ESTIMATION THROUGH LEARN-TO-PAY-ATTENTION MODULE." DE-NARDA, A. R.; CROCETTI, F.; COSTANTE, G.; VALIGI, P.; & FRAVOLINI, M. L. IEEE INTERNATIONAL WORKSHOP ON METROLOGY FOR AGRICULTURE AND FORESTRY (METROAGRIFOR) 2023.
3. "GAPT: GAUSSIAN PROCESS TOOLKIT FOR ONLINE REGRESSION WITH APPLICATION TO LEARNING QUADROTOR DYNAMICS." CROCETTI, F.; MAO, J.; SAVIOLO, A.; COSTANTE, G.; & LOIANNO, G. IEEE INTERNATIONAL CONFERENCE ON ROBOTICS AND AUTOMATION (ICRA), 2023.
4. "MONOCULAR REACTIVE COLLISION AVOIDANCE FOR MAV TELEOPERATION WITH DEEP REINFORCEMENT LEARNING" BRILLI, R.; LEGITTIMO, M.; CROCETTI, F.; LEOMANNI, M.; FRAVOLINI, M.L.; COSTANTE, G.; AIAA SCITECH 2023 FORUM, 2023
5. "ROBUST OUTPUT FEEDBACK CONTROL OF A QUADROTOR UAV FOR AUTONOMOUS VISION-BASED TARGET TRACKING" LEOMANNI, M.; FERRANTE, F.; CARTOCCI, N; COSTANTE, G.; FRAVOLINI, M.L.; DOGAN, K.M.; YUCELEN, T.; AIAA SCITECH 2023 FORUM, 2023
6. "DEVELOPMENT OF A COOPERATIVE LOCALIZATION SYSTEM USING A UWB NETWORK AND BLE TECHNOLOGY" BRUNACCI, V.; DE ANGELIS, A.; COSTANTE, G; IEEE INTERNATIONAL SYMPOSIUM ON MEASUREMENTS & NETWORKING (M&N), 2022
7. "CLASSIFICATION OF THYROID DISEASES USING MACHINE LEARNING AND BAYESIAN GRAPH ALGORITHMS" MOL-LICA, G.; FRANCESCONI, D.; COSTANTE, G.; MORETTI, S.; GIANNINI, R.; PUXEDDU, E.; VALIGI, P.; IFAC-PAPER-SONLINE 2022
8. "LINEAR CONTROL OF A NONLINEAR AEROSPACE SYSTEM VIA EXTENDED DYNAMIC MODE DECOMPOSITION" CARTOCCI, N.; MONARCA, A.; COSTANTE, G.; FRAVOLINI, M.L.; DOGAN, K. M.; YUCELEN, T.; AIAA SCITECH 2022 FORUM
9. "MONOCULAR REACTIVE COLLISION AVOIDANCE BASED ON FORCE FIELDS FOR ENHANCING THE TELEOPERATION OF MAVS" BRILLI, R; POZZI, M; GIORGETTI, F.; FRAVOLINI, M.L; VALIGI, P.; PRATTICHIZZO, D.; COSTANTE, G.; 20TH INTERNATIONAL CONFERENCE ON ADVANCED ROBOTICS - DICEMBRE 6-10, 2021. LJUBLJANA, SLOVENIA
10. "DATA-DRIVEN SENSOR FAULT DIAGNOSIS BASED ON NONLINEAR ADDITIVE MODELS AND LOCAL FAULT SENSITIVITY". CARTOCCI, N.; CROCETTI, F.; COSTANTE, G.; VALIGI, P.; NAPOLITANO, M.; FRAVOLINI, M.L; 20TH INTERNATIONAL CONFERENCE ON ADVANCED ROBOTICS - DICEMBRE 6-10, 2021. LJUBLJANA, SLOVENIA
11. "GOLN: GRAPH OBJECT-BASED LOCALIZATION NETWORK". FELICIONI, S.; LEGITTIMO, M.; FRAVOLINI, M.L; COSTANTE, G.; 20TH INTERNATIONAL CONFERENCE ON ADVANCED ROBOTICS - DICEMBRE 6-10, 2021. LJUBLJANA, SLOVENIA
12. "TIRE-ROAD FRICTION ESTIMATION AND UNCERTAINTY ASSESSMENT TO IMPROVE ELECTRIC AIRCRAFT BRAKING SYSTEM", CROCETTI, F.; COSTANTE, G.; FRAVOLINI, M. L.; VALIGI, P., IEEE 28TH MEDITERRANEAN CONFERENCE ON CONTROL AND AUTOMATION (MED), 2021.
13. "A ROBUST DATA-DRIVEN FAULT DIAGNOSIS SCHEME BASED ON RECURSIVE DEMPSTER-SHAFFER COMBINATION RULE", CARTOCCI, N.; NAPOLITANO, M.R.; COSTANTE, G.; CROCETTI, F.; VALIGI, P.; FRAVOLINI, M. L., IEEE 28TH MEDITERRANEAN CONFERENCE ON CONTROL AND AUTOMATION (MED), 2021.
14. "A DATA-DRIVEN SLIP ESTIMATION APPROACH FOR EFFECTIVE BRAKING CONTROL UNDER VARYING ROAD CONDITIONS", CROCETTI, F.; COSTANTE, G.; FRAVOLINI, M. L.; VALIGI, P. IEEE 28TH MEDITERRANEAN CONFERENCE ON CONTROL AND AUTOMATION (MED), 2020.

15. "PCA METHODS AND EVIDENCE BASED FILTERING FOR ROBUST AIRCRAFT SENSOR FAULT DIAGNOSIS". , CARTOCCI, N.; COSTANTE, G.; NAPOLITANO, M. R.; VALIGI, P.; CROCETTI, F.; FRAVOLINI, M. L., IEEE 28TH MEDITERRANEAN CONFERENCE ON CONTROL AND AUTOMATION (MED), 2020.
16. "DATA-BASED DESING OF ROBUST FAULT ISOLATION RESIDUALS USING LASSO OPTIMIZATION". CASCIANELLI S., CROCETTI F., COSTANTE G., VALIGI P. AND FRAVOLINI M.L. IEEE INTERNATIONAL CONFERENCE ON CONTROL, AUTOMATION AND DIAGNOSIS, 2019
17. "EXPERIMENTAL PREDICTION INTERVALS FOR MONITORING WIND TURBINES: AN ENSEMBLE APPROACH". CASCIANELLI S., ASTOLFI D., COSTANTE G., CASTELLANI F. AND FRAVOLINI M.L. IEEE INTERNATIONAL CONFERENCE ON CONTROL, AUTOMATION AND DIAGNOSIS, 2019
18. "VISUAL LOCALIZATION IN THE PRESENCE OF APPEARANCE CHANGES USING THE PARTIAL ORDER KERNEL". ABDOLLAHYAN M., CASCIANELLI S., BELLOCCHIO E., COSTANTE G., CIARFUGLIA T.A., BIANCONI F., SMERALDI F., FRAVOLINI M.L. 26TH EUROPEAN SIGNAL PROCESSING CONFERENCE (EUSIPCO), 2018
19. "TOWARDS MONOCULAR DIGITAL ELEVATION MODEL (DEM) ESTIMATION BY CONVOLUTIONAL NEURAL NETWORKS-APPLICATION ON SYNTHETIC APERTURE RADAR IMAGES". COSTANTE G., CIARFUGLIA T.A., BIONDI F. EUSAR 12TH EUROPEAN CONFERENCE ON SYNTHETIC APERTURE RADAR, 2018
20. "FAST ROBUST MONOCULAR DEPTH ESTIMATION FOR OBSTACLE DETECTION WITH FULLY CONVOLUTIONAL NETWORKS", MANCINI, M.; COSTANTE, G.; VALIGI, P.; CIARFUGLIA, T.A., IEEE/RSJ INTERNATIONAL CONFERENCE ON INTELLIGENT ROBOTCS AND SYSTEMS, 2016.
21. "SMARTSEAL: A ROS BASED HOME AUTOMATION FRAMEWORK FOR HETEROGENEOUS DEVICES INTERCONNECTION IN SMART BUILDINGS", BELLOCCHIO, E.; COSTANTE, G.; CASCIANELLI, S.; VALIGI, P.; CIARFUGLIA, T.A., IEEE INTERNATIONAL CONFERENCE SMART CITIES CONFERENCE, 2016.
22. "A ROBUST SEMI-SEMANTIC APPROACH FOR VISUAL LOCALIZATION IN URBAN ENVIRONMENT", CASCIANELLI, S.; COSTANTE, G.; BELLOCCHIO, E.; VALIGI, P.; FRAVOLINI, M.L.; CIARFUGLIA, T.A., IEEE INTERNATIONAL CONFERENCE SMART CITIES CONFERENCE, 2016
23. "PERSONALIZING VISION-BASED GESTURAL INTERFACES FOR HRI WITH UAVS: A TRANSFER LEARNING APPROACH", GABRIELE COSTANTE, ENRICO BELLOCCHIO, PAOLO VALIGI AND ELISA RICCI, IEEE/RSJ INTERNATIONAL CONFERENCE ON INTELLIGENT ROBOTS AND SYSTEMS (IROS), CHICAGO, U.S.A.
24. "PERSONALIZING A SMARTWATCH-BASED GESTURE INTERFACE WITH TRANSFER LEARNING", GABRIELE COSTANTE, LORENZO PORZI, OSWALD LANZ, PAOLO VALIGI, ELISA RICCI, EUROPEAN SIGNAL PROCESSING CONFERENCE (EUSIPCO), LISBON, PORTUGAL. 2014
25. "EXPLOITING TRANSFER LEARNING FOR PERSONALIZED VIEW INVARIANT GESTURE RECOGNITION", GABRIELE COSTANTE, VALERIO GALIENI, YAN YAN, MARIO LUCA FRAVOLINI, ELISA RICCI, PAOLO VALIGI, IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH AND SIGNAL PROCESSING (ICASSP), FLORENCE, ITALY.
26. "TRANSFER LEARNING FOR VISUAL PLACE CLASSIFICATION", COSTANTE, G.; CIARFUGLIA, T.A.; VALIGI, P. AND RICCI, E., RSS WORKSHOP ON ROBOTS IN CLUTTER: PREPARING ROBOTS FOR THE REAL WORLD. 2013.
27. "A TRANSFER LEARNING APPROACH FOR MULTI-CUE SEMANTIC PLACE RECOGNITION", COSTANTE, G.; CIARFUGLIA, T.A; VALIGI, P.; RICCI, E., INTELLIGENT ROBOTS AND SYSTEMS (IROS), 2013. 2012 A DISCRIMINATIVE APPROACH FOR APPEARANCE BASED LOOP CLOSING, CIARFUGLIA, T.A; COSTANTE, G.; VALIGI, P.; RICCI, E., INTELLIGENT ROBOTS AND SYSTEMS (IROS), 2012.

AWARDS

Date of Achievement Recognition	13/11/2020 National scientific certification (ASN) for SC 09/G1 – SSD ING-INF/04 for the functions of university associate professor
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Date of achievement
Recognition

28/02/2020

2020 Robotics Travel Award for research activity and scientific curriculum.
Award size: 800 CHF - Awarded by: international journal *Robotics* - MDPI

Date of achievement
Recognition

01/11/2018

Outstanding Reviewer Award, presented by the Elsevier journal, *Robotics and Autonomous Systems* for the contribution as a reviewer.

Date of achievement
Recognition

19/05/2016

Best vision paper award – Finalist for the paper “Exploring Representation Learning with CNNs for Frame-to-Frame Ego Motion Estimation” in *the IEEE International Conference on Robotics And Automation (ICRA)* 2016

REVIEWER ACTIVITIES

International Journals

IEEE Robotics and Automation Letters, IEEE Transactions on Robotics, IEEE Transactions on Industrial Informatics, IEEE Access, IEEE Robotics and Automation Magazine, IEEE Transactions on Computational Imaging, Pattern Recognition, Pattern Recognition Letters, Autonomous Robot, Robotics and Autonomous System, Journal on Intelligent Service Robotics, Engineering Applications of Artificial Intelligence, IEEE Sensors.

International Conferences

International Conference on Intelligent Robots and Systems (IROS) – (various editions); IEEE International Conference on Robotics and Automation (ICRA) – (various editions); IEEE 20th International Conference on Advanced Robotics (ICAR) – (2021)

UNIVERSITY TEACHING

Date (from - to)
Name and address of the employer

A.A. 2020-2021

Department of Engineering, University of Perugia, via G. Duranti 93, 06125, Perugia (PG), Italy

Occupation or position held
Assignment information

Lecturer

Lecturer of "Computer Vision and Robot Perception", **Master's Degree in Computer Engineering and Robotics (LM-32)**, duration: 48 hours

Date (from - to)
Employer

A.A. 2020-2021, 2021-2022

Department of Engineering, University of Perugia, via G. Duranti 93, 06125, Perugia (PG), Italy

Type of use
Assignment information

Lecturer

Lecturer of "Machine Learning and Data Analysis", **Master's Degree in Computer Engineering and Robotics (LM-32)**, duration: 72 hours

Date (from - to)
Employer

A.A. 2017-2018, 2018-2019, 2019-2020

Department of Engineering, University of Perugia, via G. Duranti 93, 06125, Perugia (PG), Italy

Type of use
Assignment information

Lecturer

Lecturer of "Computer Vision", **Master's Degree in Computer Engineering and Robotics (LM-32)**, duration: 48 hours

Date

28/06/2015

Employer	Department of Engineering, University of Perugia, via G. Duranti 93, 06125, Perugia (PG), Italy
Type of use	Lecturer
Assignment information	Seminar entitled "Computer vision for robotic and UAV applications", within the international doctoral school IEEE Advanced course for graduate students and industrial research.
PROFESSIONAL TEACHING	
Date (from - to)	2019 and 2020
Employer	ITS Umbria Smart Academy, Via Palermo, 80/A 06124 Perugia
Type of use	Teaching Assignment
Assignment information	Teacher of the module "Big Data Management and Analytics", as part of the training course "Technician for Automation and Mechatronic Systems with specialization in the Development of Technologies for Industry 4.0".
Data	06/06/2019
Employer	Training Systems Confindustria Umbria (SFCU), via Palermo 80/A, Perugia (PG)
Type of use	Teaching Assignment
Assignment information	Teaching within the module "Big Data Management & Machine Learning".
RESPONSIBILITIES AND PARTICIPATION IN FUNDED PROJECTS	
Date (from -to)	November 2023 – present
Role	Substitute PI and Local Research Unit Responsible
Project	PRIN 2022 PNRR project "LiSA - Listen, See and Act: fusing audio-video cues to perceive visible and invisible events and develop perception-to-action solutions for autonomous vehicles", PRIN 2022 PNRR Call - Avviso MUR n. 1409 del 14-09-2022 – ERC Sector PE6 – funded by European Union- NextGenerationEU
Date (from-to)	October 2023 – present
Role	Scientific PI
Project	"MiRA: Mixed Reality and AI Methodologies for Immersive Robotics" funded by the University of Perugia
Date (from - to)	July 2020 to December 2021
Role	Technical Manager for the Department of Engineering of the University of Perugia and sole representative of the academic subjects within the Technical Committee of the AGROBOT Network
Project	"AGROBOT: autonomous robots at the service of economic growth and environmental sustainability of Umbrian agriculture". The project is funded by the Umbria region through the 2014-2020 PSR call – Measure 16 – Submeasure 16.2 – Networks or Poles.
Date (from - to)	June 2020 to December 2021
Role	Technical Manager for the Department of Engineering of the University of Perugia
Project	"Integration of autonomous functionalities in an electric vehicle and interoperability with the "smart road" infrastructure". The project, entrusted by the National Agency for New Technologies, Energy and Sustainable Economic

	Development (ENEA), is funded by MISE under the 2019-2021 Program Agreement for research and development activities of general interest for the national electricity system: Objective "Technologies", research theme "1.7 Technologies for the penetration of the electric carrier in end uses".
Date (from - to)	2015-present
Role	Participation on various research projects with different companies and industries.
SERVICE ACTIVITIES AT THE UNIVERSITY	
Date (da - a)	2020 to present
Assignment	Member of the Board of Professors of the PhD Course in Industrial and Information Engineering of the University of Perugia
Date (da - a)	2020 to present
Assignment	Tutor and Co-tutor of PhD students
Date (da - a)	December 2021 to present
Assignment	Member of the Commission for Study Plans of the Intergraduate Council in Information Engineering.
TECHNOLOGY TRANSFER	
Date (da - a)	2016 to present
Activity	Founding partner of the innovative start-up "Weedea s.r.l. "
Website	https://www.weedea.com/
Date (da - a)	2020 to present
Activity	Member of the proposing group of the spin-off "Red Lynx Robotics s.r.l."
Website	https://www.redlynxrobotics.com
LANGUAGE SKILLS	
MOTHER TONGUE	ITALIAN
OTHER LANGUAGES	
	ENGLISH
Reading Skills	EXCELLENT
Writing skills	EXCELLENT
Oral expression skills	EXCELLENT
	GERMAN
Reading Skills	ELEMENTARY
Writing skills	ELEMENTARY
Oral expression skills	ELEMENTARY