

Curriculum Vitæ of Filippo Arrichiello

Current position

Nov.14 - Associate Professor in Control Engineering at University of Cassino and Southern Lazio, Italy.
Scientific area: Control Engineering (ING-INF/04 Automatica)
Research field: Robotics and Control Engineering.

Education

2003-06 Philosophiæ Doctor in Electrical and Information Engineering, received on February 22nd 2007 by the Faculty of Engineering of the University of Cassino, Cassino (FR), Italy.
Scientific area: Control Engineering (ING-INF/04 Automatica)
PhD Thesis: Coordination control of multiple mobile robots.
Tutor: Prof. Stefano Chiaverini.

1997-03 Master Degree in Mechanical Engineering, received on May 30th 2003 by the Università degli Studi di Napoli “Federico II”, Napoli, Italy. Mark: 110/110.
MS Thesis: “The role of mechanical assemblies in design and robotic operations” (in Italian).
Tutors: Prof. Bruno Siciliano (Industrial Robotics) and Prof. Salvatore Gerbino (Computer Aided Design).

1992-97 Scientific secondary school degree, received in 1997 at “Tito Lucrezio Caro” VII° Liceo Scientifico, Napoli, Italy. Mark: 57/60.

Previous experiences

May 14/Oct.14 Associate Professor in Control Engineering at University eCampus, Italy.
Scientific area: Control Engineering (ING-INF/04 Automatica)
Research field: Robotics and Control Engineering.

Oct.10/May 14 Assistant Professor in Control Engineering at the Department of Electrical and Information Engineering of the University of Cassino and Southern Lazio, Italy.
Scientific area: Control Engineering (ING-INF/04 Automatica)
Research field: Robotics and Control Engineering.

The position was granted as the Principal Investigator of the a National Research Project “FIRB-Futuro in Ricerca 2008” on Networked Cooperative Teams of Autonomous Robots (NECTAR) granted by the Italian Ministry of University and Research.

Jun.09/Sept.10 Research Assistant at the “Dipartimento di Automazione, Elettromagnetismo, Ingegneria dell’Informazione e Matematica Industriale” of the Faculty of Engineering

of the University of Cassino, Italy.
Research field: Cooperative control of teams of underwater robots.
Supervisor: Prof. Gianluca Antonelli.

Nov.06/Oct.08 Research Assistant at the “Dipartimento di Automazione, Elettromagnetismo, Ingegneria dell’Informazione e Matematica Industriale” of the Faculty of Engineering of the University of Cassino, Italy.
Research field: Motion planning and control of teams of autonomous vehicles.
Supervisor: Prof. Stefano Chiaverini.

Foreign experiences

Jun.11/Sep.11 Visiting Researcher at the Robotic Embedded Systems Laboratory of the University of Southern California (USC), Los Angeles, California, where he worked on AUV navigation in presence of drifters.
Supervisor: Prof. Gaurav Sukhatme.

Aug.09/Oct.09 Visiting Researcher at the Robotic Embedded Systems Laboratory of the University of Southern California (USC), Los Angeles, California, where he worked on coordinated control of fleet of marine robots.
Supervisor: Prof. Gaurav Sukhatme.

Nov.08/Jan.09 Visiting Researcher at the Robotic Embedded Systems Laboratory of the University of Southern California (USC), Los Angeles, California, where he worked on coordinated control of fleet of marine robots.
Supervisor: Prof. Gaurav Sukhatme.

Mar./Sept.05 Under a Marie Curie fellowship, he joined the Centre of Excellence Centre of Ships and Ocean Structures (CESOS) at the Norwegian University of Science and Technology (NTNU), Trondheim, Norway.
Research activity: coordinated control of fleet of underactuated surface vessels.
Supervisor: Prof. Thor I. Fossen.

Research activity

His research activity mainly concerns industrial and service robotics, with specific interest in mobile multi-robot systems and marine robots. In particular, his main research activity is focused on the development of control techniques for multi-robot systems, distributed robotic systems, autonomous marine vehicles.

Filippo Arrichiello’s research activity has given rise to 19 International Journal Papers, 5 Books’ chapters, 48 International Conference papers. These articles have been published in leading International Journals and Conference Proceedings in the Robotics field, e.g., IEEE Robotics and Automation Magazine, International Journal of Robotics Research, IEEE Transactions on Control Systems Technology, Proc. of IEEE International Conference on Robotics and Automation, Proc. of IEEE/RSJ International Conference on Intelligent Robots and Systems, International Conference on Field and Service Robots.

Since 2004 he is member of the IEEE Robotics and Automation Society. Moreover, he is member of the IEEE RAS Marine Robotics Technical Committee and of the IEEE RAS Multi-Robot Systems Technical Committee.

He is member of Interuniversity Center of Integrated Systems for the Marine Environment (ISME) that is a Italian Interuniversity Center that involves research

groups working in the field of marine robotics.

Participation to National and European research project

- 2018-21 Co-Principal Investigator of the International Research Project “Teams of Aquatic/Aerial Robots for Marine Environmental Monitoring” (TARMEM) funded by the Qatar National Research Fund
- 2018-21 Team Member of the European Research Project (H2020) “European Project: EU Marine Robots” (EUMR)
- 2016-20 Team Member of the European Research Project (H2020) “Robotic Subsea Exploration Technologies” (ROBUST)
- 2015-18 Team Member of the European Research Project (H2020) “Dexterous ROV Operations in Presence of Communications Latencies” (DexROV)
- 2015-19 Team Member of the European Research Project (H2020) “Aerial ROBotic system integrating multiple ARMS and advanced manipulation capabilities for inspection and maintenance” (AEROARMS)
- 2014-18 Team Member of the European Research Project (FP-7) “European Robotics Challenges European Research Project” (EuRoC)
- 2015-18 Team Member of the European Research Project (H2020) “Widely scalable Mobile Underwater Sonar Technology” (WiMUST)
- 2010-14 Principal Investigator of a National Research Project ‘FIRB-Futuro in Ricerca 2008’ on Networked Cooperative Teams of Autonomous Robots (NECTAR) granted by the Italian Ministry of University and Research
- 2009-10 Key Personnel of the European Research Project (EU FP-7 STREP) “Cognitive Cooperative Control for Autonomous Underwater Vehicles” (CO3AUVs) started in February 2009. During the project, he worked on control strategies for teams of underwater robots.
- 2004-05 Participated as Ph.D. student to the National Research Project (Projects of Relevant National Interest - PRIN) on “Planning and Intelligent Control Techniques for Unstructured Robotics Environments” (PICTURE).

Invited talks, seminars and lessons

- Feb. 2017 Invited talk on “Cooperative control of networked robotic systems” at University of Pisa, Pisa, Italy.
- Mar. 2016 Key Note talk on “Cooperative control of networked robotic systems ” at the International Multi-Conference on Systems, Signals and Devices 2016, Leipzig, Germany.
- Dec. 2015 Invited talk on “Cooperative control of Networked robotic systems ” at University of Twente, Enschede, Netherlands.
- May 2015 Invited talk on “Distributed fault detection and recovery for networked multi-robot systems” at the workshop “Taxonomies of Interconnected Systems: Asymmetric Interactions in Distributed Robotics” during 2015 IEEE International Conference on Robotics and Automation, Seattle USA.

- May 2015 Invited talk on “Past and future research activity on control of single and multiple marine robots at ISME” at the workshop “Persistent Autonomy for Aquatic Robotics: the Role of Control and Learning in Single and Multi-Robot Systems” during 2015 IEEE International Conference on Robotics and Automation, Seattle USA.
- May 2014 Invited talk on “Experiences of (de)centralized behavioral control for multi-robot systems” at the workshop “Towards Fully Decentralized Multi-Robot Systems: Hardware, Software and Integration” during IEEE International Conference on Robotics and Automation, Honk Kong.
- Apr. 2013 Invited talk on “Mobile Robotics” at the University of Sannio, Benevento, Italy.
- Feb. 2012 Invited talk on “Control of networked robots” at the workshop on “Sensor networks” at the Italian National Agency for New Technologies, Energy and Sustainable Development (ENEA), Naples, Italy.
- Jun. 2011 Invited speaker at the workshop on “Aquatic Robotics: Ocean Science and Marine Systems” during the 2011 Robotics: Science and Systems Conference, Los Angeles.
- Jan. 2008 Seminar on “Coordinated Control of Multi-Robot Systems” at the Institute of System Analysis and Computer Science of the Italian National Research Center (IASI-CNR) in Rome, Italy.
- July 2009 Four hour lesson on “Control techniques for multi-robot systems” at the Scuola Superiore ISUFI of the University of Salento, Lecce, Italy.

Teaching activities

- 2015- Professor of “Automatic Control” for Students of Industrial Engineering at the University of Cassino and Southern Lazio, Italy. (80 hours)
- 2015- Professor of “Information Technologies for Automation” for Students of Telecommunication and Information Engineering at the University of Cassino and Southern Lazio, Italy. (50 hours)
- 2012-2014 Professor of “Control Systems for Industrial Automation” for MS Students of Management Engineering at the University of Cassino and Southern Lazio, Italy. (80 hours) (co-share with prof. Gianluca Antonelli)
- 2011-2014 Professor of “Information Technologies for Automation” for Students of Telecommunication and Information Engineering at the University of Cassino and Southern Lazio, Italy. (30 hours) (co-share with prof. Giuseppe Fusco)
- 2011-2012 Professor of “Control Systems for Industrial Automation” for MS Students of Mechanical Engineering at the the Faculty of Engineering of the University of Cassino, Italy. (80 hours) (co-share with prof. Gianluca Antonelli)
- 2011-2012 Professor of “Laboratory of Industrial Automation” for BC Students of Mechanical Engineering at the the Faculty of Engineering of the University of Cassino, Italy. (30 hours) (co-share with prof. Stefano Chiaverini)
- November 2011 Teacher for the course of “Control systems for naval automation” for the Master on “Technologies and advanced systems for navigation” organized by the University of Cassino, Italy. (20 hours)
- 2010-2011 Professor of “Control Systems for Industrial Automation” for MS Students of Mechanical Engineering at the the Faculty of Engineering of the University of Cassino,

Italy. (80 hours) (co-share with prof. Stefano Chiaverini)

- 2009-2010 Adjunct Professor of “Control Systems for Industrial Automation” for MS Students of Mechanical Engineering at the the Faculty of Engineering of the University of Cassino, Italy. (80 hours)
- 2009-2010 Adjunct Professor of “Processes Control” for MS Students of Industrial Manufacturing Engineering at the Faculty of Engineering of the University of Cassino, Italy. (50 hours)
- 2008-2009 Adjunct Professor of “Processes Control” for MS Students of Industrial Manufacturing Engineering and Adjunct Professor of “Processes Control” for MS Students of Electrical Engineering both at the the Faculty of Engineering of the University of Cassino, Italy. (50+50 hours)
- July 2008 Teacher for the course of “Industrial processes control” for the specialistic formation course for “PLC Technician Programmer” in the project “IN.FORMAZIONE” at the University of Cassino. (36 hours)
- May 2008 Teacher for the course of “Marine automation” for specialistic formation course for “Technician for maritime transportation systems” at the “Istituto Tecnico Nautico di Gaeta G. Caboto”. (40 hours)
- Feb. 2008 Teacher for the course of “Automatic control systems for industrial manufacturing” for the Master on “Management of innovative integrated systems for industrial manufacturing” organized by the University of Cassino, Italy. (20 hours)
- 2007-2008 Adjunct Professor of “Processes Control” for MS Students of Industrial Manufacturing Engineering and Adjunct Professor of “Processes Control” for MS Students of Electrical Engineering both at the the Faculty of Engineering of the University of Cassino, Italy. (50+50 hours)
- 2006-2007 Adjunct Professor of “Processes Control” for MS Students of Industrial Manufacturing Engineering and Adjunct Professor of “Processes Control” for MS Students of Electrical Engineering both at the the Faculty of Engineering of the University of Cassino, Italy. (50+50 hours)
- 2006-2007 Teaching Assistant. He held some exercise lessons for the courses of “Industrial Robotics” and “Mechanical and thermal systems control” (held by Prof. Stefano Chiaverini) at the the Faculty of Engineering of the University of Cassino, Italy.
- Supervisor of more than 20 Master Students Thesis (in Italian)

Journal and conference services

Since 2018, Associate Editor for IEEE Journal of Oceanic Engineering

Since 2018, Associate Editor for IEEE Robotics and Automation Letter

Area Chair for the IEEE International Symposium on Multi-Robot and Multi-Agent Systems 2019

Member of the Award selection committee for the IEEE International Symposium on Multi-Robot and Multi-Agent Systems 2019

Member of the Program Committee of the International Symposium on Multi-robot and Multi-Agent Systems (MRS 2017)

2015-18, Associate Editor for International Journal Frontiers in Robotics and AI, Section Robotic Control Systems

2013-18, Member of the Editorial Board of the International Journal of Advanced Robotic Systems

2015-2018, Editor for the Conference Editorial Board of the IEEE Robotics and Automation Society for the IEEE International Conference on Robotics and Automation (for ICRA 2016, 2017, 2018, 2019)

2012-2014, Associate Editor for the Conference Editorial Board of the IEEE Robotics and Automation Society for the IEEE International Conference on Robotics and Automation (for ICRA 2013, 2014, 2015)

Invited reviewer for the International Conference on Robotics: Science and Systems (RSS 2018), Pittsburgh, Pennsylvania, USA, 2018

Invited reviewer for the International Symposium on Distributed Autonomous Robotic Systems (DARS 2018), Boulder, USA, 2018

Associate Editor for the 2018 IEEE Conference on Control Technology and Applications (CCTA 2018), Copenhagen, Denmark, 2018

Member of the Technical Committee of the 1st International Symposium on Multi-robot and multi-agent systems, (MRS 2017), Los Angeles, USA, 2017

Member of the Committee for IEEE Robotics & Automation Society Italian Chapter, Young Author Best Paper Award, 2017

Member of the Program Committee of the Modelling and Simulation for Autonomous Systems Workshop (MESAS), Rome, Italy, 2017

Member of the Technical Committee of the 2nd International Conference on Automation, Control and Robotics Engineering, (CACRE 2017), Prague, Czech, 2017

Member of the Program Committee of the 13th International Symposium on Distributed Autonomous Robotic Systems (DARS 2016), London, UK, 2016

Member of the Program Committee of the Modelling and Simulation for Autonomous Systems Workshop (MESAS), Rome, Italy, 2016

Member of the Program Committee of the Track 7 on Intelligent Robots and Systems of the IEEE Emerging Technologies and Factory Automation Conference, Luxembourg, 2015

Member of the Program Committee of the Robotics Science and Systems Conference, Rome, Italy, 2015

Member of the Program Committee of the Track 7 on Intelligent Robots and Systems of the IEEE Emerging Technologies and Factory Automation Conference, Barcelona, Spain, 2014

Member of the Program Committee of the 13th International Conference on Intelligent Autonomous Systems, Padova, Italia, 2014

Member of the Technical Program Committee of the Workshop on Robots and Sensor Clouds in conjunction with the 11th International Conference on Mobile Systems and Pervasive Computing, Niagara Falls, Canada, 2014

Member of the Technical Program Committee of the Workshop on Robotic Sensor Networks along with the Cyber-physical Systems week, Berlin, Germany, 2014

Member of the Program Committee of the Track 7 on Intelligent Robots and Systems of the IEEE Emerging Technologies and Factory Automation Conference, September 2013, Italy

Member of the Technical Program Committee of the IEEE Conference on Control, Systems & Industrial Informatics, September 23-26, 2012, Bandung, Indonesia

Member of the Technical Program Committee of the IEEE Symposium on Industrial Electronics and Application, September 23-26, 2012, Bandung, Indonesia

Member of the International Program Committee of the IASTED on Robotics (Robo 2011) November 7-9, 2011, Pittsburgh, USA.

Member of the International Program Committee of the IASTED International Conference on Robotics and Applications (RA 2011) June 1-3, 2011, Vancouver, BC, Canada.

Member of the Program Committee of the IASTED on Robotics (Robo 2010) November 24-26, 2010, Phuket, Thailand.

Member of the Technical Program Committee of the 10th International Symposium on Distributed Autonomous Robotics Systems (DARS 2010) November 1-3, 2010, Lausanne, Switzerland.

Member of the Technical Program Committee of the IASTED International Conference on Robotics and Applications (RA 2010) November 1-3, 2010, Cambridge, Massachusetts, USA.

Member of the Technical Program Committee of the IASTED International Conference on Robotics and Applications (RA 2009) November 2-6, 2009, Cambridge, Massachusetts, USA.

Member of the Technical Program Committee of the IASTED International Conference on Robotics, Telematics and Applications (RTA 2009) October 12-14, 2009, Beijing, China.

Member of the Technical Program Committee of the IEEE Canadian Conference on Electrical and Computer Engineering CCECE 2008.

He has been reviewer form many international journal and conference papers submitted to: IEEE Tran. on Robotics; IEEE Robotics and Automation Magazine; IEEE Robotics and Automation Letters; Autonomous Robots; IEEE Tran. on Mechatronics; IEEE Tran. on Control System Technology; IEEE Tran. on System, Man and Cybernetics; Robotics and Autonomous Systems; IEEE Journal of Oceanic Engineering, Mechanism and Machine Theory; Control Engineering Practice; Journal of Vibration and Control; IEEE Int. Conf. on Robotics and Automation; IEEE Int. Conf. on Intelligent Robots and Systems; IEEE Conf. on Decision and Control; IFAC World Congress; IEEE/ASME Int. Conf. on Advanced Intelligent Mechatronics; Mediterranean Conf. on Control and Automation; American Control Conf.

Publications

Bibliometric indicators

- from Scopus: H-index 22; Citations 1397
- from Google Scholar: H-index 28; Citations 2127

International Journal Papers

- r21 Gillini, Giuseppe and Di Lillo, Paolo and Arrichiello, Filippo and Di Vito, Daniele and Marino, Alessandro and Antonelli, Gianluca and Chiaverini, Stefano, A dual-arm mobile robot system performing assistive tasks operated via P300-based Brain Computer Interface, *Industrial Robot*, 2020
- r20 Di Lillo, Paolo and Arrichiello, Filippo and Di Vito, Daniele and Antonelli, Gianluca, BCI-controlled assistive manipulator: developed architecture and experimental results, *IEEE Transactions on Cognitive and Developmental Systems*, 2020
- 19 Antonelli, Gianluca and Arrichiello, Filippo and Caiti, Andrea and Casalino, Giuseppe and De Palma, Daniela and Indiveri, Giovanni and Razzanelli, Matteo and Pollini, Lorenzo and Simetti, Enrico, ISME activity on the use of Autonomous Surface and Underwater Vehicles for acoustic surveys at sea, *ACTA IMEKO*, vol.7, n.2, pp. 24–31, 2018
- 18 G. Antonelli and E. Cataldi and F. Arrichiello and P. Robuffo Giordano and S. Chiaverini and A. Franchi, Adaptive Trajectory Tracking for Quadrotor MAVs in Presence of Parameter Uncertainties and External Disturbances, *IEEE Transactions on Control Systems Technology*, vol.26, n.1, pp. 248–254, 2018
- 17 D. De Palma and F. Arrichiello and G. Parlangeli and G. Indiveri, Underwater localization using single beacon measurements: observability analysis for a double integrator system, *Ocean Engineering*, vol.142, n.15, pp. 650–665, 2017
- 16 F. Arrichiello and A. Marino and F. Pierri, Distributed fault detection isolation and accommodation for homogeneous networked discrete-time linear systems, *IEEE Trans. on Automatic Control*, vol.62, n.9, pp. 4840–4847, 2017
- 15 F. Arrichiello and A. Marino and F. Pierri, Distributed Fault Tolerant Control for Networked Robots in the Presence of Recoverable/Unrecoverable Faults and Reactive Behaviors, *Frontiers in Robotics and AI*, vol.4, n.2, 2017
- 14 P. Abreu and G. Antonelli and F. Arrichiello and A. Caffaz and A. Caiti and G. Casalino and N. Catenacci Volpi and I. de Jong and D. De Palma and H. Duarte and others, Widely Scalable Mobile Underwater Sonar Technology: An Overview of the H2020 WiMUST Project, *Marine Technology Society Journal*, vol.50, n.4, pp. 42–53, 2016
- 13 F. Arrichiello and A. Marino and F. Pierri, Observer-Based Decentralized Fault Detection and Isolation Strategy for Networked Multirobot Systems, *IEEE Transactions on Control Systems Technology*, vol.23, n.4, pp. 1465–1476, 2015
- 12 G. Antonelli, F. Arrichiello, F. Caccavale and A. Marino, Decentralized time-varying formation control for multi-robot systems, *International Journal of Robotics Research*, vol.33, n.7, pp. 1029–1043, 2014
- 11 F. Arrichiello and G. Antonelli and A.P. Aguiar and A. Pascoal, *An observability metric for underwater vehicle localization using range measurements*, *Sensors*, vol.13, n.12, pp. 16191–16215, 2013
- 10 G. Antonelli and F. Arrichiello and F. Caccavale and A. Marino, *A decentralized*

controller-observer scheme for multi-agent weighted centroid tracking, IEEE Transactions on Automation Control, vol.58, n.5, pp. 1310–1316, 2013

- 9 F. Arrichiello, H. Heidarsson, S. Chiaverini and G.S. Sukhatme, *Cooperative caging and transport using autonomous aquatic surface vehicles*, Intelligent Service Robotics, Special Issue on Marine Robotics Systems, vol.5, n.1, pp.73-87, 2012
- 8 G. Antonelli, F. Arrichiello and S. Chiaverini, *The NSB control: a behavior-based approach for multi-robot systems*, Paladyn. Journal of Behavioral Robotics, vol. 1, n. 1, pp. 48–56, 2010.
- 7 F. Arrichiello, S. Chiaverini, G. Indiveri and P. Pedone, *The Null-Space Based Behavioral Control for Mobile Robots with Velocity Actuator Saturations* International Journal of Robotics Research, vol. 29, n. 10, pp. 1317–1337, 2010.
- 6 R. Smith, J. Das, H. Heidarsson, A. Pereira, F. Arrichiello, I. Cetinic, L. Darjany, M. Garneau, M. Howard, C. Oberg, M. Ragan, E. Seubert, E. Smith, B. Stauffer, A. Schnetzerand, G. Toro-Farmer, D. Caron, B. Jones and G. Sukhatme, *USC CINAPS Builds Bridges: Observing and Monitoring the Southern California Bight*, IEEE Robotics and Automation Magazine, Special Issue on Marine Robotic Systems, vol. 17, n. 1, pp. 20–30, 2010.
- 5 G. Antonelli, F. Arrichiello, S. Chiaverini, *Flocking for Multi-Robot Systems via the Null-Space-based Behavioral Control*, Swarm Intelligence, vol. 4, n. 1, pp. 37-56, 2010.
- 4 G. Antonelli, F. Arrichiello, S. Chiaverini, *Experiments of Formation Control with Multi-Robot Systems using the Null-Space-Based Behavioral Control*, IEEE Transactions on Control Systems Technology, vol. 17, n. 5, pp. 1173–1182, 2009.
- 3 G.Antonelli, F.Arrichiello, S.Chiaverini, *The Entrapment/Escorting Mission: An Experimental Study Using a Multirobot System*, IEEE Robotics and Automation Magazine (RAM). Special Issues on Design, Control, and Applications of Real-World Multi-Robot Systems, vol. 15, n. 1, pp. 22–29, 2008.
- 2 G.Antonelli, F.Arrichiello, S.Chiaverini, *The Null-Space-Based Behavioral Control for Autonomous Robotic Systems*, Journal of Intelligent Service Robotics, online March 2007, printed vol. 1, n. 1, pp. 27–39, 2008.
- 1 G.Antonelli, F.Arrichiello, S.Chiaverini, R.Setola, *Coordinated control of mobile antennas for ad-hoc networks*, International Journal of Modelling, Identification and Control, Special/Inaugural issue on Intelligent Robot Systems, Vol. 1, No. 1, pp.63–71, 2006.

Book Chapters

F. Arrichiello, S. Sarkar, S. Chiaverini, and G. Antonelli, *Dynamic Modelling of a Streamer of Hydrophones Towed with an Autonomous Underwater Vehicle*, Modelling and Simulation for Autonomous Systems, Lecture Notes in Computer Science (LNCS, volume 10756), pp. 179–192, 2018

K. Baizid and R. Chellali and R. Luza and B. Vitezslav and F. Arrichiello, *RRS: Rapidly-Exploring Random Snakes a New Method for Mobile Robot Path Planning*, Intelligent Autonomous Systems 13, Advances in Intelligent Systems and Computing, pp. 291–305, 2016

G. Antonelli and F. Arrichiello and G. Casalino and S. Chiaverini and A. Marino and E. Simetti and S. Torelli, Harbour Protection Strategies with Multiple Autonomous Marine Vehicles, Modelling and Simulation for Autonomous Systems, Jan Hodicky (Ed.), Springer-Verlag's Lecture Notes in Computer Science series, pp. 241–261, 2014

F. Arrichiello and J. Das and H. Heidarsson and A. Pereira and S. Chiaverini and G.S. Sukhatme, *Multi-Robot Collaboration with Range-Limited Communication: Experiments with Two Underactuated ASVs*, Field and Service Robotics, A. Howard, K. Iagnemma, A. Kelly(Eds.), Springer Tracts in Advanced Robotics, Springer-Verlag, vol. 60, pp. 443–453, 2010.

G. Antonelli, F. Arrichiello and S. Chiaverini, *Toward control of mobile multi-robot systems in hyper-flexible work cells*, Control Themes in Hyperflexible Robotic Workcells, F. Basile, P. Chiacchio (Eds.), CUES, pp.145-162 , 2010

F.Arrichiello, S.Chiaverini and T. I.Fossen, *Formation Control of Marine Surface Vessels using the Null-Space-Based Behavioral Control*, In Group Coordination and Cooperative Control (K. Y. Pettersen, T. Gravdahl, and H. Nijmeijer, Eds.). Springer-Verlag's Lecture Notes in Control and Information Systems series, pp. 1–19, 2006.

International Conference Papers

- c49 Gillini, Giuseppe and Lippi, Martina and Arrichiello, Filippo and Marino, Alessandro and Pierri, Francesco, Distributed Fault Detection and Isolation for Cooperative Mobile Manipulators, 2019 IEEE International Conference on Systems, Man and Cybernetics (SMC), , pp. 1701–1707, 2019
- 48 F. Arrichiello, S. Sarkar, S. Chiaverini, and G. Antonelli, Localization of an Array of Hydrophones Towed by an Autonomous Underwater Vehicle, 2018 26th Mediterranean Conference on Control and Automation (MED), Zadar, Croatia, pp. 601–606, 2018
- 47 P. Di Lillo, F. Arrichiello, G. Antonelli, S. Chiaverini, Safety-related Tasks within the Set-Based Task-Priority Inverse Kinematics Framework, 2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Madrid, Spain, pp. 6130–6135, 2018
- 46 Di Vito, Daniele and Di Lillo, Paolo and Arrichiello, Filippo and Antonelli, Gianluca, Assistive Control Framework for Remotely Operated Vehicles, 2018 26th Mediterranean Conference on Control and Automation (MED), Zadar, Croatia, pp. 364–369, 2018
- 45 G. Antonelli, F. Arrichiello, A. Caiti, G. Casalino, D. De Palma, G. Indiveri, L. Pollini, E. Simetti, ISME trends: Autonomous Surface and Underwater Vehicles for Geoseismic Survey, 1st IMEKO TC19 Workshop on Metrology for the Sea, Naples, Italy, pp. 44-49, 2017
- 44 F. Arrichiello, P. Di Lillo, D. Di Vito, G. Antonelli, S. Chiaverini, Assistive robot operated via P300-based Brain Computer Interface, 2017 IEEE International Conference on Robotics and Automation, Singapore, 2017
- c43 G. Indiveri and G. Antonelli and F. Arrichiello and A. Caffaz and A. Caiti and G. Casalino and N. Catenacci Volpi and I.B. de Jong and D. De Palma and H.

Duarte and others, Overview and first year progress of the Widely scalable Mobile Underwater Sonar Technology H2020 project, 10th IFAC Conference on Control Applications in Marine Systems CAMS 2016, Trondheim, Norway, pp. 430–433

- 42 F. Arrichiello and G. Antonelli and E. Kelholt, Shape estimate of a streamer of hydrophones towed by an Autonomous Underwater Vehicle, 10th IFAC Conference on Control Applications in Marine Systems CAMS 2016, Trondheim, Norway, pp. 181–186, 2016
- 41 F. Arrichiello and D. De Palma and G. Indiveri and G. Parlangei, Observability analysis for single range localization, OCEANS 2015-Genova, , pp. 1–10, 2015
- 40 K. Baizid and R. Chellali and R. Luza and B. Vitezslav and F. Arrichiello, RRS: Rapidly-exploring Random Snakes a New Method for Mobile Robot Path Planning, Proceedings of 13th International Conference on Intelligent Autonomous Systems, Padova, Italy, 2014
- 39 F. Arrichiello and A. Marino and F. Pierri, Distributed fault detection and recovery for networked robots, Proceedings 2014 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Chicago, Illinois, 2014
- 38 F. Arrichiello and A. Marino and F. Pierri, Distributed fault-tolerant strategy for networked robots with both cooperative and reactive controls, Proceeding of the IEEE International Conference on Information and Automation, Hailar, China, 2014
- 37 F. Arrichiello, A. Marino and F. Pierri, *A decentralized fault tolerant control strategy for multi-robot systems*, Proceedings 19th World Congress of the International Federation of Automatic Control, August, 2014
- 36 F. Arrichiello and A. Marino and F. Pierri, *A decentralized fault detection and isolation strategy for networked robots*, Proceedings 2013 International Conference on Advanced Robotics, Montevideo, Uruguay, 2013
- 35 F. Arrichiello and A. Marino and A. Meddahi, *A decentralized observer for a general class of Lipschitz systems*, Proceedings 2013 IEEE International Conference on Automation and Logistics, Yinchuan, China, pp. 362-367, 2013
- 34 F. Arrichiello and F. Pascucci and R. Setola, *Indoor Localization and Connectivity Maintenance in Rescue*, Proceedings 2013 Annual Conference of The International Emergency Management Society, Velaux, France, 2013
- 33 G. Antonelli and F. Arrichiello and F. Caccavale and A. Marino, *Decentralized control of dynamic centroid and formation for multi-robot systems*, 2013 IEEE International Conference on Robotics and Automation, Karlsruhe, D, pp. 3496–3501, 2013
- 32 G. Antonelli and F. Arrichiello and S. Chiaverini and P. Robuffo Giordano, *Adaptive trajectory tracking for quadrotor MAVs in presence of parameter uncertainties and external disturbances*, Proceedings 2013 IEEE/ASME International Conference on Advanced Intelligent Mechatronics, Wollongong, AU, 2013
- 31 G. Antonelli and F. Arrichiello and F. Caccavale and A. Marino, *A decentralized observer-controller scheme for centroid and formation control with bounded control input*, 3rd IFAC Workshop on Estimation and Control of Networked Systems, Santa Barbara, CA, pp. 252–257, 2012

- 30 F. Arrichiello and H. Heidarsson and G.S. Sukhatme, *Opportunistic Localization of Underwater Robots using Drifters and Boats*, 2012 IEEE International Conference on Robotics and Automation, pp. 1861-2776, San Paul, Mi, USA, 2012.
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