

Lucia Pallottino

Research Center “E. Piaggio”,
Department of Information Engineering, University of Pisa
tel. (+39) 050-2217057 fax. (+39) 050-2217051
lucia.pallottino@unipi.it

Personal Data

Birth: 1974
Citizenship: Italy
Office Address: Centro “E. Piaggio”
Largo L. Lazzarino 1, 56100, Pisa, Italy

Education and Current Position

Full Professor in Automatic Control and Robotics, Pisa University, since 2023

Associate Professor in Automatic Control and Robotics, Pisa University, 2015–2023

Ricercatore (Assistant Professor), Pisa University, 2007–2015

Ph.D. in Robotics and Industrial Automation, Pisa University, 2002

“Laurea” Degree in Mathematics, Pisa University, 1998

Researcher Contract (Assegno di Ricerca), at the Department of Electrical Systems and Automation Engineering Faculty of Pisa University in “Optimization techniques applied to the manipulation and the control of hybrid dynamical systems”, *2002-2006*

Visiting Researcher at Mechanical and Aerospace Engineering Department, University of California at Los Angeles, USA, Prof. E. Frazzoli, *11-12/2004.*

Visiting Scholar at the Laboratory for Information and Decision Systems, Massachusetts Institute of Technology, Cambridge USA, Prof. E. Feron, *10/2000-02/2001.*

Institutional Roles

Director of the Centro di Ricerca “E. Piaggio”, Università di Pisa, since January 2023.

Deputy Director of the Centro di Ricerca “E. Piaggio”, Università di Pisa, 2017-2022.

Director of the “Advanced Manufacturing” CrossLab, Dipartimento di Eccellenza, Dipartimento di Ingegneria dell’Informazione since March 2018.

Member of the Ph.D. school committee in “Ingegneria dell’Informazione”, Università di Pisa.

Academic Experiences

Professor of Distributed Robotic Systems for Robotics and Automation Engineering, Pisa University, *2011–2024*

Professor of Systems Theory and Control for Robotics and Automation Engineering, Pisa University, *2016–2024*

Professor of Modelling and Simulation of Discrete Productive Systems Management Engineering and Robotics and Automation Engineering, Pisa University, *2018–2022*

Professor of Automatic Control Management Engineering, Pisa University, *2016–2019*

Professor of Systems Theory for Mechanical and Energy Engineering, Pisa University, *2015–2016*

Professor of Processes Control for Automation Engineering, Pisa University, *2009–2010*

Professor of System Theory for Management Engineering, Pisa University, *2008–2010*

Professor of Automatic Control for Management Engineering, Pisa University, *2006–2007*

Professor of Discrete Event Systems for Business Engineering and Computer Science Engineering, Siena University, *2006–2007*

Recent Research Projects

DARKO: Dynamic Agile Production Robots That Learn and Optimise Knowledge and Operations (DARKO, H2020-EU 101017274, Start: January 2021, Duration: 48 months),
DeCAIR: Developing Curricula for Artificial Intelligence and Robotics (DeCAIR, Erasmus+ EPLUS 618535, Start: January 2021, Duration: 48 months). **Principal Investigator** for the University of Pisa.

EuROBIN: European ROBOTics and AI Network (EuROBIN, HORIZON-CL4-2021-DIGITAL-EMERGING-01 101070596, Start: July 2022, Duration: 48 months). **WP Leader**.

ILIAD: Intra-Logistics with Integrated Automatic Deployment: safe and scalable fleets in shared spaces (ILIAD, H2020-ICT 732737, Start: January 2017, Duration: 48 months). **Principal Investigator** for the University of Pisa.

WALKMAN: Whole-body Adaptive Locomotion and Manipulation (WALKMAN, FP7-ICT 611832, <http://www.walk-man.eu>, Start: September 2013, Duration: 48, Role: **WP Leader** months).

Control of Heterogeneous Automation Systems: Technologies for scalability, reconfigurability and security (CHAT, n. 224428, <http://www.ict-chat.eu/>, Start: September 1st, 2008, Duration: 36 months).

Cooperating Objects NETWORK of excellence (CONET NOE INFSO-ICT-224053, <http://www.cooperating-objects.eu/> Start: June 1st, 2008, Duration: 48 months)

HYCON2- Highly-Complex and Networked Control Systems (HYCON2 NOE ICT-257462, <http://www.hycon2.eu/> Start: September 1st, 2010, Duration: 48 months).

PLATform for the deployment and operation of heterogeneous NETWORKed cooperating objects (PLANET ICT-2009-2130, <http://www.planet-ict.eu/> Start: October 1st, 2010, Duration: 48 months).

RUNES: Reconfigurable Ubiquitous Networked Embedded Systems (RUNES, IST-004536, <http://www.ist-runes.org/>, Start: September 1st, 2004, Duration: 32 months), **Key Researcher**.

RECSYS, Ruolo: Key Researcher: Real-Time Embedded Control of Mobile Systems with Distributed Sensing (RECSYS IST-2001-32515, <http://www.recsys.org>, Start: September 1st, 2002, Duration: 36 months), **Key Researcher**.

Awards

Finalist of the “**ICRA Best Paper Award on Human-Robot Interaction**” for the paper “Deconfliction of Motion Paths with TrafficIns Inspired Rules in Robot-Robot and Human-Robot Interaction” by F. Celi, L. Wang, L. Pallottino, M. Egerstedt, published in IEEE Robotics and Automation Letters, vol. 4, no. 2, pp. 2227-2234, 2019.

Recipient of the “**2019 RAS Chapter of the Year Award**” as the Chair of the IEEE Robotics & Automation Society Italian Chapter, with co-chair Andrea Maria Zanchettin.

Winner of the “**IEEE RAS Italian Chapter Young Author Best Paper Award 2009**” for the paper: Lucia Pallottino, Vincenzo G. Scordio, Antonio Bicchi, and Emilio Frazzoli, “Decentralized cooperative policy for conflict resolution in multivehicle systems,” on IEEE Transactions on Robotics, 23(6):1170–1183, 2007.

Top 10 Best Research Papers (2000 to 2009) in IEEE Transactions on Intelligent Transportation Systems: L. Pallottino, E. M. Feron, and A. Bicchi, “Conflict resolution problems for air traffic management systems solved with mixed integer programming,” IEEE Transactions on Intelligent Transportation Systems, vol. 3, no. 1, pp. 311, March 2002.

Recent Plenary and invited talks

IEEE RAS Distinguished Lecturers: 2020-2021.

Invited Talk at KAUST Research Conference on Robotics and Autonomy “From one to many, coordination problems of multiple mobile robots”, 30 March 2021.

Invited talk at Università di Modena e Reggio Emilia “Distributed approaches for multi mobile robot coordination”, 2018 14 November, Reggio Emilia.

Invited talk at IROS Workshop on “Robotics for logistics in warehouses and environments shared with humans”, presentation on “Soft robotic solutions for warehouse applications: from bin picking to palletizing”, 2018 October 4, Madrid, Spain.

Invited talk at the Workshop “Hybrid Dynamical Systems: Optimization, Stability and Applications”, 2017 January 9-11, Trento, Italy.

Keynote Speaker per “IEEE, 8th International Congress on Ultra Modern Telecommunications and Control Systems”, 19 October, 2016, Lisboa, Portugal.

Invited talk at the Università di Padova (March 31st 2016) “The Walk-Man humanoid robot: whole-body loco-manipulation planning and control”.

Roles and membership of Societies

IEEE Senior Member
Member of IEEE Robotics and Automation Society
Member of IEEE Control Systems Society
Member of IEEE Industrial Electronics Society
Chair of the Italian chapter of the IEEE Robotics and Automation Society (I-RAS) 2015–2018 Vice-chair of the Italian chapter of the IEEE Robotics and Automation Society (I-RAS) 2012–2014

Conferences and Workshops Organizing Committees

Publications Co-Chair for the “2022 IEEE Conference on Robotics and Automation”, Philadelphia, USA, May 23 - 27, 2022.

Registration and finance co-chair of the “29th Mediterranean Conference on Control and Automation”, Italy, June 22-25, 2021.

Workshops co-chair for the “Robotics: Science and Systems 2019”, Freiburg June 22-26, 2019.

Congress co-chair of Control Systems, Automation and Robotics track, 9th IEEE ICUMT 2017, Munich, Germany.

Program Chair of Workshop “2014 Modelling and simulation for autonomous systems” (MESAS14), Roma, 5-6 Maggio 2014.

Congress co-chair of Control Systems, Automation and Robotics track: 6th IEEE ICUMT 2014, St. Petersburg, Russia.

Co-Chair de CONET2012 Third International Workshop on Networks of Cooperating Objects April 16th, 2012 Beijing, China.

Co-Organizer of “Convegno Annuale dei Docenti e Ricercatori Italiani in Automatica: Automatica.it”, Pisa, 7-9 settembre 2011.

International Conferences Programme Committees:

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2007, 2014, 2018, 2019);

IEEE Conference on Robotics and Automation (IEEE-ICRA 2011, 2014, 2015, 2017-2019);

Robotics: Science and Systems Conference (RSS 2014, 2015, 2018-Workshops);

IEEE Conference on Automation Science and Engineering (IEEE-CASE 2008-2010, 2017-2019);

IEEE International Symposium on Multi-robot and Multi-Agent Systems (MRS 2017);

19th European Control Conference (ECC 2020);

2010 IEEE Intelligent Vehicles Symposium (IEEE-IVS 2010);

IEEE 25th International Conference on Emerging Technologies and Factory Automation, Track: “Artificial Intelligence for Cyber-Physical Systems in Automation”, (ETFA2020);

2019 IEEE Computer Society Signature Conference on Computers, Software and Applications (COMPSAC2019)

19th IEEE International Conference on Autonomous Robot Systems and Competitions (ICARSC 2019);

9th European Conference on Mobile Robots (ECMR 2019)

2015 Modelling and simulation for autonomous systems workshop (MESAS15);

Intelligent Robotics and Multi-Agent Systems (IRMAS 2015, 2016)

International Conference on INnovations in Intelligent SysTems and Applications (INISTA 2014);

International Workshop on Networks of Cooperating Objects CONET (2010, 2011 and 2013);

Autonomous Agents and MultiAgent Systems 2011-2013, ARMS@AAMAS2011, ARMS2012, ARMS2013;
1st International Workshop on Robotics IEEE International Conference on Service Operations and
Logistics, and Informatics (IEEE SOLI, 2017) Technology Transfer: Innovation from Academia to
Industry (RTT 2015)
1st International Conference on Intelligent Robotics Automation and Manufacturing 2012 (IRAM2012)
CMASA - Cooperative Multi-Agent Systems and Applications track of the ACM Symposium on Ap-
plied Computing (SAC 2013, 2015, 2017-2020)
Robotica – International Conference on Autonomous Robot Systems 2013 and 2014
IEEE Conference on Control Applications (CCA 2014, 2015)
The 8th International Symposium on Distributed Autonomous Robotic Systems 2006 (DARS06);

Editorial Activities

International Journals' Editorial Board:

- IEEE Robotics and Automation Letters (2020-ongoing Senior Editor);
- IEEE Transactions on Control of Network Systems (2021-ongoing Associate Editor)
- IEEE Transactions on Automation Science and Engineering (2021-ongoing Associate Editor)
- IEEE Robotics and Automation Letters (2018-2020 Associate Editor);
- IEEE Transactions on Robotics(2013-2017)
- International Journal of Advanced Robotic Systems (2013-2015)

International Journals' reviewer:

- Automatica,
- IEEE Transactions on Automatic Control,
- IEEE Transactions on Robotics,
- IEEE Robotics and Automation Magazine,
- IEEE Robotics and Automation Letters;
- International Journal of Robotics Research;
- IEEE Transactions on Automation Science and Engineering
- SIAM Journal On Control and Optimization (SICON),
- Autonomous Robots (Springer),
- Robotics and Autonomous Systems (Elsevier);
- Control Engineering Practice (Elsevier);
- Operations Research & Decision Theory;
- IEEE Transaction on Intelligent Transportation Systems,
- IEEE Transactions on Systems, Man and Cybernetics,
- IEEE Transactions on Control of Network Systems
- IFAC Journal on Control Engineering Practice,
- IEEE Transactions on Control System Technology,

- IEEE Transactions on Industrial Informatics;
- Journal of Intelligent and Robotic Systems;
- AIAA Journal of Guidance, Control, and Dynamics;
- Annals of Operations Research;
- European Journal of Operational Research;
- Information Sciences, Elsevier.

Reviewer of Handbook of Robotics.

Reviewer of Ph.D. Thesis of the European Embedded Control Institute Award, 2009.

Reviewer of Ph.D. thesis for Università di Trento, KTH Stockholm, Università di Padova, Politecnico di Milano, Sapienza Università di Roma, Norwegian University of Science and Technology, Politecnico di Torino, Università del Salento, Mälardalens University Västerås, Università di Salerno.

Research Projects Reviewer:

- Member of the Scientific Commission F.R.S.-FNRS since 2022.
- External Reviewer for the Portuguese Foundation for Science and Technology (FCT) for research projects in the Computer Sciences and Engineering field, 2010.
- Reviewer for the Natural Sciences and Engineering Research Council of Canada (NSERC) for “Discovery Grant” research projects, 2012.
- Reviewer for the Fund for Scientific Research (F.R.S.-FNRS), 2013, 2015, 2017.
- Evaluator of EU projects proposals, 2018.

Main Research Interests

- Planning and Control of Humanoid Robots
- Distributed coordination and control of multi vehicle systems
- Distributed collision avoidance in multi-agent systems
- Optimal control of constrained robotic systems
- Controllability and motion planning of robots formations

Publications

Journals or Books' Chapters

1. A. Palleschi, F. Angelini, C. Gabellieri, L. Pallottino, A. Bicchi and M. Garabini, "Grasp It Like a Pro 2.0: A Data-Driven Approach Exploiting Basic Shape Decomposition and Human Data for Grasping Unknown Objects", *IEEE Transactions on Robotics*, vol. 39, n. 5, pp. 4016-4036, 2023.
2. E. Stefanini, E. Ciancolini, A. Settimi, and L. Pallottino, "Safe and Robust Map Updating for Long-Term Operations in Dynamic Environments", *Sensors*, vol. 23, n.13, 6066, 2023.
3. C. Gabellieri, A. Palleschi, L. Pallottino and M. Garabini, "Autonomous Unwrapping of General Pallets: A Novel Robot for Logistics Exploiting Contact-Based Planning", *IEEE Transactions on Automation Science and Engineering*, Early Access, 2022.
4. O. Napolitano, D. Fontanelli, L. Pallottino and P. Salaris, "Information-aware Lyapunov-based MPC in a feedback-feedforward control strategy for autonomous robots" *IEEE Robotics and Automation Letters*, vol. 7, no. 2, pp. 4765-4772, 2022.
5. A. Palleschi, G.J. Pollayil, M.J. Pollayil, M. Garabini and L. Pallottino, "High-Level Planning for Object Manipulation with Multi Heterogeneous Robots in Shared Environments", *IEEE Robotics and Automation Letters*, vol. 7, no. 2, pp. 3138-3145, 2022.
6. Y. Nisticò, S. Fahmi, L. Pallottino, C. Semini, G. Fink, "On Slip Detection for Quadruped Robots ", *Sensors*, vol. 22, no. 8, 2022.
7. F. Barontini, M.G. Catalano, L. Pallottino, B. Leporini and M. Bianchi, "Integrating Wearable Haptics and Obstacle Avoidance for the Visually Impaired in Indoor Navigation: A User-Centered Approach", *IEEE Transactions on Haptics*, 14 (1), pp. 109-122, 2021.
8. M. Cecchi, M. Paiano, A. Mannucci, A. Palleschi, F. Pecora and L. Pallottino, "Priority-Based Distributed Coordination for Heterogeneous Multi-Robot Systems with Realistic Assumptions", *IEEE Robotics and Automation Letters*, vol. 6, no. 3, pp. 6131-6138, 2021.
9. A. Mannucci, D. Caporale, and L. Pallottino, "On Null Space-Based Inverse Kinematics Techniques for Fleet Management: Toward Time-Varying Task Activation", *IEEE Transactions on Robotics*, 37 (1), pp. 257-274, 2021.
10. A. Mannucci, L. Pallottino and F. Pecora, "On provably safe and live multirobot coordination with online goal posting", *IEEE Transactions on Robotics*, vol. 37, no. 6, pp. 1973-1991, 2021
11. A. Palleschi, M. Hamad, S. Abdolshah, M. Garabini, S. Haddadin and L. Pallottino, "Fast and Safe Trajectory Planning: Solving the Cobot Performance/Safety Trade-Off in Human-Robot Shared Environments", *IEEE Robotics and Automation Letters*, vol. 6, no. 3, pp. 5445-5452, 2021.
12. M. Garabini, D. Caporale, V. Tincani, A. Palleschi, C. Gabellieri, M. Gugliotta, A. Settimi, M.G. Catalano, G. Grioli, and L. Pallottino, "WRAPP-up: a Dual-Arm Robot for Intralogistics", *IEEE Robotics and Automation Magazine*, vol. 8, no. 3, pp. 50-66, 2021.
13. C. Gabellieri, F. Angelini, V. Arapi, A. Palleschi, M.G. Catalano, G. Grioli, L. Pallottino, A. Bicchi, M. Bianchi, and M. Garabini, , "Grasp It Like a Pro: Grasp of Unknown Objects With Robotic Hands Based on Skilled Human Expertise", *IEEE Robotics and Automation Letters*, vol. 5, no. 2, 2020.
14. A. Palleschi, R. Mengacci, F. Angelini, D. Caporale, L. Pallottino, A. De Luca, and M. Garabini, "Time-Optimal Trajectory Planning for Flexible Joint Robots", *IEEE Robotics and Automation Letters*, vol. 5, no. 2, 2020.

15. F. Massa, L. Bonamini, A. Settini, L. Pallottino, and D. Caporale, "LiDAR-Based GNSS Denied Localization for Autonomous Racing Cars", *Sensors*, vol. 20, no. 14, 2020.
16. L. Pallottino, "Networked Systems Theory: Distributed Algorithms for Optimal Cooperation of Dynamical Systems", in *Analytics for the Sharing Economy: Mathematics, Engineering and Business Perspectives*, eds. E. Crisostomi, B. Ghaddar, F. Häusler, J. Naoum-Sawaya, G. Russo and R. Shorten, pp. 25-37, Springer International Publishing, 2020
17. M. Razzanelli, E. Crisostomi, L. Pallottino, G. Pannocchia, "Distributed model predictive control for energy management in a network of microgrids using the dual decomposition method", *Optimal Control Applications and Methods*, vol.41, n. 1, pp. 25-41, 2020.
18. C. Gabellieri, M. Tognon, D. Sanalitra, L. Pallottino, A. Franchi, "A study on force-based collaboration in swarms", *Swarm Intelligence*, pp. 1-26, vol.14 Nov. 2020.
19. G. Lentini, A. Settini, D. Caporale, M. Garabini, G. Grioli, L. Pallottino, M.G. Catalano, A. Bicchi, "Alter-Ego: A Mobile Robot With a Functionally Anthropomorphic Upper Body Designed for Physical Interaction", *IEEE Robotics & Automation Magazine*, Vol. 26 n.4, pp. 94-107, 2019.
20. C. Gabellieri, A. Palleschi, A. Mannucci, M. Pierallini, E. Stefanini, M.G. Catalano, D. Caporale, A. Settini, T. Stoyanov, M. Magnusson, M. Garabini, L. Pallottino, "Towards an Autonomous Unwrapping System for Intralogistics", *IEEE Robotics and Automation Letters*, Vol. 4 n.4, pp. 4603-4610, 2019.
21. A. Palleschi, M. Garabini, D. Caporale, L. Pallottino, "Time-Optimal Path Tracking for Jerk Controlled Robots", *IEEE Robotics and Automation Letters*, Vol. 4 n.4, pp. 3932-3939, 2019.
22. G. Zambella, G. Lentini, M. Garabini, G. Grioli, M.G. Catalano, A. Palleschi, L. Pallottino, A. Bicchi, A. Settini, D. Caporale, "Dynamic Whole-Body Control of Unstable Wheeled Humanoid Robots", *IEEE Robotics and Automation Letters*, Vol. 4 n.4, pp. 3489-3496, 2019.
23. A. Mannucci, L. Pallottino, F. Pecora, "Provably Safe Multi-Robot Coordination With Unreliable Communication", *IEEE Robotics and Automation Letters*, Vol.4 n.4, pp. 3232-3239, 2019.
24. C. Della Santina, L. Pallottino, D. Rus, A. Bicchi, "Exact task execution in highly under-actuated soft limbs: an operational space based approach", *IEEE Robotics and Automation Letters*, Vol. 4 n. 3, pp. 2508-2515, 2019.
25. F. Celi, L. Wang, L. Pallottino, M. Egerstedt, "Deconfliction of Motion Paths with Traffic Inspired Rules in Robot-Robot and Human-Robot Interactions", *IEEE Robotics and Automation Letters*, Vol. 4 n. 2, pp. 2227-2234, 2019.
26. M. Razzanelli, E. Crisostomi, L. Pallottino, G. Pannocchia, "Distributed model predictive control for energy management in a network of microgrids using the dual decomposition method", *Optimal Control Applications and Methods*, pp. 1-17, 2019.
27. S. Nardi, F. Mazzitelli, L. Pallottino, "A Game Theoretic Robotic Team Coordination Protocol For Intruder Herding", *IEEE Robotics and Automation Letters*, Vol. 3, n. 4, pp. 4124-4131, 2018.
28. M. Tognon, C. Gabellieri, L. Pallottino, A. Franchi, "Aerial Co-Manipulation With Cables: The Role of Internal Force for Equilibria, Stability, and Passivity", *IEEE Robotics and Automation Letters*, Vol. 3, n. 3, pp. 2577 - 2583, 2018.

29. F. Negrello, A. Settini, D. Caporale, G. Lentini, M. Poggiani, D. Kanoulas, L. Muratore, E. Luberto, G. Santaera, L. Ciarleglio, L. Ermini, L. Pallottino, D. G. Caldwell, N. Tsagarakis, A. Bicchi, M. G. Catalano, "WALK-MAN Humanoid Robot: Field Experiments in a Post-earthquake Scenario", *IEEE Robotics & Automation Magazine*, vol 25, n 3, pp 8-22, 2018.
30. N. G. Tsagarakis, F. Negrello, M. Garabini, W. Choi, L. Baccelliere, V. G. Loc, J. Noorden, M. Catalano, M. Ferrati, L. Muratore, P. Kryczka, E. Mingo Hoffman, A. Settini, A. Rocchi, A. Margan, S. Cordasco, D. Kanoulas, A. Cardellino, L. Natale, H. Dallali, J. Malzahn, N. Kashiri, V. Varricchio, L. Pallottino, C. Pavan, J. Lee, A. Ajoudani, D. G. Caldwell, A. Bicchi, "WALK-MAN Humanoid Platform", *The DARPA Robotics Challenge Finals: Humanoid Robots To The Rescue*. Editors Spenko M., Buerger S., Iagnemma K., Springer Tracts in Advanced Robotics, vol 121, pp 495-548, Springer.
31. A. Cristofaro, P. Salaris, L. Pallottino, F. Giannoni and A. Bicchi, "On the Minimum-Time Control Problem for Differential Drive Robots with Bearing Constraints", *Journal of Optimization Theory and Applications*, pp. 1-27, 2017.
32. N. G. Tsagarakis, D. G. Caldwell, F. Negrello, W. Choi, L. Baccelliere, V. G. Loc, J. Noorden, L. Muratore, A. Margan, A. Cardellino, L. Natale, E. Hoffman Mingo, H. Dallali, N. Kashiri, J. Malzahn, J. Lee, P. Kryczka, D. Kanoulas, M. Garabini, M. G. Catalano, M. Ferrati, V. Varricchio, L. Pallottino, C. Pavan, A. Bicchi, A. Settini, A. Rocchi, and A. Ajoudani, "WALK-MAN: A High-Performance Humanoid Platform for Realistic Environments", *Journal of Field Robotics*, vol. 34, no. 4, pp. 1 - 34, 2017.
33. H. Marino, P. Salaris, and L. Pallottino, "Controllability analysis of a pair of 3D Dubins vehicles in formation", *Robotics and Autonomous Systems*, vol. 83, pp. 94-105, 2016.
34. M. Ferrati, A. Settini, L. Muratore, A. Cardellino, A. Rocchi, E. Mingo Hoffman, C. Pavan, D. Kanoulas, N.G. Tsagarakis, L. Natale, and L. Pallottino, "The Walk-Man Robot Software Architecture", *Frontiers in Robotics AI*, 2016.
35. P. Salaris, A. Cristofaro, and L. Pallottino, "Epsilon-Optimal Synthesis for Unicycle-like Vehicles with Limited Field-Of-View Sensors", *IEEE Transactions on Robotics (T-RO)*, vol. 31, no. 6, pp. 1404 - 1418, 2015.
36. P. Salaris, A. Cristofaro, L. Pallottino, and A. Bicchi, "Epsilon-optimal synthesis for vehicles with vertically bounded Field-Of-View", *IEEE Transactions on Automatic Control*, vol. 60, no. 5, pp. 1204 - 1218, 2015.
37. S. Martini, D. Di Baccio, F. Alarcón-Romero, A. Viguria-Jiménez, L. Pallottino, G. Dini, and A. Ollero, "Distributed motion misbehavior detection in teams of heterogeneous aerial robots", *Robotics and Autonomous Systems information*, vol. 74 part A, pp. 30-39, 2015.
38. P. Salaris, L. Pallottino, and A. Bicchi, "Shortest Paths for Finned, Winged, Legged and Wheeled Vehicles with Side-Looking Sensors", *International Journal of Robotics Research*, 31(8):997-1017, 2012.
39. A. Bicchi, A. Fagiolini, and L. Pallottino, "Towards a Society of Robots: Behaviors, Misbehaviors, and Security", *IEEE Robotics and Automation Magazine*, 17(4):26 - 36, December 2010.
40. P. Salaris, D. Fontanelli, L. Pallottino and A. Bicchi, "Shortest Paths for a Robot with Non-holonomic and Field-of-View Constraints", *IEEE Trans. on Robotics*, 26(2):269 - 281, 2010.
41. A. Bicchi, A. Danesi, G. Dini, S. La Porta, L. Pallottino, I. M. Savino, and R. Schiavi, "Heterogeneous Wireless Multirobot System", *Robotics and Automation Magazine, IEEE*, 15(1):62-70, 2008.

42. L. Pallottino, V. G. Scordio, E. Frazzoli, and A. Bicchi, “Decentralized cooperative policy for conflict resolution in multi-vehicle systems”. *IEEE Trans. on Robotics*, 23(6):1170-1183, 2007.
43. A. Bicchi, A. Caiti, L. Pallottino, G. Tonietti, “Online Robotic Experiments for Tele-Education at the University of Pisa”, *Int. Journal of Robotic Systems*, 22(4):217-230, 2005. Note: Special issue on Internet & Online Robots for Telemanipulation.
44. L. Pallottino, E. Feron, A. Bicchi, “Conflict Resolution Problems for Air Traffic Management Systems Solved with Mixed Integer Programming”, *IEEE Transaction on Intelligent Transportation Systems*, vol. 3, no. 1, pp. 3-11, March 2002.
45. S. Pancanti, L. Leonardi, L. Pallottino, A. Bicchi, “Optimal control of quantized input systems”, M. Greenstreet and C. Tomlin, editors, *Hybrid Systems: Computation and Control*, LNCS 2289 Lecture Notes in Computer Science. Springer-Verlag, Heidelberg, Germany, pp. 351-363, 2002.
46. A. Bicchi and L. Pallottino, “On Optimal Cooperative Conflict Resolution for Air Traffic Management Systems”, *IEEE Transaction on Intelligent Transportation Systems*, vol. 1, no.4, pp.221-231, Dec. 2000.
47. A. Bicchi and L. Pallottino, “Optimal planning for coordinated vehicles with bounded curvature”, In B. Donald, K. Lynch, and D. Rus, editors, *Algorithmic and Computational Robotics: New Directions*, volume 1, pages 167-172, 2000.

Conference Proceedings

1. E. Stefanini, E. Ciancolini, A. Settini, and L. Pallottino, “Efficient 2D LIDAR-Based Map Updating For Long-Term Operations in Dynamic Environments”, in 2022 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), pp. 832-839, 2022.
2. C. Gabellieri, A. Palleschi, L. Pallottino, “Force-based Formation Control of Omnidirectional Ground Vehicles”, in 2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), pp. 6419-6426, 2021.
3. O. Napolitano, D. Fontanelli, L. Pallottino, P. Salaris, “Gramian-based optimal active sensing control under intermittent measurements”, in 2021 IEEE International Conference on Robotics and Automation (ICRA), pp. 9680-9686, 2021.
4. C. Gabellieri, Y. S. Sarkisov, A. Coelho, L. Pallottino, K. Kondak, M. J. Kim, “Compliance Control of a Cable-Suspended Aerial Manipulator using Hierarchical Control Framework”, in 2020 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2020.
5. T. Brüdigam, F.D. Luzio, L. Pallottino, D. Wollherr, and M. Leibold, “Grid-Based Stochastic Model Predictive Control for Trajectory Planning in Uncertain Environments”, in 2020 IEEE 23rd International Conference on Intelligent Transportation Systems (ITSC), 2020, pp. 1-8.
6. D. Caporale, Settini, A., Massa, F., Amerotti, F., Corti, A., Fagiolini, A., Guiggiani, M., Bicchi, A., and L. Pallottino, “Towards the Design of Robotic Drivers for Full-Scale Self-Driving Racing Cars”, 2019 International Conference on Robotics and Automation (ICRA). 2019.
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