Francesco Betti Sorbelli

Curriculum Vitæ

Last update: **November 1, 2026**



Birth	November 14th, 1983
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Scopus	**989 citations · h-index: 18**

Short Biography

I received the Bachelor's and Master's degrees *cum laude* in Computer Science from the University of Perugia, Italy, in 2007 and 2010, respectively, and the Ph.D. degree in Computer Science from the University of Florence, Italy, in 2018. From November 2018 to October 2019, I was a Postdoctoral Researcher at the University of Perugia under the supervision of Prof. Cristina M. Pinotti. From January 2020 to January 2021, I was a Postdoctoral Researcher at the Missouri University of Science and Technology, Rolla, Missouri, USA, under the supervision of Prof. Sajal K. Das. I subsequently held a Postdoctoral position at the University of Perugia from April 2021 to October 2022.

In October 2022, I joined the Department of Computer Science and Mathematics at the University of Perugia as a tenure-track Assistant Professor and was promoted to Associate Professor in October 2025. In July 2026, I obtained the Italian National Scientific Qualification as Full Professor in Informatics (01/B1). My research lies at the intersection of graph algorithms, combinatorial optimization, wireless and mobile systems, and artificial intelligence, with a primary focus on unmanned aerial vehicles and autonomous systems. I served as Principal Investigator of the national PRIN 2022 PNRR project BREADCRUMBS, which investigated robust and efficient routing for connectivity- and risk-aware BVLoS drone operations. My work combines theoretical modeling and algorithm design with simulation, experimental validation, real-world measurements, dataset construction, and interdisciplinary applications in smart agriculture, autonomous logistics, infrastructure monitoring, and emergency response.

Current Research Lines

My research investigates the algorithmic foundations of autonomous and unmanned systems. The methodological core includes graph and network algorithms, combinatorial optimization, exact and approximation methods, temporal and multi-layer graph models, and data-driven techniques. A central line concerns safe BVLoS and EVLoS drone operations: I develop routing, scheduling, and coverage algorithms that jointly account for ground risk, wireless connectivity, energy constraints, heterogeneous airspace, and operational requirements. This work ranges from theoretical models and complexity analysis to simulation and experimental evaluation on realistic missions. A second line addresses localization, sensing, and communication for UAV-assisted systems. My work includes range-free and UWB-based localization with mobile anchors, outdoor evaluation of PDoA measurements, UAV-assisted wireless sensor and IoT data collection, and the mapping of cellular signal strength and communication quality from real-world traces. I am particularly interested in integrating communication measurements into path planning and in designing reproducible evaluation methodologies that connect analytical models, network simulation, and field experiments. I also study autonomous logistics, infrastructure applications, and resilient multi-UAV systems. Topics include multi-drone and drone-truck delivery, multi-package operations, depot selection, wind-aware routing, aerial inspection and maintenance, and coordination under resource constraints. Related research investigates security and resilience against adversarial actions, including path-deviation and edge attacks, as well as the use of unmanned vehicles in emergency and disaster-response scenarios. In smart agriculture and edge intelligence, I combine robot and drone motion planning on aisle-graphs with edge-cloud sensing, computer vision, and machine learning. Current activities include automated pest detection and monitoring, multimodal agricultural datasets, lightweight neural models for embedded platforms, sensor fusion, and aerial gesture recognition for human–drone interaction. Across these domains, I aim to produce methods that are algorithmically sound, experimentally validated, and deployable in operational environments.

Education and Qualifications

2026 **Italian National Scientific Qualification (ASN).** Qualification as Full Professor in the disciplinary field 01/B1 – Informatics *(Jul 2026)*.

2022 **Italian National Scientific Qualification (ASN).** Qualification as Associate Professor in the disciplinary field 01/B1 – Informatics *(Oct 2022)*.

2014–2018 **Ph.D., Computer Science.** Thesis title: "Localization of Terrestrial Objects Using a Drone with UWB Antennas". Advisor: Cristina M. Pinotti. Dept. of Computer Science and Mathematics, University of Florence.
Judgment: optimum *(Oct 2014–Mar 2018)*.

2007–2010 **MS, Computer Science.** Thesis title: "Coloring and Routing in Wireless Sensor Networks". Advisor: Cristina M. Pinotti. Dept. of Computer Science and Mathematics, University of Perugia.
Final mark: 110/110 cum laude *(Oct 2007–Feb 2010)*.

2003–2007 **BS, Computer Science.** Thesis title: "Asynchronous Training in Wireless Sensor Networks: Two Level Algorithm and Cooperative Approach". Advisor: Ferruccio Barsi. Dept. of Computer Science and Mathematics, University of Perugia.
Final mark: 110/110 cum laude *(Oct 2003–May 2007)*.

Work Experience

Research Positions

2025–now **Associate Professor.** Dept. of Computer Science and Mathematics, University of Perugia. Responsibilities: Writing project proposals, research activities, teaching courses *(Oct 2025–present)*.

2022–2025 **Tenure-track Assistant Professor.** Dept. of Computer Science and Mathematics, University of Perugia. Tutor: Osvaldo Gervasi. Responsibilities: Writing project proposals, research activities, teaching courses *(Oct 2022–Sep 2025)*.

2021–2022 **Post-doctoral researcher.** Dept. of Computer Science and Mathematics, University of Perugia. Advisor: Cristina M. Pinotti. Project title: HALY-ID: HALYomorpha halys IDentification. Funded by: ICT-AGRI-FOOD. Responsibilities: Investigate the use of drones in detecting the Halyomorpha halys bug in orchards *(Apr 2021–Oct 2022)*.

2020–2021 **Post-doctoral researcher.** Dept. of Computer Science, Missouri University of Science and Technology, Rolla, Missouri, USA. Advisor: Sajal K. Das. Responsibilities: Devise efficient algorithms for precision agriculture, localization of sensors, and delivery of goods; Mentor undergraduate students; Assist classes, give lectures, and grade students *(Jan 2020–Jan 2021)*.

2018–2019 **Post-doctoral researcher.** Dept. of Computer Science and Mathematics, University of Perugia. Advisor: Cristina M. Pinotti. Project title: NALP-SAPR: Navigazione Autonoma e Localizzazione Precisa per Sistemi Aeromobili a Pilotaggio Remoto. Funded by: POR UMBRIA FSE 2014-2020. Responsibilities: Devise efficient algorithms for accurate localization and flights of drones *(Nov 2018–Oct 2019)*.

Teaching Positions

2026–2027 **Lecturer.** Undergraduate Course "**Programming I**" (INF/01; 6 CFU, 42 hours), L-P03, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

Lecturer. Undergraduate Course "**Algorithms and Data Structures**" (INF/01; 6 CFU, 42 hours), L-P03, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

Lecturer. Undergraduate Course "**Algorithms and Data Structures with Lab: Part II**" (INF/01; 47 hours), L-31, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

Co-Lecturer. Undergraduate Course "**Additional Computer Skills**" (6 hours), L-35, Mathematics, Dept. of Computer Science and Mathematics, University of Perugia.

2025–2026 **Lecturer.** Ph.D. Course "**Advanced Applications of Unmanned Vehicles in Emerging Technologies**" (INF/01; 3 CFU, 18 hours), XLI-cycle, Computer Science, Dept. of Computer Science and Mathematics, University of Florence.

Lecturer. Undergraduate Course "**Software Engineering**" (INF/01; 6 CFU, 42 hours), L-31, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

Lecturer. Undergraduate Course "**Algorithms and Data Structures**" (INF/01; 6 CFU, 42 hours), L-P03, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

Lecturer. Undergraduate Course "**Programming I**" (INF/01; 6 CFU, 42 hours), L-P03, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

2024–2025 **Lecturer.** Ph.D. Course "**Advanced Applications of Unmanned Vehicles in Emerging Technologies**" (INF/01; 3 CFU, 18 hours), XL-cycle, Computer Science, Dept. of Computer Science and Mathematics, University of Florence.

Lecturer. Undergraduate Course "**Software Engineering**" (INF/01; 6 CFU, 42 hours), L-31, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

Lecturer. Undergraduate Course "**Algorithms and Data Structures**" (INF/01; 6 CFU, 42 hours), L-P03, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

Lecturer. Undergraduate Course "**Programming I**" (INF/01; 6 CFU, 42 hours), L-P03, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

Co-Lecturer. Undergraduate Course "**Algorithms and Data Structures with Lab: part II**" (INF/01; 10 hours), L-31, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

2023–2024 **Lecturer.** Undergraduate Course "**Algorithms and Data Structures**" (INF/01; 6 CFU, 42 hours), L-P03, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

Lecturer. Undergraduate Course "**Programming I**" (INF/01; 6 CFU, 42 hours), L-P03, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

Co-Lecturer. Undergraduate Course "**Algorithms and Data Structures with Lab: part II**" (INF/01; 10 hours), L-31, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

2022–2023 **Co-Lecturer.** Undergraduate Course "**Algorithms and Data Structures with Lab: part II**" (INF/01; 10 hours), L-31, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

Lecturer. Course "**Operating Systems and BASH Programming**" (45 hours), ITS, Higher Technical Institute.

Lecturer. Undergraduate Course "**Coding, Big Data, and Artificial Intelligence**" (INF/01; 6 CFU, 36 hours), L-14, Jurisprudence, Dept. of Law, University of Perugia.

2021–2022 **Adjunct Professor.** Undergraduate Course "**Informatics**" (INF/01; 6 CFU, 36 hours), L-14, Jurisprudence, Dept. of Law, University of Perugia.

2020–2021 **Adjunct Professor.** Undergraduate Course "**Informatics**" (INF/01; 6 CFU, 36 hours), L-14, Jurisprudence, Dept. of Law, University of Perugia.

2014–2015 **Tutor.** Undergraduate Course "**Informatics I**" (INF/01; 6 CFU, 14 hours), L-35, Mathematics, Dept. of Computer Science and Mathematics, University of Perugia.

2007–2008 **Tutor.** Undergraduate Course "**Algorithms and Data Structures II**" (INF/01; 6 CFU, 30 hours), L-31, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia.

2018–now **Teaching Assistant.** Undergraduate Course "**Algorithms and Data Structures**", L-31, Computer Science, Dept. of Computer Science and Mathematics, University of Perugia. Expert in the field. Assisting exams.

Industry

2013–2014 **Programmer.** Klimser/IBM Italy, Siena. Full stack developer at the Monte dei Paschi bank *(May 2013–Aug 2014)*.

2012–2013 **Sysadmin.** Elektron, Bastia Umbra. Coding and configuration of virtual machines *(Nov 2012–Apr 2013)*.

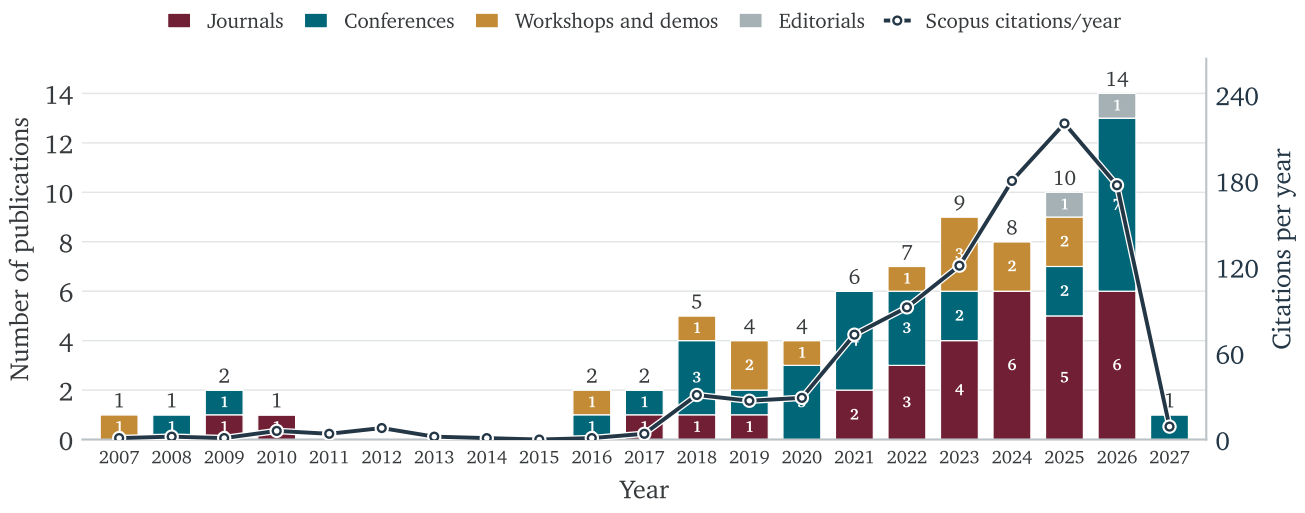
2011–2012 **Web developer.** NewComWeb, Ponte San Giovanni, Perugia. Realization of websites *(Oct 2011–Nov 2012)*.

2010–2011 **Programmer.** Conesi/IBM Italy, Siena. Backend coding at the Monte dei Paschi bank *(Sep 2010–Oct 2011)*.

2010 **Web developer.** Media Division, Perugia. Search Engine Optimization of websites *(May 2010–Jul 2010)*.

2010 **Sysadmin.** DesktopSrl, Ellera. Configuration of virtual machines *(May 2010)*.

Publications by Year



Research Publications

Editorial Contributions

[e3] **F. Betti Sorbelli**, P. Chatterjee, C. Claudel, and F. Corò, "*Introduction to Special Issue on Applications-Driven UAV Routing and Scheduling Algorithms for Autonomous Transportation Systems – Part II*", In: **ACM Journal on Autonomous Transportation Systems**, vol. 3, no. 1, pp. 1–3, Article 1, March 2026.
DOI: https://doi.org/10.1145/3759424
(Editorial Introduction to Special Issue; Guest Editors)

[e2] **F. Betti Sorbelli**, P. Chatterjee, C. Claudel, and F. Corò, "*Introduction to Special Issue on Applications-Driven UAV Routing and Scheduling Algorithms for Autonomous Transportation Systems – Part I*", In: **ACM Journal on Autonomous Transportation Systems**, vol. 2, no. 4, pp. 1–3, Article 14, Dec. 2025.
DOI: https://doi.org/10.1145/3742480
(Editorial Introduction to Special Issue; Guest Editors)

[e1] C. T. Calafate, J. Wubben, **F. Betti Sorbelli**, E. Vinogradov, and J. P. Carvalho, "*Introduction to Special Issue on Multi-UAV-Assisted Wireless Sensor Networks*", In: **International Journal of Distributed Sensor Networks**, Wiley.
TOC: https://onlinelibrary.wiley.com/doi/toc/10.1155/DSN.si.174494
(Editorial Introduction to Special Issue; Guest Editors)

Journal Articles

[j31] S. Kumari, A. Pratap, and **F. Betti Sorbelli**, "*Service Provider's Profit Maximization in Multi-UAV Terahertz 6G Networks: An AoI and Energy-Aware Multi-Agent PPO Method*", In: **Pervasive and Mobile Computing**, to appear, 2026.
(Computer Networks and Communications: Scimago=Q1, Scopus=83rd; IF: WOS=4.890)

[j30] L. Palazzetti, S. K. Mishra, A. Gupta, A. Pratap, and **F. Betti Sorbelli**, "*Reward Maximization in Last-Mile Delivery Using Truck-Carried Heterogeneous Drones*", In: **IEEE Transactions on Intelligent Transportation Systems**, pp. 1–12, early access, 2026.
DOI: https://doi.org/10.1109/TITS.2026.3741397
(Computer Science Applications: Scimago=Q1, Scopus=97th; IF: WOS=11.010)

[j29] **F. Betti Sorbelli**, S. Ghobadi, L. Palazzetti, and C. M. Pinotti, "*Collaborative Drone-Truck Routing for Power Line Maintenance with Multi-Package Deliveries*", In: **ACM Transactions on Sensor Networks**, to appear, Oct. 2026.
DOI: https://doi.org/10.1145/3857798
(Computer Networks and Communications: Scimago=Q1, Scopus=87th; IF: WOS=4.660)

[j28] **F. Betti Sorbelli**, F. Corò, A. Navarra, and C. M. Pinotti, "*Optimal and Approximated Path Planning for a Robot Moving on Aisle-Graphs*", In: **Discrete Applied Mathematics**, vol. 395, pp. 456–472, Elsevier, 2026.
DOI: https://doi.org/10.1016/j.dam.2026.08.050
(Discrete Mathematics and Combinatorics: Scimago=Q1, Scopus=76th; IF: WOS=1.340)

[j27] **F. Betti Sorbelli**, S. Ghobadi, L. Palazzetti, and C. M. Pinotti, "*Optimizing Connectivity and Coverage for UAV Paths Toward BVLoS Operations*", In: **IEEE Transactions on Networking**, vol. 34, pp. 6664–6677, 2026.
DOI: https://doi.org/10.1109/TON.2026.3722934
(Computer Networks and Communications: Scimago=Q1, Scopus=87th; IF: WOS=5.120)

[j26] L. Palazzetti, **F. Betti Sorbelli**, P. Das, L. Almstedt, D. Niederprüm, L. Wolf, and C. M. Pinotti, "*A comprehensive dataset of Halyomorpha halys for automated detection and monitoring in orchards*", In: **Scientific Data**, vol. 13, no. 1, Article 1059, Jul. 2026.
DOI: https://doi.org/10.1038/s41597-026-07774-3
(Computer Science Applications: Scimago=Q1, Scopus=84th; IF: Scopus=9.554)

[j25] L. Palazzetti, D. Giannetti, A. Verolino, D. A. Grasso, C. M. Pinotti, and **F. Betti Sorbelli**, "*AntPi: A Raspberry Pi Based Edge-Cloud System for Real-Time Ant Species Detection Using YOLO*", In: **Ecological Informatics**, vol. 91, Article 103383, Elsevier, Nov. 2025.
DOI: https://doi.org/10.1016/j.ecoinf.2025.103383
(Computer Science Applications: Scimago=Q1, Scopus=95th; IF: Scopus=5.058, WOS=3.142)

[j24] **F. Betti Sorbelli**, S. Ghobadi, and C. M. Pinotti, "*Single- and Multi-Depot Optimization for UAV-Based IoT Data Collection in Neighborhoods*", In: **ACM Transactions on Sensor Networks**, vol. 21, no. 1, pp. 1-30, Jan. 2025.
DOI: https://dl.acm.org/doi/abs/10.1145/3704810
(Computer Networks and Communications: Scimago=Q1, Scopus=75th; IF: Scopus=3.389, WOS=2.253)

[j23] L. Almstedt, **F. Betti Sorbelli**, B. Boom, R. Calvini, E. Costi, A. Dinca, V. Ferrari, D. Giannetti, L. Ichim, A. Kargar, C. Lazar, L. Maistrello, A. Navarra, D. Niederprum, P. Offermans, B. O'Flynn, L. Palazzetti, N. Patelli, C. M. Pinotti, D. Popescu, A. K. Rangarajan, L. Serghei, A. Ulrici, L. Wolf, D. Zorbas, and L. Zurek, "*A Comprehensive Pest Monitoring System for Brown Marmorated Stink Bug*", In: **IEEE Transactions on AgriFood Electronics**, vol. 3, no. 1, pp. 110-120, March-April 2025.
DOI: https://doi.org/10.1109/TAFE.2024.3469538

[j22] L. Almstedt, **F. Betti Sorbelli**, B. Boom, R. Calvini, E. Costi, A. Dinca, V. Ferrari, D. Giannetti, L. Ichim, A. Kargar,

C. Lazar, L. Maistrello, A. Navarra, D. Niederprum, P. Offermans, B. O'Flynn, L. Palazzetti, N. Patelli, C. M. Pinotti, D. Popescu, A. K. Rangarajan, L. Serghei, A. Ulrici, L. Wolf, D. Zorbas, and L. Zurek, "*Beyond The Naked Eye: Computer Vision for Detecting Brown Marmorated Stink Bug and Its Punctures*", In: **IEEE Transactions on AgriFood Electronics**, vol. 3, no. 1, pp. 6-17, March-April 2025.
DOI: https://doi.org/10.1109/TAFE.2024.3429537

[j21] **F. Betti Sorbelli**, P. Chatterjee, F. Corò, S. Ghobadi, L. Palazzetti, and C. M. Pinotti, "*A Novel Graph-Based Multi-Layer Framework for Managing Drone BVLoS Operations*", In: **IEEE Transactions on Network and Service Management**, vol. 21, no. 5, pp. 5091-5105, Oct. 2024.
DOI: https://doi.org/10.1109/TNSM.2024.3401175
(Computer Networks and Communications: Scimago=Q1, Scopus=83rd; IF: Scopus=5.502, WOS=4.195)

[j20] D. Giannetti, N. Patelli, L. Palazzetti, **F. Betti Sorbelli**, C. M. Pinotti, and L. Maistrello, "*First use of unmanned aerial vehicles to monitor Halyomorpha halys and recognize it using Artificial Intelligence*", In: **Pest Management Science**, vol. 80, no. 8, pp. 4074-4084, Wiley, Aug. 2024.
DOI: https://doi.org/10.1002/ps.8115
(Insect Science: Scimago=Q1, Scopus=95th; IF: Scopus=4.85, WOS=4.845)

[j19] **F. Betti Sorbelli**, F. Corò, S. K. Das, L. Palazzetti, and C. M. Pinotti, "*Drone-based Bug Detection in Orchards with Nets: A Novel Orienteering Approach*", In: **ACM Transactions on Sensor Networks**, vol. 20, no. 3, pp. 1-28, Apr. 2024.
DOI: https://doi.org/10.1145/3653713
(Computer Networks and Communications: Scimago=Q1, Scopus=75th; IF: Scopus=3.389, WOS=2.253)

[j18] **F. Betti Sorbelli**, "*UAV-Based Delivery Systems: a Systematic Review, Current Trends, and Research Challenges*", In: **ACM Journal on Autonomous Transportation Systems**, vol. 1, no. 3, pp. 1-40, Sept. 2024.
DOI: https://doi.org/10.1145/3649224

[j17] A. Khochare, **F. Betti Sorbelli**, Y. Simmhan, and S. K. Das, "*Improved Algorithms for Co-scheduling of Edge Analytics and Routes for UAV Fleet Missions*", In: **IEEE/ACM Transactions on Networking**, vol. 32, no. 1, pp. 17-33, Feb. 2024.
DOI: https://doi.org/10.1109/TNET.2023.3277810
(Computer Networks and Communications: Scimago=Q1, Scopus=87th; IF: Scopus=4.371, WOS=3.56)

[j16] **F. Betti Sorbelli**, A. Navarra, L. Palazzetti, C. M. Pinotti, and G. Prencipe, "*Wireless IoT Sensors Data Collection Reward Maximization by Leveraging Multiple Energy- and Storage-Constrained UAVs*", In: **Journal of Computer and System Sciences**, vol. 139, Article 103475, Elsevier, 2024.
DOI: https://doi.org/10.1016/j.jcss.2023.103475
(General Computer Science: Scimago=Q2, Scopus=56th; IF: Scopus=1.292, WOS=1.023)

[j15] **F. Betti Sorbelli**, L. Palazzetti, and C. M. Pinotti, "*YOLO-based Detection of Halyomorpha halys in Orchards Using RGB Cameras and Drones*", In: **Computers and Electronics in Agriculture**, vol. 213, Article 108228, Elsevier, 2023.
DOI: https://doi.org/10.1016/j.compag.2023.108228
(Computer Science Applications: Scimago=Q1, Scopus=95th; IF: Scopus=8.045, WOS=5.565)

[j14] **F. Betti Sorbelli**, F. Corò, S. K. Das, C. M. Pinotti, and A. Shende, "*Dispatching Point Selection for a Drone-Based Delivery System Operating in a Mixed Euclidean-Manhattan Grid*", In: **Annals of Operations Research**, vol. 351, no. 1, pp. 203–222, Springer, 2025.
DOI: https://doi.org/10.1007/s10479-023-05458-4
(Management Science and Operations Research: Scimago=Q1, Scopus=82nd; IF: Scopus=4.549, WOS=4.854)

[j13] C. Qu, **F. Betti Sorbelli**, R. Singh, P. Calyam, and S. K. Das, "*Environmentally-Aware and Energy-Efficient Multi-Drone Coordination and Networking for Disaster Response*", In: **IEEE Transactions on Network and Service Management**, vol. 20, no. 2, pp. 1093-1109, 2023.
DOI: https://doi.org/10.1109/TNSM.2023.3243543
(Computer Networks and Communications: Scimago=Q1, Scopus=83rd; IF: Scopus=5.502, WOS=4.195)

[j12] **F. Betti Sorbelli**, F. Corò, L. Palazzetti, C. M. Pinotti, and G. Rigoni, "*How the Wind Can Be Leveraged for Saving Energy in a Truck-Drone Delivery System*", In: **IEEE Transactions on Intelligent Transportation Systems**, vol. 24, no. 4, pp. 4038-4049, 2023.
DOI: https://doi.org/10.1109/TITS.2023.3234627
(Computer Science Applications: Scimago=Q1, Scopus=96th; IF: Scopus=9.722, WOS=6.319)

[j11] **F. Betti Sorbelli**, C. M. Pinotti, and G. Rigoni, "*On the Evaluation of a Drone-Based Delivery System on a Mixed Euclidean-Manhattan Grid*", In: **IEEE Transactions on Intelligent Transportation Systems**, vol. 24, no. 1, pp. 1276-1287, 2023.
DOI: https://doi.org/10.1109/TITS.2022.3189948
(Computer Science Applications: Scimago=Q1, Scopus=96th; IF: Scopus=9.722, WOS=6.319)

[j10] **F. Betti Sorbelli**, F. Corò, S. K. Das, L. Palazzetti, and C. M. Pinotti, "*On the Scheduling of Conflictual Deliveries in a Last-mile Delivery Scenario with Truck-carried Drones*", In: **Pervasive and Mobile Computing**, vol. 87, Article

101700, Elsevier, 2022.
DOI: https://doi.org/10.1016/j.pmcj.2022.101700
(Computer Networks and Communications: Scimago=Q1, Scopus=90th; IF: Scopus=4.265, WOS=2.725)

[j9] **F. Betti Sorbelli**, S. Carpin, F. Corò, S. K. Das, A. Navarra, and C. M. Pinotti, "*Speeding up Routing Schedules on Aisle Graphs With Single Access*", In: **IEEE Transactions on Robotics**, vol. 38, no. 1, pp. 433-447, 2022.
DOI: https://doi.org/10.1109/TRO.2021.3082021
(Computer Science Applications: Scimago=Q1, Scopus=98th; IF: Scopus=12.738, WOS=6.123)

[j8] **F. Betti Sorbelli**, C. M. Pinotti, S. Silvestri, and S. K. Das, "*Measurement Errors in Range-Based Localization Algorithms for UAVs: Analysis and Experimentation*", In: **IEEE Transactions on Mobile Computing**, vol. 21, no. 4, pp. 1291-1304, 2022.
DOI: https://doi.org/10.1109/TMC.2020.3020584
(Computer Networks and Communications: Scimago=Q1, Scopus=95th; IF: Scopus=6.272, WOS=5.112)

[j7] **F. Betti Sorbelli**, F. Corò, S. K. Das, and C. M. Pinotti, "*Energy-Constrained Delivery of Goods With Drones Under Varying Wind Conditions*", In: **IEEE Transactions on Intelligent Transportation Systems**, vol. 22, no. 9, pp. 6048-6060, 2021.
DOI: https://doi.org/10.1109/TITS.2020.3044420
(Computer Science Applications: Scimago=Q1, Scopus=96th; IF: Scopus=9.722, WOS=6.319)

[j6] **F. Betti Sorbelli**, S. K. Das, C. M. Pinotti, and G. Rigoni, "*A comprehensive investigation on range-free localization algorithms with mobile anchors at different altitudes*", In: **Pervasive and Mobile Computing**, vol. 73, no. 1, Article 101383, Elsevier, 2021.
DOI: https://doi.org/10.1016/j.pmcj.2021.101383
(Computer Networks and Communications: Scimago=Q1, Scopus=90th; IF: Scopus=4.265, WOS=2.725)

[j5] **F. Betti Sorbelli**, C. M. Pinotti, and V. Ravelomanana, "*Range-Free Localization Algorithm Using a Customary Drone: Towards a Realistic Scenario*", In: **Pervasive and Mobile Computing**, vol. 54, pp. 1-15, Elsevier, 2019.
DOI: https://doi.org/10.1016/j.pmcj.2019.01.005
(Computer Networks and Communications: Scimago=Q1, Scopus=90th; IF: Scopus=4.265, WOS=2.725)

[j4] **F. Betti Sorbelli**, S. K. Das, C. M. Pinotti, and S. Silvestri, "*Range-based Algorithms for Precise Localization of Terrestrial Objects using a Drone*", In: **Pervasive and Mobile Computing**, vol. 48, pp. 20-42, Elsevier, 2018.
DOI: https://doi.org/10.1016/j.pmcj.2018.05.007
(Computer Networks and Communications: Scimago=Q1, Scopus=90th; IF: Scopus=4.265, WOS=2.725)

[j3] P. Perazzo, **F. Betti Sorbelli**, M. Conti, G. Dini, and C. M. Pinotti, "*Drone Path Planning for Secure Positioning and Secure Position Verification*", In: **IEEE Transactions on Mobile Computing**, vol. 16, no. 9, pp. 2478-2493, 2017.
DOI: https://doi.org/10.1109/TMC.2016.2627552
(Computer Networks and Communications: Scimago=Q1, Scopus=95th; IF: Scopus=6.272, WOS=5.112)

[j2] A. Navarra, C. M. Pinotti, V. Ravelomanana, **F. Betti Sorbelli**, and R. Ciotti, "*Cooperative training for high density sensor and actor networks*", In: **IEEE Journal on Selected Areas in Communications**, vol. 28, no. 5, pp. 753-763, 2010.
DOI: https://doi.org/10.1109/JSAC.2010.100612
(Computer Networks and Communications: Scimago=Q1, Scopus=99th; IF: Scopus=13.595, WOS=11.42)

[j1] F. Barsi, A. A. Bertossi, **F. Betti Sorbelli**, R. Ciotti, S. Olariu, and M. C. Pinotti, "*Asynchronous Corona Training Protocols in Wireless Sensor and Actor Networks*", In: **IEEE Transactions on Parallel and Distributed Systems**, vol. 20, no. 8, pp. 1216-1230, 2009.
DOI: https://doi.org/10.1109/TPDS.2008.223
(Hardware and Architecture: Scimago=Q1, Scopus=85th; IF: Scopus=4.531, WOS=2.6)

Conference Papers

[c28] **F. Betti Sorbelli**, L. Palazzetti, and C. M. Pinotti, "*Beyond Signal Bars: Benchmarking Cellular RSSI and Quality Mapping from Real-World Traces*", In: **Global Communications Conference (GLOBECOM 2026)**, IEEE, 2026. Macau S.A.R., China, December 7–11, 2026.
(ICORE: B)

[c27] **F. Betti Sorbelli**, A. Ceccarelli, J. Colombo, P. Das, F. Gavazzi, S. Ghobadi, M. Kordi, P. Lollini, M. Meo, L. Palazzetti, C. M. Pinotti, D. Renga, and G. Vallero, "*Risk- and Connectivity-Aware UAV BVLoS Routing: Design and Experimental Evaluation*", In: **Global Communications Conference (GLOBECOM 2026)**, IEEE, 2026. Macau S.A.R., China, December 7–11, 2026.
(ICORE: B)

[c26] **F. Betti Sorbelli**, M. Conti, F. Corò, S. Ghobadi, and C. M. Pinotti, "*Energy-Aware Eternal Vertex Cover for UAV-Based Surveillance under Adversarial Edge Attacks*", In: **Computer Security – 31st European Symposium on Research in Computer Security (ESORICS 2026)**, Lecture Notes in Computer Science, vol. 16970, pp. 488–505, Springer, Cham, 2027. Rome, Italy, September 14–18, 2026.
DOI: https://doi.org/10.1007/978-3-032-38702-8_24

(ICORE: A)

[c25] S. Das, P. Das, **F. Betti Sorbelli**, C. M. Pinotti, and P. Chatterjee, "*Analyzing Ground Risks of UAVs Covering Heterogeneous Areas in BVLoS Mission*", In: **7th Intl. Conf. on Frontiers in Computing and Systems (COMSYS 2026)**, 2026. Mladá Boleslav, Czech Republic, June 24–26, 2026.

[c24] **F. Betti Sorbelli**, P. Das, L. Palazzetti, and C. M. Pinotti, "*Can a Classifier Replace the Human? Box-Level Surrogates for Low-Annotation Object Detection*", In: **22nd Intl. Conf. on Distributed Computing in Smart Systems and the Internet of Things (DCOSS-IoT 2026)**, pp. 56–63, IEEE, 2026. Reykjavik, Iceland, June 22–24, 2026.
DOI: https://doi.org/10.1109/DCOSS-IoT69657.2026.00014
(ICORE: B)

[c23] **F. Betti Sorbelli**, L. Palazzetti, and C. M. Pinotti, "*Outdoor Accuracy Evaluation of DecaWave's DWM1002 PDoA Kit Measurements*", In: **Intl. Conf. on Communications (ICC 2026)**, pp. 1–6, IEEE, 2026. Glasgow, Scotland, UK, May 24–28, 2026.
DOI: https://doi.org/10.1109/ICC59461.2026.11587181

[c22] **F. Betti Sorbelli**, P. Das, L. Palazzetti, and C. M. Pinotti, "*EdgeNeXt: A Lightweight Model for UAV-Based Gesture Recognition from Aerial Perspectives*", In: **Intl. Conf. on Communications (ICC 2026)**, pp. 1–6, IEEE, 2026. Glasgow, Scotland, UK, May 24–28, 2026.
DOI: https://doi.org/10.1109/ICC59461.2026.11587841

[c21] L. Palazzetti, **F. Betti Sorbelli**, and C. M. Pinotti, "*Let Me Sleep! A Machine Learning Approach for IoT Wake-Up Mechanism for Insect Detection*", In: **2025 8th Intl. Workshop on Metrology for Agriculture and Forestry (MetroAgriFor)**, pp. 122–127, IEEE, 2025. Bologna, Italy, October 28–30, 2025. (**Best paper candidate**).
DOI: https://doi.org/10.1109/MetroAgriFor66923.2025.11512533

[c20] **F. Betti Sorbelli**, S. Ghobadi, L. Palazzetti, and C. M. Pinotti, "*Integrating Ground Communication for Extended Drone Visual Line of Sight*", In: **2025 21st Intl. Conf. on Wireless and Mobile Computing, Networking and Communications (WiMob)**, pp. 1–6, IEEE, 2025. Marrakech, Morocco, October 20-22, 2025.
DOI: https://doi.org/10.1109/WiMob66857.2025.11257561
(ICORE: B)

[c19] **F. Betti Sorbelli**, S. Ghobadi, L. Palazzetti, and C. M. Pinotti, "*Optimizing the Number of Drones for Aerial Power-Line Maintenance*", In: **Algorithmics of Wireless Networks. ALGOWIN 2025**, Lecture Notes in Computer Science, vol. 16078, pp. 46–60, Springer, Cham, 2026. Warsaw, Poland, September 15-19, 2025.
DOI: https://doi.org/10.1007/978-3-032-09120-8_4
(ICORE: C)

[c18] **F. Betti Sorbelli**, L. Palazzetti, and C. M. Pinotti, "*A Drone-Based Automated Halyomorpha halys Scouting: A Case Study on Orchard Monitoring*", In: **2023 6th Intl. Workshop on Metrology for Agriculture and Forestry (MetroAgriFor)**, pp. 380-385, IEEE, 2023. Pisa, Italy, November 6-8, 2023.
DOI: https://doi.org/10.1109/MetroAgriFor58484.2023.10424287

[c17] **F. Betti Sorbelli**, L. Palazzetti, and C. M. Pinotti, "*Preliminary Results for Halyomorpha halys Monitoring Relying on a Custom Dataset*", In: **2023 6th Intl. Workshop on Metrology for Agriculture and Forestry (MetroAgriFor)**, pp. 363-368, IEEE, 2023. Pisa, Italy, November 6-8, 2023.
DOI: https://doi.org/10.1109/MetroAgriFor58484.2023.10424403

[c16] **F. Betti Sorbelli**, A. Navarra, L. Palazzetti, C. M. Pinotti, and G. Prencipe, "*Optimal and Heuristic Algorithms for Data Collection by Using an Energy- and Storage-Constrained Drone*", In: **Algorithmics of Wireless Networks. ALGOSENSORS 2022**, Lecture Notes in Computer Science, vol. 13707, pp. 18–30, Springer, Cham, 2022. Potsdam, Germany, September 8–9, 2022.
DOI: https://doi.org/10.1007/978-3-031-22050-0_2
(ICORE: C)

[c15] **F. Betti Sorbelli**, F. Corò, S. K. Das, L. Palazzetti, and C. M. Pinotti, "*Drone-based optimal and heuristic orienteering algorithms towards bug detection in orchards*", In: **2022 18th Intl. Conf. on Distributed Computing in Sensor Systems (DCOSS)**, pp. 117-124, IEEE, 2022. Marina Del Rey, California, USA, May 30-June 1, 2022.
DOI: https://doi.org/10.1109/DCOSS54816.2022.00032
(ICORE: B)

[c14] **F. Betti Sorbelli**, F. Corò, S. K. Das, L. Palazzetti, and C. M. Pinotti, "*Greedy Algorithms for Scheduling Package Delivery with Multiple Drones*", In: **2022 23rd Intl. Conf. on Distributed Computing and Networking (ICDCN)**, pp. 31–39, ACM, 2022. Virtual, January 4-7, 2022. (**Best paper award**).
DOI: https://doi.org/10.1145/3491003.3491028

[c13] C. Qu, R. Singh, A. E. Morel, **F. Betti Sorbelli**, P. Calyam, and S. K. Das, "*Obstacle-Aware and Energy-Efficient Multi-Drone Coordination and Networking for Disaster Response*", In: **2021 17th Intl. Conf. on Network and Service Management (CNSM)**, pp. 446-454, IEEE, 2021. Virtual, October 25-29, 2021.
DOI: https://doi.org/10.23919/CNSM52442.2021.9615574
(ICORE: B)

[c12] A. Khanda, F. Corò, **F. Betti Sorbelli**, C. M. Pinotti, and S. K. Das, "*Efficient Route Selection for Drone-based Delivery*

Under Time-varying Dynamics", In: **2021 18th Intl. Conf. on Mobile Ad Hoc and Smart Systems (MASS)**, pp. 437-445, IEEE, 2021. Virtual, October 4-7, 2021.
DOI: https://doi.org/10.1109/MASS52906.2021.00061
(ICORE: B)

[c11] A. Khochare, Y. Simmhan, **F. Betti Sorbelli**, and S. K. Das, "*Heuristic Algorithms for Co-scheduling of Edge Analytics and Routes for UAV Fleet Missions*", In: **2021 42nd Intl. Conf. on Computer Communications (INFOCOM)**, pp. 1-10, IEEE, 2021. Virtual, May 10-13, 2021.
DOI: https://doi.org/10.1109/INFOCOM42981.2021.9488740
(ICORE: A++)

[c10] **F. Betti Sorbelli**, F. Corò, S. K. Das, A. Navarra, and C. M. Pinotti, "*Speeding-up Routing Schedules on Aisle-Graphs*", In: **2020 16th Intl. Conf. on Distributed Computing in Sensor Systems (DCOSS)**, pp. 69-76, IEEE, 2020. Virtual, June 15-17, 2020.
DOI: https://doi.org/10.1109/DCOSS49796.2020.00023
(ICORE: B)

[c9] **F. Betti Sorbelli**, S. Carpin, F. Corò, A. Navarra, and C. M. Pinotti, "*Optimal Routing Schedules for Robots Operating in Aisle-Structures*", In: **2020 37th Intl. Conf. on Robotics and Automation (ICRA)**, pp. 4927-4933, IEEE, 2020. Virtual, May 31-Aug 31, 2020.
DOI: https://doi.org/10.1109/ICRA40945.2020.9197579
(ICORE: B)

[c8] **F. Betti Sorbelli**, C. M. Pinotti, and G. Rigoni, "*Range-free Localization Algorithms with Mobile Anchors at Different Altitudes: A Comparative Study*", In: **2020 21st Intl. Conf. on Distributed Computing and Networking (ICDCN)**, pp. 1–10, ACM, 2020. Kolkata, India, January 4-7, 2020. (**Best paper award**).
DOI: https://doi.org/10.1145/3369740.3369766
(ICORE: B)

[c7] L. Bartoli, **F. Betti Sorbelli**, F. Corò, C. M. Pinotti, and A. Shende, "*Exact and Approximate Drone Warehouse for a Mixed Landscape Delivery System*", In: **2019 5th Intl. Conf. on Smart Computing (SMARTCOMP)**, pp. 266-273, IEEE, 2019. Washington, DC, USA, June 12-14, 2019.
DOI: https://doi.org/10.1109/SMARTCOMP.2019.00062

[c6] **F. Betti Sorbelli**, S. K. Das, C. M. Pinotti, and S. Silvestri, "*On the Accuracy of Localizing Terrestrial Objects Using Drones*", In: **2018 Intl. Conf. on Communications (ICC)**, pp. 1-7, IEEE, 2018. Kansas City, MO, USA, May 20-24, 2018.
DOI: https://doi.org/10.1109/ICC.2018.8422375
(ICORE: B)

[c5] **F. Betti Sorbelli**, C. M. Pinotti, and V. Ravelomanana, "*Range-Free Localization Algorithm Using a Customary Drone*", In: **2018 4th Intl. Conf. on Smart Computing (SMARTCOMP)**, pp. 9-16, IEEE, 2018. Taormina, Italy, June 18-20, 2018. (**Best paper candidate**).
DOI: https://doi.org/10.1109/SMARTCOMP.2018.00068

[c4] **F. Betti Sorbelli**, S. K. Das, C. M. Pinotti, and S. Silvestri, "*Precise Localization in Sparse Sensor Networks using a Drone with Directional Antennas*", In: **2018 19th Intl. Conf. on Distributed Computing and Networking (ICDCN)**, pp. 1-10, ACM, 2018. Varanasi, India, January 4-7, 2018.
DOI: https://doi.org/10.1145/3154273.3154295

[c3] A. Bagchi, **F. Betti Sorbelli**, C. M. Pinotti, and V. Ribeiro, "*Connectivity of a Dense Mesh of Randomly Oriented Directional Antennas Under a Realistic Fading Model*", In: **Algorithms for Sensor Systems. ALGOSENSORS 2015**, Lecture Notes in Computer Science, vol. 9536, pp. 13–26, Springer, Cham, 2016. Patras, Greece, September 14-18, 2015.
DOI: https://doi.org/10.1007/978-3-319-28472-9_2
(ICORE: C)

[c2] **F. Betti Sorbelli**, R. Ciotti, A. Navarra, M. C. Pinotti, and V. Ravelomanana, "*Cooperative Training in Wireless Sensor and Actor Networks*", In: **2009 6th International ICST Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness (QSHINE)**, vol. 9, pp. 569–583, 2009. Las Palmas, Gran Canaria, Spain, November 23–25, 2009.
DOI: https://doi.org/10.1007/978-3-642-10625-5_36
(ICORE: C)

[c1] F. Barsi, A. A. Bertossi, **F. Betti Sorbelli**, R. Ciotti, S. Olariu, and C. M. Pinotti, "*Asynchronous Training in Wireless Sensor Networks*", In: **2007 3rd Intl. Workshop on Algorithms for Sensor Systems (ALGOSENSORS)**, pp. 46–57, 2008. Wroclaw, Poland, July 14, 2007.
DOI: https://doi.org/10.1007/978-3-540-77871-4_6
(ICORE: C)

Workshop and Demo Papers

[w14] P. Das, **F. Betti Sorbelli**, P. Chatterjee, and C. M. Pinotti, "*Urban Roads and Aerial Autonomy: Are Drones Safe Above Busy Roads?*", In: **2025 22nd Intl. Conf. on Mobile Ad-Hoc and Smart Systems (UAV-IoT@MASS)**, pp. 759–764, IEEE, 2025. Chicago, IL, USA, October 6–8, 2025.
DOI: https://doi.org/10.1109/MASS66014.2025.00124
(ICORE: B)

[w13] **F. Betti Sorbelli**, S. Ghobadi, L. Palazzetti, and C. M. Pinotti, "*Power Line Maintenance Using Multi-Package Collaborative Drone-Truck System*", In: **2025 21st Intl. Conf. on Distributed Computing in Smart Systems and the Internet of Things (Wi-DroIT@DCOSS-IoT)**, pp. 328–335, IEEE, 2025. Lucca, Italy, June 9-11, 2025.
DOI: https://doi.org/10.1109/DCOSS-IoT65416.2025.00061
(ICORE: B)

[w12] **F. Betti Sorbelli**, P. Chatterjee, F. Corò, S. Ghobadi, and C. M. Pinotti, "*Scheduling of Multiple UAVs in BVLoS Operations along Unidirectional and Bidirectional Paths*", In: **2024 49th Annual Conference on Local Computer Networks (ASDRoNet@LCN)**, pp. 1-7, IEEE, 2024. Caen, France, October 8-10, 2024.
DOI: https://doi.org/10.1109/LCN60385.2024.10639622
(ICORE: B)

[w11] **F. Betti Sorbelli**, P. Chatterjee, P. Das, and C. M. Pinotti, "*Risk Assessment in BVLoS Operations for UAVs: Challenges and Solutions*", In: **2024 20th Intl. Conf. on Distributed Computing in Smart Systems and the Internet of Things (Wi-DroIT@DCOSS-IoT)**, pp. 300-307, IEEE, 2024. Abu Dhabi, UAE, April 29-May 1, 2024.
DOI: https://doi.org/10.1109/DCOSS-IoT61029.2024.00053
(ICORE: B)

[w10] **F. Betti Sorbelli**, F. Corò, C. M. Pinotti, and A. Shende, "*Exploring Mixed-Grid Environments for Drone-Based Last-Mile Logistics Optimization*", In: **2023 20th Intl. Conf. on Mobile Ad-Hoc and Smart Systems (UAV-IoT@MASS)**, pp. 634-639, IEEE, 2023. Toronto, Canada, September 25-27, 2023.
DOI: https://doi.org/10.1109/MASS58611.2023.00089
(ICORE: B)

[w9] L. Almstedt, D. Baltieri, **F. Betti Sorbelli**, D. Cattozzi, D. Giannetti, A. Kargar, L. Maistrello, A. Navarra, D. Niederprüm, B. O'Flynn, L. Palazzetti, N. Patelli, L. Piccinini, C. M. Pinotti, L. Wolf, and D. Zorbas, "*Technological Innovations in Agriculture for Scouting Halyomorpha halys in Orchards*", In: **2023 19th Intl. Conf. on Distributed Computing in Smart Systems and the Internet of Things (ISIoT@DCOSS-IoT)**, pp. 702-709, IEEE, 2023. Paphos, Cyprus, June 19-21, 2023.
DOI: https://doi.org/10.1109/DCOSS-IoT58021.2023.00110
(ICORE: B)

[w8] **F. Betti Sorbelli**, P. Chatterjee, F. Corò, L. Palazzetti, and C. M. Pinotti, "*A Novel Multi-Layer Framework for BVLoS Drone Operation: A Preliminary Study*", In: **INFOCOM 2023 – Conference on Computer Communications Workshops (DroneCom@INFOCOM)**, pp. 1–6, IEEE, 2023. Hoboken, NJ, USA, May 17-20, 2023.
DOI: https://doi.org/10.1109/INFOCOMWKSHPS57453.2023.10225806
(ICORE: A*)

[w7] **F. Betti Sorbelli**, F. Corò, S. K. Das, E. Di Bella, L. Maistrello, L. Palazzetti, and C. M. Pinotti, "*A Drone-based Application for Scouting Halyomorpha halys Bugs in Orchards with Multifunctional Nets*", In: **2022 20th Intl. Conf. on Pervasive Computing and Communications (PerCom Demos@PerCom)**, pp. 127-129, IEEE, 2022. Pisa, Italy, March 21-25, 2022. (**Best demo paper award**).
DOI: https://doi.org/10.1109/PerComWorkshops53856.2022.9767309
(ICORE: A*)

[w6] **F. Betti Sorbelli**, M. Conti, C. M. Pinotti, and G. Rigoni, "*UAVs Path Deviation Attacks: Survey and Research Challenges*", In: **2020 17th Intl. Conf. on Sensing, Communication and Networking (IAUV@SECON)**, pp. 1-6, IEEE, 2020. Virtual, June 22-25, 2020.
DOI: https://doi.org/10.1109/SECONWorkshops50264.2020.9149780
(ICORE: B)

[w5] **F. Betti Sorbelli** and C. M. Pinotti, "*Ground Localization with a Drone and UWB Antennas: Experiments on the Field*", In: **2019 20th Intl. Symposium on a World of Wireless, Mobile and Multimedia Networks (SwarmNet@WoWMoM)**, pp. 1-7, IEEE, 2019. Washington, DC, USA, June 10-12, 2019.
DOI: https://doi.org/10.1109/WoWMoM.2019.8793016
(ICORE: B)

[w4] **F. Betti Sorbelli**, F. Corò, C. M. Pinotti, and A. Shende, "*Automated Picking System Employing a Drone*", In: **2019 15th Intl. Conf. on Distributed Computing in Sensor Systems (Wi-DroIT@DCOSS)**, pp. 633-640, IEEE, 2019. Santorini, Greece, May 29-31, 2019.
DOI: https://doi.org/10.1109/DCOSS.2019.00115
(ICORE: B)

[w3] **F. Betti Sorbelli** and C. M. Pinotti, "*On the Localization of Sensors using a Drone with UWB Antennas*", In: **2018**

GEOSAFE Workshop on Robust Solutions for Fire Fighting (RSFF), CEUR Workshop Proceedings, vol. 2146, pp. 18-29, 2018. L'Aquila, Italy, July 19-20, 2018.
URL: https://ceur-ws.org/Vol-2146/paper72.pdf

[w2] C. M Pinotti, **F. Betti Sorbelli**, P. Perazzo, and G. Dini, "*Localization with Guaranteed Bound on the Position Error using a Drone*", In: **2016 14th Intl. Symposium on Mobility Management and Wireless Access (MobiWac@ MSWIM)**, pp. 147–154, ACM, 2016. Malta, November 13-17, 2016.
DOI: https://doi.org/10.1145/2989250.2998178
(ICORE: A)

[w1] F. Barsi, **F. Betti Sorbelli**, R. Ciotti, C. M. Pinotti, A. A. Bertossi, and S. Olariu, "*Asynchronous Training in SANET*", In: **2007 13th Annual Intl. Conf. On Mobile Computing And Networking 2007 (SANET@MobiCom)**, pp. 43–50, ACM, 2007. Montreal, Quebec, Canada, September 11 2007.
DOI: https://doi.org/10.1145/1287731.1287740
(ICORE: A*)

Italian Conferences

[i2] **F. Betti Sorbelli**, F. Corò, S. K. Das, L. Palazzetti, and C. M. Pinotti, "*Cooperative Truck-Drone Scheduling Approach for Last-Mile Deliveries*", In: **2021 22nd Italian Conference on Theoretical Computer Science (ICTCS short paper)**, CEUR Workshop Proceedings, vol. 3072, pp. 40–45, 2021. Virtual, September 13-15, 2021.
URL: https://ceur-ws.org/Vol-3072/paper4.pdf

[i1] **F. Betti Sorbelli** and C. M. Pinotti, "*Localization in Sparse Sensor Networks using a Drone with Directional Antennas*", In: **2017 3rd Italian Conference on ICT for Smart Cities and Communities (I-CiTies)**, 2017. Bari, Italy, September 27–29, 2017.

Other

[o5] D. Giannetti, N. Patelli, **F. Betti Sorbelli**, L. Palazzetti, M. C. Pinotti, and L. Maistrello. "*The HALY.ID project: an innovative field data acquisition system based on drones and machine learning to monitor Halyomorpha halys*". In: XXVII Congresso Nazionale Italiano di Entomologia, Palermo, Italy, June 12–16, 2023 (poster).

[o4] L. Maistrello, D. Giannetti, N. Patelli, **F. Betti Sorbelli**, and M. C. Pinotti. "*Do drones affect the behaviour of Halyomorpha halys? Implications for pest monitoring in pear orchards*". In: XII European Congress of Entomology, Heraklion, Crete, Greece, October 16–20, 2023.

[o3] D. Giannetti, N. Patelli, M. C. Pinotti, **F. Betti Sorbelli**, and L. Maistrello. "*Droni & insetti: nuove tecnologie per studiare e gestire gli agroecosistemi*". In: ENTOMATA, vol. 19, pp. 43–51, 2023.

[o2] C. Qu, R. Singh, A. E. Morel, **F. Betti Sorbelli**, P. Calyam, and S. K. Das. "*Multi-Drone Coordination and Networking Experiments for Disaster Response*". In: 2021 Aerial Experimentation and Research Platform for Advanced Wireless (AERPAW) (poster).

[o1] **F. Betti Sorbelli**. "*Localization of Terrestrial Objects Using a Drone with UWB Antennas*". Ph.D. Thesis, University of Florence, 2018.
URL: https://flore.unifi.it/retrieve/e398c37d-6319-179a-e053-3705fe0a4cff/thesis.pdf

Open Datasets

[d2] L. Almstedt, **F. Betti Sorbelli**, P. Das, D. Niederprüm, L. Palazzetti, C. M. Pinotti, and L. Wolf. "*Haly.ID: A Multi-year Multi-modal Dataset for Halyomorpha halys (BMSB) Monitoring in Pear Orchards (Italy, 2021–2023)*". Zenodo, Version v1, Dec. 2025.
DOI: https://doi.org/10.5281/zenodo.18045393

[d1] L. Palazzetti, D. Giannetti, A. Verolino, D. A. Grasso, C. M. Pinotti, and **F. Betti Sorbelli**. "*ANTPI: A Raspberry Pi Based Edge-Cloud System for Real-Time Ant Species Detection Using YOLO*". Zenodo, Version v1, Sept. 2025.
DOI: https://doi.org/10.5281/zenodo.16740458

Funded Projects

National

2023–2026 **Principal Investigator (PI) – PRIN 2022 PNRR** for the project "*BREADCRUMBS: Building up Robust and Efficient routing Algorithms for Drones by integrating Connectivity and Risk awareness in a Urban air Mobility BVLoS Scenario*".
Total funded: 240.000 EUR (104.000 EUR personal).
Grant code: P2022K7ERB **CUP**: J53D23014990001.
Website: https://breadcrumbsprin2022pnrr.github.io *(Dec 2023–Feb 2026)*.

Awards and Travel Grants

Awards

2025 **Best paper candidate** at the 8th Intl. Workshop on Metrology for Agriculture and Forestry (MetroAgriFor), Bologna, Italy, for the paper "*Let Me Sleep! A Machine Learning Approach for IoT Wake-Up Mechanism for Insect Detection*" [21].

2022 **Best demo paper award** at the 20th Intl. Conf. on Pervasive Computing and Communications (PerCom), online conference, for the paper "*A Drone-based Application for Scouting Halyomorpha halys Bugs in Orchards with Multifunctional Nets*" [7].

2022 **Best paper award** at the 23rd Intl. Conf. on Distributed Computing and Networking (ICDCN), online conference, for the paper "*Greedy Algorithms for Scheduling Package Delivery with Multiple Drones*" [14].

2020 **Visiting Scholar Recognition** at the Missouri University of Science and Technology, College of Engineering and Computing for my outstanding teaching and service contributions.

2020 **Best paper award** at the 21st Intl. Conf. on Distributed Computing and Networking (ICDCN), Kolkata, India, for the paper "*Range-free Localization Algorithms with Mobile Anchors at Different Altitudes: A Comparative Study*" [8].

2018 **Best paper candidate** at the 4th IEEE Intl. Conf. on Smart Computing (SMARTCOMP), Taormina, for the paper "*Range-Free Localization Algorithm Using a Customary Drone*" [5].

Travel Grants

2025 **INdAM/GNCS** Funding for Research Projects (PI: Alfredo Navarra, University of Perugia).

2023 **INdAM/GNCS** Funding for Conferences (personal) (600 EUR).

2023 **UNIPG** Funding for Mobility/Traveling Projects.

2022 **INdAM/GNCS** Funding for Research Projects (PI: Giuseppe Prencipe, University of Pisa) (900 EUR).

2022 **INdAM/GNCS** Funding for Young Researchers (personal) (900 EUR).

2020 **INdAM/GNCS** Funding for Research Projects (PI: Alfredo Navarra, University of Perugia) (900 EUR).

2019 **INdAM/GNCS** Funding for Conferences, Schools, Workshops, and Seminars (personal) (800 EUR).

2017 **INdAM/GNCS** Funding for Young Researchers (personal) (1.300 EUR).

National or International Collaborations

- **Coordinator**: National Project BREADCRUMBS: Building up Robust and Efficient routing Algorithms for Drones by integrating Connectivity and Risk awareness in an Urban Air Mobility BVLoS Scenario, Funded by: MUR (PRIN 2022 PNRR).
- **Participant**: European Project HALY-ID: HALYomorpha halys IDentification, Funded by: ICT-AGRI-FOOD (Horizon 2020), and coordinated by Cristina M. Pinotti, Full Professor at the Dept. of Computer Science and Mathematics, University of Perugia.
- **Member**: GEAR Lab–Group of rEsearch in Algorithms for emeRgent models, directed by Cristina M. Pinotti, Full Professor at the Dept. of Computer Science and Mathematics, University of Perugia.
- **Collaboration**: UC Merced Robotics Laboratory, directed by Stefano Carpin, Full Professor at the Dept. of Computer Science and Engineering, University of California, Merced, USA.
- **Collaboration**: SPRITZ Lab–Security and Privacy Research Group, directed by Mauro Conti, Full Professor at the Dept. of Mathematics, University of Padua.
- **Collaboration**: DREAM:Lab–Distributed Research on Emerging Applications and Machines, directed by Yogesh Simmhan, Associate Professor at the Dept. of Computational and Data Sciences, Indian Institute of Science (IISc), Bangalore, India.
- **Collaboration**: VIMAN Lab–Virtualization, Multimedia and Networking Lab, directed by Prasad P. Calyam, Associate Professor at the Dept. of Electrical Engineering and Computer Science, University of Missouri-Columbia, Columbia, Missouri, USA.
- **Collaboration**: CReWMaN Lab–Creative Research in Wireless Mobility and Networking, directed by Sajal K. Das, Professor and Daniel St. Clair Endowed Chair, Dept. of Computer Science, Missouri University of Science and Technology, Rolla, Missouri, USA.
- **Collaboration**: School of Mobile Computing and Communication, Jadavpur University, India.
- **Collaboration**: Department of Animal Science, Pennsylvania State University (PSU), USA.
- **Participant**: National Project NALP-SAPR: Navigazione Autonoma e Localizzazione Precisa per Sistemi Aeromobili a Pilotaggio Remoto, Funded by: POR UMBRIA FSE 2014-2020 (24.0k EUR), and directed by Cristina M. Pinotti, Full Professor at the Dept. of Computer Science and Mathematics, University of Perugia.
- **Participant**: Research Project funded by Fondazione Cassa di Risparmio di Perugia (Bando 2016) titled RISE: un

nuovo framework distribuito per data collection, monitoraggio e comunicazioni in contesti di emergency response, directed by Alfredo Navarra and Cristina M. Pinotti, University of Perugia.

- **Participant**: INdAM/GNCS Project 2020 titled Commesso Viaggiatore 2.0, directed by Alfredo Navarra (Associate Professor) and Cristina M. Pinotti (Full Professor), Dept. of Computer Science and Mathematics, University of Perugia.
- **Participant**: INdAM/GNCS Project 2022 titled Algoritmi per il controllo distribuito di MIcro e MAcro robots (MIMA), directed by Giuseppe Prencipe (Associate Professor), Dept. of Computer Science, University of Pisa.
- **Participant**: Department Project 2021–2026 titled RESIDUAL: RESilient Innovative and Distributed UAvs ALgorithms, directed by Alfredo Navarra and Cristina M. Pinotti, University of Perugia.

Memberships

2021–2022 **Volunteer Appointment**, Dept. of Computer Science, Missouri University of Science and Technology, Rolla, Missouri, USA *(Apr 2021–Dec 2022)*.

2019–now **Member**, IEEE.

2020–2023 **Member**, ACM.

2020–now **Member**, Research institution "Consorzio Interuniversitario Nazionale per l'Informatica" (CINI) Group.

2019–now **Member**, Research institution "GRuppo di INformatica" (GRIN) Group.

2016–now **Member**, Research institution (INdAM/GNCS) Group.

Supervision of Students

Ph.D.

(1) **Papiya Das**, Dept. of Computer Science and Mathematics, *University of Florence*, Thesis topic about drones and BVLoS flights, from Nov 2023 (co-supervisor).

Master's

(2) **Fabio Bocchini**, Thesis: "*Brown Marmorated Stink Bug: Control and Monitoring with Interactive Dashboards and Computer Vision Algorithms on NVIDIA Jetson*", Dept. of Computer Science and Mathematics, *University of Perugia*, Jul 2024 (supervisor).

(1) **Alessandro Angeletti**, Thesis: "*Analysis of microclimate weather stations data aimed to scouting the brown marmorated stink bug*", Dept. of Computer Science and Mathematics, *University of Perugia*, Sep 2023 (supervisor).

Bachelor's

(6) **Alessandro Manucci**, Thesis: "*Design and Implementation of a Network Access Control System in a Wireless Environment Using HPE Aruba ClearPass: An Enterprise Case Study*", Dept. of Computer Science and Mathematics, *University of Perugia*, Sep 2026 (supervisor).

(5) **Ali Koka**, Thesis: "*Design and Implementation of an Autonomous Waypoint Navigation System for DJI Drones Using Virtual Stick*", Dept. of Computer Science and Mathematics, *University of Perugia*, Jul 2026 (supervisor).

(4) **Alessandro Perego**, Thesis: "*Realistic NS-3 Simulation of an EVLoS System Based on Ground Communication Infrastructure*", Dept. of Computer Science and Mathematics, *University of Perugia*, Jul 2026 (supervisor).

(3) **Mercelia Kodiele Boucketty Issot**, Thesis: "*Temporal graph and shortest path*", Dept. of Computer Science and Mathematics, *University of Perugia*, Apr 2026 (co-supervisor).

(2) **Stefano Biagini**, Thesis: "*Overview of combinatorial approaches in the use of drones for shipping and package delivery*", Dept. of Computer Science and Mathematics, *University of Perugia*, Apr 2025 (supervisor).

(1) **Samuele Bianchi**, Thesis: "*Drone-based algorithms for a last-mile delivery system on mixed Euclidean-Manhattan metric scenario*", Dept. of Computer Science and Mathematics, *University of Perugia*, May 2022 (co-supervisor).

Visiting Students

(1) **Ahmed Lamiri**, Visiting PhD student from *University of Monastir*, Sep–Dec 2025 (host supervisor).

Periods Abroad

2023 **Visit**, at the *Technical University of Braunschweig*, Germany *(Jul 2023)*.

2023 **Visiting Scholar**, at the *Missouri University of Science and Technology*, Rolla, Missouri, USA *(Mar 2023)*.

2019–2020 **Visiting Scholar**, at the *Missouri University of Science and Technology*, Rolla, Missouri, USA *(Sep 2019–Jan 2020)*.

2018 **Visit**, at the *Université de Corse Pascal-Paoli*, Corte, France *(Apr 2018)*.

2016–2017 **Visiting Scholar**, at the *Missouri University of Science and Technology*, Rolla, Missouri, USA *(Aug 2016–Jan 2017)*.

Institutional Roles

2025–now **Member of the Doctoral Board**, Ph.D. Program in Computer Science, *University of Camerino*, Italy.

2024–now **Degree Program Quality Assurance Coordinator**, Bachelor's Degree Program in Computer Science, *University of Perugia*.

2025–now **Degree Program Quality Assurance Coordinator**, Professional Bachelor's Degree Program in Computer Science, *University of Perugia*.

2025–now **Erasmus+ and Internationalization Coordinator**, Department of Computer Science and Mathematics, *University of Perugia*.

2025–now **Member of the Departmental Board (Giunta)**, Department of Computer Science and Mathematics, *University of Perugia*.

Academic Responsibilities

Associate Editor

- ACM Journal on Autonomous Transportation Systems (JATS) *(2025–now)*.

Guest Editor

- ACM Journal on Autonomous Transportation Systems (JATS), Special Issue on "Navigation for Autonomous Vehicles in Complex and GPS-Denied Environments" *(2025)*.
- ACM Journal on Autonomous Transportation Systems (JATS), Special Issue on "Applications-Driven UAV Routing and Scheduling Algorithms for Autonomous Transportation Systems" *(2024)*.
- Wiley International Journal of Distributed Sensor Networks (DSN), Special Issue on "Multi-UAV-Assisted Wireless Sensor Networks" *(2024)*.

General Chair

- IEEE Intl. Conf. on Distributed Computing in Smart Systems and the Internet of Things (DCOSS-IoT) (2025).
- ACM Intl. Workshop on Cost-effective Algorithms for Robots and Drones In Novel AppLications (CARDINAL) (2023).
- IEEE Intl. Special Track on Algorithmic Solutions for Drone- and Robot-based Networks (ASDRoNet) (2024).
- IEEE Intl. Workshop on Wireless Sensors and Drones in Internet of Things (Wi-DroIT) (2021, 2022).

Workshops Chair

- IEEE Intl. Conf. on Distributed Computing in Smart Systems and the Internet of Things (DCOSS-IoT) (2026, 2027).

Posters and Demo Chair

- IEEE Intl. Conf. on Smart Computing (SMARTCOMP) (2024).

Steering Committee

- IEEE Intl. Workshop on Wireless Sensors and Drones in Internet of Things (Wi-DroIT) (2023, 2024, 2025, 2026).

Technical Program Committee Member

- IEEE Intl. Conf. on Computer Communications and Networks (ICCCN) (2025, 2027).
- IEEE Intl. Conf. on Communications (ICC) (2024, 2025).
- ACM Intl. Conf. on Distributed Computing and Networking (ICDCN) (2022, 2023, 2024, 2025, 2026, 2027).
- ACM Intl. Symposium on Mobility Management and Wireless (MobiWac) (2021, 2022, 2023, 2025, 2026).
- IEEE Intl. Conf. on Sensing, Communication, and Networking (SECON) (2022, 2023).
- IEEE Intl. Conf. on Pervasive Computing and Communications (PerCom, Demo/WiP) (2023, 2024, 2025).
- IEEE Intl. Conf. on Distributed Computing in Smart Systems and the Internet of Things (DCOSS-IoT) (2023, 2024, 2025, 2026, 2027).
- IEEE Intl. Conf. on Smart Computing (SMARTCOMP) (2022, 2023, 2024).
- IEEE Intl. Conf. on Mobility, Sensing and Networking (MSN) (2022).
- IEEE Intl. Conf. on Mobile Ad-Hoc and Smart Systems (MASS) (2024, 2025).

- IEEE Intl. Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM) (2021, 2022, 2023, 2024).
- ACM Intl. Workshop on Advances in Systems and Computation at the Edge and HPC Networks (ASCENT@ICDCN) (2026).
- ACM Intl. Workshop on Emergency Response Technologies and Services (EmeRTeS@ICDCN) (2022, 2023).
- ACM Intl. Workshop on Machine Learning and Blockchain for Smart Society (MLBSS@ICDCN) (2022, 2023, 2024, 2025, 2026).
- ACM Intl. Workshop on Societal Computing for the Internet of Things & You (SoCIeTY@ICDCN) (2024).
- IEEE Intl. Workshop on Internet of Autonomous Unmanned Vehicles (IAUV@SECON) (2019, 2020).
- IEEE Intl. Workshop on Wireless Sensors and Drones in Internet of Things (Wi-DroIT@DCOSS) (2019).
- IEEE Intl. Workshop on Wirelessly Powered Systems and Networks (WPSN@DCOSS) (2020).
- IEEE Intl. Workshop on Real-life modeling in 5G/6G networks (REFRESH@DCOSS-IoT) (2023).
- IEEE Intl. Workshop on Pervasive Robotics in Smart and Connected Environments (PerRobotics@PerCom) (2027).
- IEEE Intl. Workshop on Security and Resilience of Multi-UAV Systems (SReMUAV@PerCom) (2027).
- IEEE Intl. Workshop on Sensors and Smart Cities (SSC@SMARTCOMP) (2022, 2023, 2024, 2025, 2026).
- IEEE Intl. Workshop on Unmanned Autonomous Vehicles and IoT (UAV-IoT@MASS) (2023, 2024, 2025, 2026).
- Intl. Conf. on Intelligent Vehicles (ICoIV) (2020, 2022).
- Intl. Conf. on Advances in Future (AFIN) (2022, 2023, 2024, 2025, 2026).
- Intl. Conf. on Evolving Internet (INTERNET) (2023, 2024, 2025).
- Intl. Conf. on Sensor Technologies and Application (SENSORCOMM) (2020, 2022, 2023, 2024, 2025, 2026).
- Intl. Conf. on Mechanical, Electronic and Robotic Engineering (Mere) (2021).
- Intl. Conf. on Mechatronics and Electrical Engineering (MEEE) (2022, 2023).
- Intl. Conf. on Intelligent Sustainable Systems (ICISS) (2024).

Publicity Chair

- IEEE Intl. Workshop on Wireless Sensors and Drones in Internet of Things (Wi-DroIT) (2019, 2020).
- IEEE Intl. Workshop on Unmanned Autonomous Vehicles and IoT (UAV-IoT) (2023).
- IEEE Intl. Workshop on Metrology for Agriculture and Forestry (MetroAgriFor) (2023).
- Intl. Symposium on Algorithmics of Wireless Networks (ALGOSENSORS) (2020).

Web Chair

- IEEE Intl. Workshop on Wireless Sensors and Drones in Internet of Things (Wi-DroIT) (2020, 2021, 2022).

Reviewer Activity

Ph.D. Thesis

- External reviewer for the Ph.D. thesis "*Multi-Agent Systems: New Results for Path Planning and Pattern Formation*", by Sahar Badri, University of L'Aquila, Italy, 2026. Supervisors: Professor Serafino Cicerone and Professor Gabriele Di Stefano.
- External examiner for the Ph.D. thesis "*Fixed-Wing UAV System for Aerial Tethered Delivery of Small to Medium Packages*", by Samuel Ord, RMIT University, Melbourne, Australia, 2024. Supervisor: Associate Professor Matthew Marino. Official nomination and evaluation with honorarium.

International Journals

- ACM Transactions on Sensor Networks (TOSN).
- IEEE/ACM Transactions on Networking (TON).
- IEEE Access.
- IEEE Networking Letters (NL).
- IEEE Sensors Journal.
- IEEE Systems Journal.
- IEEE Robotics and Automation Letters (RA-L).
- IEEE Transactions on Vehicular Technology (TVT).
- IEEE Transactions on Intelligent Transportation Systems (T-ITS).
- IEEE Transactions on Reliability (TR).
- IEEE Transactions on Mobile Computing (TMC).
- IEEE Transactions on Emerging Topics in Computational Intelligence (TETCI).
- IEEE Transactions on Network Science and Engineering (TNSE).
- IEEE Transactions on AgriFood Electronics (TAFE).
- Elsevier Ad Hoc Networks (ADHOC).

- Elsevier Future Generation Computer Systems (FGCS).
- Elsevier Computer Communications (COMCOM).
- Elsevier Computer Networks (COMNET).
- Elsevier Expert Systems with Applications (ESWA).
- Elsevier Pervasive and Mobile Computing (PMC).
- Elsevier Theoretical Computer Science (TCS).
- Elsevier Journal of King Saud University (JKSUCIS).
- Springer Applied Network Science (ANS).
- Operations Research and Decisions (ORD).
- Journal of Agricultural Engineering (JAE).
- ITU Journal on Future and Evolving Technologies (ITU J-FET).

International Conferences and Workshops

- AAMAS (2021, 2023).
- ACM EmeRTeS (2020).
- ACM ICDCN (2020).
- ACM MobiWac (2018, 2019).
- ACM 6G-ABS (2021).
- ACM KDD (2022).
- IEEE CASE (2021).
- IEEE WCNC (2021).
- IEEE PerCom (2021).
- IEEE COMSNETS (2020).
- IEEE ICNP (2021).
- IEEE MetroAgriFor (2023, 2025).
- IEEE DCOSS (2019, 2020, 2021).
- IEEE GLOBECOM (2019, 2020).
- IEEE ICNC (2018).
- IEEE ICDCS (2022).
- IEEE ISCC (2026).
- IEEE INFOCOM (2019, 2020, 2021, 2023, 2024, 2027).
- IEEE SMARTCOMP (2020).
- IEEE Wi-DroIT (2019, 2020).
- IEEE WIFS (2018).
- IEEE WoWMoM (2018, 2020).
- IEEE LCN (2023).
- SOFSEM (2027).
- AIxSET (2025).
- ITASEC25 (2025).
- CALDAM (2023).
- CVIP (2026).
- GECON (2021).
- GPC (2019).
- ALGOSENSORS (2020).

Scientific Presentations, Lectures, and Outreach

Conference and Workshop Participation

2026 **Attended** the 22nd Intl. Conf. on Distributed Computing in Smart Systems and the Internet of Things (IEEE DCOSS-IoT 2026), Reykjavik, Iceland *(Jun 2026)*.

2026 **Presented at** the IEEE Intl. Conf. on Communications (ICC 2026), Glasgow, Scotland, UK, 2026, for the conference paper "*Outdoor Accuracy Evaluation of DecaWave's DWM1002 PDoA Kit Measurements*" [23] *(May 2026)*.

Presented at the IEEE Intl. Conf. on Communications (ICC 2026), Glasgow, Scotland, UK, 2026, for the conference paper "*EdgeNeXt: A Lightweight Model for UAV-Based Gesture Recognition from Aerial Perspectives*" [22].

2025 **Presented at** the 21st IEEE Intl. Conf. on Wireless and Mobile Computing, Networking and Communications (WiMob), Marrakech, Morocco, 2025, for the conference paper "*Integrating Ground Communication for Extended Drone Visual Line of Sight*" [20] *(Oct 2025)*.

2024 **Presented at** the 49th IEEE Conference on Local Computer Networks (ASDRoNet@LCN), Caen, Normandy, France, 2024, for the special track paper "*Scheduling of Multiple UAVs in BVLoS Operations along Unidirectional and Bidirectional Paths*" [12] *(Oct 2024)*.

2024 **Presented at** the 20th IEEE Intl. Conf. on Distributed Computing in Sensor Systems (Wi-DroIT@DCOSS-IoT), Abu Dhabi, UAE, 2024, for the workshop paper "*Risk Assessment in BVLoS Operations for UAVs: Challenges and Solutions*" [11] *(Apr 2024)*.

2023 **Presented at** the 5th IEEE Intl. Workshop on Metrology for Agriculture and Forestry (MetroAgriFor), Pisa, 2023, for the workshop paper "*Preliminary Results for Halyomorpha halys Monitoring Relying on a Custom Dataset*" [17] *(Nov 2023)*.

2023 **Presented at** the 19th IEEE Intl. Conf. on Distributed Computing in Sensor Systems (ISIoT@DCOSS-IoT), Paphos, Cyprus, 2023, for the workshop paper "*Technological Innovations in Agriculture for Scouting Halyomorpha halys in Orchards*" [9] *(Jun 2023)*.

2023 **Presented at** the 42nd IEEE Intl. Conf. on Computer Communications (DroneCom@INFOCOM), online conference, 2023, for the workshop paper "*A Novel Multi-Layer Framework for BVLoS Drone Operation: A Preliminary Study*" [8] *(May 2023)*.

2022 **Attended** the 18th IEEE Intl. Conf. on Distributed Computing in Sensor Systems (DCOSS), Marina del Rey, California, USA, May 30–June 1, 2022 *(May 2022)*.

2022 **Presented at** the 20th IEEE Intl. Conf. on Pervasive Computing and Communications (PerCom Demos@PerCom), online conference, 2022, for the demonstration paper "*A Drone-based Application for Scouting Halyomorpha halys Bugs in Orchards with Multifunctional Nets*" [7]. (**Best demo paper award**) *(Mar 2022)*.

2020 **Presented at** the 16th IEEE Intl. Conf. on Distributed Computing in Sensor Systems (DCOSS), online conference, 2020, for the paper "*Speeding-up Routing Schedules on Aisle-Graphs*" [10] *(Jun 2020)*.

2019 **Presented at** the Science, Technology and Human Rights Conference (AAAS), Washington, DC, USA, 2019, for the talk "*Monitoring human rights in conflict: The use of drones is still a chimera*" *(Oct 2019)*.

2019 **Presented at** the 5th IEEE Intl. Conf. on Smart Computing (SMARTCOMP), Washington, DC, USA, 2019, for the paper "*Exact and Approximate Drone Warehouse for a Mixed Landscape Delivery System*" [7] *(Jun 2019)*.

2019 **Presented at** the 20th IEEE Intl. Symposium on a World of Wireless, Mobile and Multimedia Networks (SwarmNet@WoWMoM), Washington, DC, USA, 2019, for the paper "*Ground Localization with a Drone and UWB Antennas: Experiments on the Field*" [5] *(Jun 2019)*.

2019 **Presented at** the 15th IEEE Intl. Conf. on Distributed Computing in Sensor Systems (Wi-DroIT@DCOSS), Santorini, Greece, 2019, for the paper "*Automated Picking System Employing a Drone*" [4] *(May 2019)*.

2018 **Presented at** the GEO-SAFE Workshop on Robust Solutions for Fire Fighting (RSFF), L'Aquila, Italy, 2018, for the paper "*On the Localization of Sensors using a Drone with UWB Antennas*" [3] *(Jul 2018)*.

2018 **Presented at** the 4th IEEE Intl. Conf. on Smart Computing (SMARTCOMP), Taormina, 2018, for the paper "*Range-Free Localization Algorithm Using a Customary Drone*" [5]. (**Best paper candidate**) *(Jun 2018)*.

2018 **Presented at** the 19th ACM Intl. Conf. on Distributed Computing and Networking (ICDCN), Varanasi, India, 2018, for the paper "*Precise Localization in Sparse Sensor Networks using a Drone with Directional Antennas*" [4] *(Jan 2018)*.

2017 **Presented at** the 3rd Italian Conference on ICT for Smart Cities & Communities (I-CiTies), Bari, 2017, for the work "*Localization in Sparse Sensor Networks using a Drone with Directional Antennas*" [1] *(Mar 2017)*.

Invited Talks and Research Seminars

2026 **Presentation** at the "2026 General INdAM/GNCS Group Meeting", Rimini. Title: "*Integrating Ground Communications for EVLoS Drone Operations*" *(Feb 2026)*.

2024 **Presentation** at the 20th IEEE Intl. Conf. on Distributed Computing in Sensor Systems (Wi-DroIT), Abu Dhabi, UAE, 2024, for the invited talk "*A Comprehensive Pest Monitoring System for Brown Marmorated Stink Bug*" *(Apr 2024)*.

2023 **Presentation** at the Technical University of Braunschweig, Germany. Title: "*Smart Agriculture Applications by Leveraging Robots/Drones Operating in Aisle-Structures*" *(Jul 2023)*.

2023 **Presentation** at the University of Pisa. Title: "*Optimizing Data Collection in IoT Sensor Networks using Drones: The Single-Drone Data-Collection Maximization Problem and Orienteering Aisle-graphs Single-access Problem*" *(Apr 2023)*.

2023 **Seminar** at the Missouri University of Science and Technology, Rolla, USA. Title: "*Optimizing Data Collection in IoT Sensor Networks using Drones: The Single-Drone Data-Collection Maximization Problem and Orienteering Aisle-graphs Single-access Problem*" *(Mar 2023)*.

2023 **Presentation** at the "2023 Haly.ID Workshop", Perugia. Title: "*Exploring the Advancements in Real-Time Object Detection: An Insight into DJI Matrice's Application*" *(Feb 2023)*.

2023 **Presentation** at the "2023 Young researchers@DMI", Perugia. Title: "*Optimal and Heuristic Algorithms for Data Collection by Using an Energy- and Storage-Constrained Drone*" *(Feb 2023)*.

2022 **Presentation** at the "2022 General INdAM/GNCS Group Meeting", Montecatini Terme. Title: "*Optimal and Approximated Routing Schedules for Robots Operating in Aisle-Structures*" *(Jun 2022)*.

2020 **Seminar** at the Missouri University of Science and Technology, Rolla, USA. Title: "*Optimal and Approximated Routing Schedules for Robots Operating in Aisle-Structures*" *(Nov 2020)*.

2020 **Seminar** at the Missouri University of Science and Technology, Rolla, USA. Title: "*Energy-Constrained Delivery of Goods with Drones Under Varying Wind Conditions*" *(Apr 2020)*.

2020 **Seminar** at the Missouri University of Science and Technology, Rolla, USA. Title: "*Range-free Localization Algorithms with Mobile Anchors at Different Altitudes: A Comparative Study*" *(Feb 2020)*.

2019 **Seminar** at the Missouri University of Science and Technology, Rolla, USA. Title: "*How Autonomous Vehicles can be Employed?*" *(Oct 2019)*.

2016 **Seminar** at the Missouri University of Science and Technology, Rolla, USA. Title: "*Localization with Guaranteed Bound on the Position Error using a Drone*" *(Sep 2016)*.

Teaching Lectures

2022 **Lecture** in the "Smart Living in the Era of IoT, AI, Data Science and Cybersecurity" Ph.D. course at the University of Pisa, held by Sajal K. Das. Title: "*Robots and Drones in Smart Agriculture: Possible Applications*" *(Jul 2022)*.

2022 **Lecture** in the "Algorithms and Data Structures" class at the University of Perugia. Title: "*How Autonomous Vehicles can be Employed?*" *(Apr 2022)*.

2021 **Lecture** in the "Algorithms and Data Structures" class at the University of Perugia. Title: "*Heuristic Algorithms for Co-scheduling of Edge Analytics and Routes for UAV Fleet Missions*" *(Dec 2021)*.

2021 **Lecture** in the "Cyber-Physical Systems" class at the Missouri University of Science and Technology, Rolla, USA. Title: "*Unmanned Aerial and Ground Vehicles in Cyber Physical Systems Applications*" *(Apr 2021)*.

2020 **Lecture** in the "Applied Graph Theory" class at the Missouri University of Science and Technology, Rolla, USA. Title: "*Random Graphs and Applications*" *(Nov 2020)*.

2017 **Lecture** in the "Algorithms and Data Structures" class at the University of Perugia. Title: "*The use of the k-d Trees*" *(May 2017)*.

Public Engagement and Dissemination

2024 **Sharper 2024** at the University of Perugia. Title of discussion: "*Detection of the Asian stink bug with AI and UAVs*" *(Sep 2024)*.

2024 **Haly.ID Demo** in Carpi, Modena, Italy *(May 2024)*.

2023 **Sharper 2023** at the University of Perugia. Title of discussion: "*How to use drones and artificial intelligence to counteract the infestation of the Asian stink bug in orchards*" *(Sep 2023)*.

2023 **Open Day 2023** at the University of Perugia *(May 2023)*.

Sports

National University Employees' Championships

Year	Month	Event	Location	Seniores	Veteran A	Overall
2026	Sep	Road Cycling	Vicenza (UniPd)	–	5th	20th/135
	Apr	MTB Short-Track	Varese (UniInsubria, UniMi)	–	**2nd**	4th/25
2025	Oct	Road Cycling	Pescara (UniCh)	–	4th	21st/120
	Apr	MTB Short-Track	Busalla (UniGe)	–	**2nd**	**2nd**/28
2024	Jul	Road Cycling	Milano (UniMi)	–	**1st**	4th/130
	Apr	MTB Short-Track	Firenze (UniFi)	–	*DNS*	*DNS*
2023	May	Road Cycling	Savona (UniGe)	–	**2nd**	**2nd**/108
2022	Sep	Road Cycling	Camerino (UniCam)	**1st**	–	4th/87

Seniores: 35–39 years; Veteran A: 40–44 years; Category columns: category placing. Overall: placing/participants. –: not applicable or unavailable. DNS: did not start.

National University Championships

Year	Month	Event	Location	Employees	Overall
2023	Jun	Road Cycling	Camerino (UniCam)	**2nd**	–

Category columns: category placing. Overall: placing/participants. –: not applicable or unavailable. DNS: did not start.

Miscellaneous

2021–now **Drone license** A1/A3 Open Sub Category.

