# Curriculum Vitae

Carlo Masone

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## Personal Information

**Date of birth** October 22nd, 1983
**Place of birth** Rome (RM), Italy
**Citizenship** Italian

## Contacts and pages

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## Education

**02/2010 - 03/2014** **Ph.D.** in Systems Engineering, conducted at the **Max Planck Institute for Biological Cybernetics** (Germany), under the supervision of Prof. Heinrich H. Bülthoff, and at the **University of Stuttgart** (Germany), under the supervision of Prof. Dr. -Ing. Frank Allgöwer. Title of the thesis: "Planning and control for robotic tasks with a human-in-the-loop", available at the University online library at http://dx.doi.org/10.18419/opus-4589 . The oral examination was held on July 16th 2014. Final grade: **magna cum laude**.

**07/2011 - 07/2011** Robotics summer School on "Autonomous Micro Aerial Vehicles: Design, Perception and Control", at ETH Zurich.

**07/2010 - 07/2010** "Telerobotics summer School" at Technische Universität München (TUM)

**04/2006 - 01/2010** **Master degree** in Systems Engineering from the **Sapienza University of Rome** (Italy). Title of the thesis: "Design, implementation and evaluation of a washout algorithm for a motion simulator using an anthropomorphic manipulator". Final grade: **110 cum laude**.

**10/2002 - 03/2006** **Bachelor degree** in Systems and Automation Engineering from the **Sapienza University of Rome** (Italy). Final grade: **110 cum laude**.

**09/1997 - 07/2002** **Scientific High School diploma** within the National Informatics Program at the "Augusto Righi" high school (Rome, Italy). Final grade: **100 cum laude**.

## Positions

**10/2022 - ongoing** **Assistant Professor (RTD-A)** at **Politecnico di Torino**.

**06/2021 - 09/2022** **Postdoctoral researcher** at the **Consorzio Interuniversitario Nazionale per l'Informatica** (CINI), working within the Visual and Multimodal Applied Learning laboratory led by Prof. Barbara Caputo.

**08/2020 - 05/2021** **Postdoctoral researcher** at the **Italian Institute of Technology** (IIT), working within the Visual and Multimodal Applied Learning laboratory led by Prof. Barbara Caputo.

**07/2017 - 07/2020** **Autonomous Driving Specialist** at Italdesign Giugiaro S.p.a.

**04/2014 - 05/2017** **Postdoctoral researcher** at the **Max Planck Institute for Biological Cybernetics**, within the Autonomous Robotics and Human-Machine Systems research group.

**02/2010 - 03/2014** **Ph.D.** in Systems Engineering, at the **Max Planck Institute for Biological Cybernetics** (Germany), directed by Prof. Heinrich H. Bülthoff and under the co-supervision of Dr. Paolo Robuffo Giordano (now director of research at INRIA) and Dr. Antonio Franchi (now full professor at the University of Twente), and at the **University of Stuttgart** (Germany), under the supervision of Prof. Dr. -Ing. Frank Allgöwer.

## Research Interests and Activities

**Visual geo-localization** Since joining the **VANDAL lab** in August 2020 I am working on the task of visual geo-localization, researching deep learning solutions for extracting image representations that are robust across domains and compact. Related publications: [J4], [J6], [P13-P14], [P17-P19].

**Semantic segmentation in autonomous driving and aerial robotics** At **Italdesign** and in the **VANDAL lab** I have been working on developing deep learning solutions for semantic segmentation for autonomous driving and for aerial robotics. The principal focus of this research so far is to address the domain shift problem in an unsupervised domain adaptation or few-shot domain adaptation setting. Related publications: [J3], [P15], [P16], [P20].

**Cooperative aerial transportation** As a postdoctoral researcher at the **Max Planck Institute for Biological Cybernetics** I have worked on the development of a system for aerial transportation and manipulation of a payload suspended by cables. For the first time, this study viewed such an aerial transportation system as a reconfigurable cable-driven parallel robot. Related publications: [J5] and [P11].

**Modeling and control for the CableRobot simulator** As a postdoctoral researcher at the **Max Planck Institute for Biological Cybernetics** I have worked on the development of model-based control algorithms for the CableRobot simulator, the world's first cable robot for passengers. Related publications: [BC1], [P8], [P10], [P12].

**Robust control for robotic platforms** As a postdoctoral researcher at the **Max Planck Institute for Biological Cybernetics** I have worked on the application of robust controllers to various robotic systems (cable-driven parallel robot, micro aerial vehicle) using sliding mode control algorithms and feedback linearization. Related publications: [P8] and [P9].

**Shared planning and control for aerial robots** My **Ph.D. research** was focused mainly on the development of shared control algorithms for robotics applications with a human in the loop. The combination of some form of automatic control and human control is not only an important step towards increasing the autonomy of robots but it is also relevant for many robotics applications to come. During my Ph.D. I developed several shared control strategies acting at different levels (motion control, motion planning) and devising novel blending functions to combine the control inputs coming from the different systems. Related publications: [J1], [J2], [J5], [P4]. [P6], [P7].

**Modeling and control for the CyberMotion simulator** During my **M.Sc. thesis** and **Ph.D.** I have worked on the development of model-based control algorithms for the CyberMotion simulator, a motion simulator based on an anthropomorphic industrial robot arm. Related publications: [P1-P3] and [P5].

## Research Projects

**04/2022 - ongoing** I am the **principal investigator** of the **lSCRA-C project GeoWarp**. The project grants access to the computational resources of the Marconi 100 HPC at CINECA to investigate the problem of viewpoint shifts in visual geolocalization. Building upon the methodology developed in [P14], the project proposes to:

1) Quantitatively assess the invariance achieved by the method with respect to different variations in the viewpoint.

2) Extend the method to new kinds of viewpoint shifts besides homographies.

**06/2021 - 03/2022** I am the **principal investigator** of the **lSCRA-C project MaGeo**. The project grants access to the computational resources of the Marconi 100 HPC at CINECA to investigate the task of visual geolocalization in large scale databases (possibly with millions of images) with two studies:

1) A benchmark that analyzes the impact of different architectural and training choices of the image retrieval pipeline and verifies the results on datasets with different qualities (in terms of sparsity/density and size).

2) Develop a novel architecture based on deep neural networks that leverages the advances made in large scale classification problems. This is based on the intuition that the metric learning approaches used to leam representations in visual geolocalization are not well suited to handle large problems due to their computationally expensive mining procedures.

Both goals have been accomplished and the results have been published in [P17-P18].

**08/2020 - ongoing** **Coordinator** of a research project on visual geolocalization that employs 1 senior researcher (full time equivalent), 3 research fellows (full time equivalent) and 3 junior fellows (full time equivalent).

## Industrial Projects

**07/2017 - 07/2020** As an employee of Italdesign Giugiaro I worked on several R&D projects regarding innovative and concept platforms for autonomous and assisted mobility:

1) **TechDemo** - a self-driving platform built entirely at Italdesign. l contributed to the design of the

system architecture (definition of sensors and compute units) and to the implementation of the software functionalities (motion planning and control, obstacle avoidance based on lidar readings).
2) **Pop.Up Next** - a hybrid mobility concept with seamless transition between ground and aerial transportation. I worked on a small-scale demonstrator of the concept, developing the autonomous functionalities for the ground vehicle (definition of sensors and compute units, implementation of the motion planning, motion control and perception functions).
3) **WheeM-I** - a micro mobility vehicle for wheelchair users. l was the technical leader in the definition of the assisted driving functionalities and in their implementation. I was involved from the early phases of the project and acted as the technical spokesperson to the presentation of the idea at the judging panel for the Mobility Unlimited Challenge organized by the Toyota Mobility Foundation. The proposal was selected as one of the top-5 finalists among all global entries and received a development grant of $500000.

## Participation and Coordination of Research Groups

**08/2020 - 03/2022** Within the VANDAL research lab (www.http://vandal.polito.it ) I have created a research unit working on the topic of visual geo-localization. The goal of this unit is to develop new solutions for this problem that are robust across different domains (e.g. different lighting, weather conditions, seasons, viewpoints) and applicable to large scale geographical environments. Within this timeframe this research unit has counted on two research assistants, two Ph.D. students, and several M.Sc. students. The research output of this unit includes several publications at journals [J4], [J6] and top conferences [P13-P14], [P17-P19].

**09/2018 - 07/2020** Member of the Volkswagen Group AI Team, a global team composed by researchers within the Volkswagen group that are working in the field of AI. The group, created by Firas Lethaus, aims to foster the collaboration among the VW researchers and accelerate results. As a member affiliated to Italdesign, I organized one of the bi-annual workshops of the group.

## Honors and Awards

**2022** Outstanding reviewer award at the 2022 IEEE/CVF International Conference on Computer Vision and Pattern Recognition (CVPR) https://cvpr2022.thecvf.com/outstanding-reviewers .

**2019** Finalist with Italdesign's team WheeM-i of the Mobility Unlimited Challenge organized by the Toyota Mobility Foundation. As a finalist, the team was awarded a development grant of $500k (https://mobilityunlimited.org/ ). I was the team's technical responsible at the pitch presentation for the judging panel that selected the finalists.

**2016** IROS JTCF Novel Technology Paper Award for Amusement Culture (winner), at the 2016 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), for the paper "The CableRobot Simulator - Large Scale Motion Platform Based on Cable Robot Technology".
https://www.ieee-ras.org/about-ras/latest-news/842-iros-2016-award-winners-announced

**2016** Best Paper Award (finalist) at the 2016 IEEE International Conference on Information and Automation (ICIA), for the paper ' Modeling and Analysis of Cable Vibrations for a Cable-Driven Parallel Robot'.

**2011** Winner of the "Wow-Factor award" for the best multimedia content presented at the 2011 Joint Virtual Reality Conference (JVRC). The prize was awarded for a video demonstrating the operation of the MPI CyberMotion Simulator.

## Editorial Activities, Conference Organization, Institutional Service

### Reviewer Activity

Since 2010 I have been serving as reviewer for several conferences and journals:

- IEEE International Conference on Robotics and Automation (lCRA)
- IEEE/RSJ international Conference on Robotics and Intelligent Systems (IROS)
- IEEE/CVF International Conference on Computer Vision and Pattern Recognition (CVPR)
- IEEE/CVF international Conference On Computer Vision (ICCV)
- International Conference on Pattern Recognition (ICPR)
- IEEE/ASME International Conference on Advanced Intelligent Mechatronics
- IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)
- IEEE Robotics and Automation Letters
- IEEE Transactions on Image Processing
- IEEE Transactions on Robotics
- IEEE Access
- Sensors

### Service

**2021** Pre-screening evaluator in the selection process for the 2021/2022 ELLIS (European Laboratory for Learning and Intelligent Systems) Ph.D. program. This program aims to support excellent young researchers, granting them the supervision from two advisors within the ELLIS network. The pre-screening is the first filtering stage in the selection process.

### Conference Organization

**2019** Organizer of the “VW Group AI Workshop 2019.1”, at Italdesign (Torino, Italy). This is a bi-annual workshop that unites researchers within the Volkswagen group who work in AI. The event was attended by over 100 people from all around the world.

## Seminars, Talks and Presentations

**2021** “Semantic segmentation for automotive applications”, invited talk at the High-Frequency Workshop at Politecnico di Milano. Milan (Italy), November 22$^{nd}$-23$^{rd}$.

**2018** Invited talk at the "VW Group AI Workshop 2018.2", a bi-annual workshop that is organized within the Volkswagen Group AI team, a global team with all the researchers working in Volkswagen AG on AI related topics. Södertalje (Sweden), October 10th-11th.

**2016** Presentation of the paper "Cooperative transportation of a payload using quadrotors: A reconfigurable cable-driven parallel robot" at the interactive session of the 2016 IEEE/RSJ International conference on Intelligent Robots and Systems (IROS). Daejeon (South Korea), October 9th-14th.

**2016** Presentation of the paper "The CableRobot simulator large scale motion platform based on cable robot technology" at the interactive session of the 2016 IEEE/RSJ International conference on Intelligent Robots and Systems (IROS). Daejeon (South Korea), October 9th-14th.

**2012** "Shared trajectory planning for human-in-the-loop navigation of mobile robots in cluttered environments", presentation at the 5th International Workshop on human-Friendly Robotics (HFR 2012). Brussels (Belgium), October 18th-19th.

**2012** Oral presentation of the paper "Interactive planning of persistent trajectories for human-assisted navigation of mobile robots" at the 2012 IEEE/RSJ International conference on Intelligent Robots and Systems (IROS). Vilamoura-Algarve (Portugal), October 7th-12th.

**2011** Invited talk titled "Mechanical design and control of the new 7-DoF CyberMotion Simulator" at the 5th Human Centered Motion cueing Workshop. Göteborg (Sweden), May 19th.

**2011** Oral presentation of the paper "Mechanical design and control of the new 7-DoF CyberMotion Simulator" at the 2011 IEEE International Conference on Robotics and Automation (ICRA). Shanghai (China), May 9th-11th.

# Teaching and Tutoring Activity

## Teaching Collaboration

**2021/2022** Within the course "Machine learning and Deep learning", held by Prof. Barbara Caputo at Politecnico di Torino for the M.Sc. degree program in "Data science and engineering", I have organized two of the compulsory group projects that the students must complete as part of their assessment. A total of 48 students have taken these projects. As part of these projects I held a lecture on visual geo-localization as a guest lecturer.

**2021/2022** Within the course "Advanced Machine Learning", held by Prof. Tatiana Tommasi at Politecnico di Torino for the M.Sc. degree program in "Science in computer engineering", I have organized one of the compulsory group projects that the students must complete as part of their assessment. The project was on the topic of visual geo-localization.

**2021/2022** Within the course "Data analysis and machine intelligence", held by Prof. Tatiana Tommasi at Politecnico di Torino for the M.Sc. degree program in "Automotive engineering", I have organized one of the compulsory group projects that the students must complete as part of their assessment. The project was on the topic of visual geo-localization.

**2021/2022** Within the course "Machine learning and Deep learning", held by Prof. Barbara Caputo at Politecnico di Torino for the M.Sc. degree program in "Data science and engineering", I have participated in the organization of two reading groups for the students, on the subject semantic segmentation.

## Students Supervision

### M.Sc. Students

**2021-2022** **Gabriele Trivigno** graduated from the M.SC. program on "Data Science and Engineering" from Politecnico di Torino with a thesis titled "Deep learning for Sequence-based Visual Geo-localization".

**2021-2022** **Riccardo Mereu** graduated from the M.SC. program on "Data Science and Engineering" from Politecnico di Torino with a thesis titled "A Study on Deep Learning Approaches for Visual Geo-localization".

**2020/2021** **Emanuele Munafò** graduated from the M.SC. program on "Computer Engineering" from Politecnico di Torino with a thesis titled "Efficient and scalable visual place recognition".

**2019/2020** **Antonio Tavera** graduated from the M.SC. program on "Computer Engineering" from Politecnico di Torino with a thesis titled "Steps towards Autonomous Driving: Deep Semantic Segmentation among vehicle viewpoints".

**2019/2020** **Emanuele Alberti** graduated from the M.SC. program on "Computer Engineering" from Politecnico di Torino with a thesis titled "Deep Semantic Segmentation across Environments for Autonomous Driving".

**2019/2020** **Stefano Zamboni** graduated from the M.SC. program on "Computer Engineering" from Politecnico di Torino with a thesis titled "Steps towards autonomous driving: deep semantic segmentation among weather conditions".

### Ph.D. Students

**2022-ongoing** **Gabriele Trivigno** is an ELLIS Ph.D. student from Politecnico di Torino working on "Visual Geo-Localization". His Ph.D. is co-hosted with Prof. Torsten Sattler from the Czech Technical University in Prague.

**2022-ongoing** **Gabriele Berton** is a Ph.D. student from Politecnico di Torino working on "Visual Geo-Localization".

**2022-ongoing** **Shyam Randan Rai** is an ELLIS Ph.D. student from Politecnico di Torino working on "Federated Semantic Segmentation architectures on IoT devices". His Ph.D. is co-hosted with Prof. Zeynep Akata from the University of Tubingen.

**2020-ongoing** **Antonio Tavera** is a Ph.D. student from Politecnico di Torino working on "Semantic Segmentation for Autonomous Driving Applications".

**2014-2019** **Christian Schenk** was a Ph.D. student at the Max Planck Institute for Biological Cybernetics and at the University of Stuttgart. He completed his Ph.D. in 2019 with a dissertation titled “Modelling and control of a cable-driven parallel robot : methods for vibration reduction and motion quality improvement”.

# Publications

## Journals

[J7] R. Mereu, G. Trivigno, G. Berton, C. Masone and B. Caputo, "Learning Sequential Descriptors for Sequence-Based Visual Place Recognition," in IEEE Robotics and Automation Letters, vol. 7, no. 4, pp. 10383-10390, Oct. 2022, doi: 10.1109/LRA.2022.3194310.

[J6] V. Paolicelli, G. Berton, F. Montagna, C. Masone and B. Caputo, “Adaptive-Attentive Geolocalization from few queries: a hybrid approach”, accepted to Frontiers in Computer Science - Special issue on Domain Adaptation and Generalization in Challenging Visual Data Regimes, vol. 4, 2022

[J5] C. Masone and P. Stegagno, “Shared Control of an Aerial Cooperative Transportation System with a Cable-suspended Payload”, Journal of Intelligent & Robotic Systems 103, 40 (2021). doi: 10.1007/s10846-021-01457-4

[J4] C. Masone and B. Caputo, "A Survey on Deep Visual Place Recognition," in IEEE Access, vol. 9, pp. 19516-19547, 2021, doi: 10.1109/ACCESS.2021.3054937, Electronic ISSN: 2169-3536

[J3] E. Alberti, A. Tavera, C. Masone and B. Caputo, "IDDA: A Large-Scale Multi-Domain Dataset for Autonomous Driving," in IEEE Robotics and Automation Letters, vol. 5, no. 4, pp. 5526-5533, Oct. 2020, doi: 10.1109/LRA.2020.3009075, Electronic ISSN: 2377-3766

[J2] C. Masone, M. Mohammadi, P. Robuffo Giordano and A. Franchi, “Shared planning and control for mobile robots with integral haptic feedback”, The International Journal of Robotics Research, 2018;37(11):1395-1420. doi:10.1177/0278364918802006

[J1] A. Franchi, C. Masone, V. Grabe, M. Ryll, H. H. Bülthoff and P. Robuffo Giordano, “Modeling and Control of UAV Bearing Formations with Bilateral High-level Steering”, The International Journal of Robotics Research, 2012;31(12):1504-1525. doi:10.1177/0278364912462493

## Books Chapters

[BC1] C. Schenk, C. Masone, A. Pott, H. H. Bülthoff, “Application of a Differentiator-Based Adaptive Super-Twisting Controller for a Redundant Cable-Driven Parallel Robot”, (2018), In: Gosselin C., Cardou P., Bruckmann T., Pott A. (eds) Cable-Driven Parallel Robots. Mechanisms and Machine Science, vol 53. Springer, Cham. https://doi.org/10.1007/978-3-319-61431-1_22

## Proceedings

[P20] A. Tavera, E. Arnaudo, C. Masone and B. Caputo, “Augmentation Invariance and Adaptive Sampling in Semantic Segmentation of Agricultural Aerial Images”, accepted to Agriculture-Vision: 3rd International Workshop and Prize Challenge at CVPR 2022

[P19] V. Paolicelli, A. Tavera, G. Berton, C. Masone and B. Caputo, “Learning Semantics for Visual Place Recognition through Multi-Scale Attention”, 21st International Conference on Image Analysis and Processing, 23-27 May 2022, Lecce, Italy. Preprint available at https://arxiv.org/abs/2201.09701

[P18] G. Berton, C. Masone and B. Caputo, “Rethinking Visual Geo-localization for Large-Scale Applications”, accepted to 2022 IEEE/CVF International Conference on Computer Vision and Pattern Recognition (CVPR), New Orleans, Louisiana, US, 19-24 Jun. 2022

[P17] G. Berton, R. Mereu, G. Trivigno, C. Masone, G. Csurka, T. Sattler and B. Caputo, “Deep Visual Geo-localization Benchmark”, accepted to 2022 IEEE/CVF International Conference on Computer Vision and Pattern Recognition (CVPR), New Orleans, Louisiana, US, 19-24 Jun. 2022

[P16] A. Tavera, F. Cermelli, C. Masone and B. Caputo, “Pixel-by-Pixel Cross-Domain Alignment for Few-Shot Semantic Segmentation”, Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), Waikoloa, Hawaii, US, 8-9 Jan. 2022, pp. 1626-1635, https://openaccess.thecvf.com/content/WACV2022/html/Tavera_Pixel-by-Pixel_Cross-Domain_Alignment_for_Few-Shot_Semantic_Segmentation_WACV_2022_paper.html

[P15] A. Tavera, C. Masone and B. Caputo, “Reimagine BiSeNet for Real-Time Domain Adaptation in Semantic Segmentation”, to appear in Proceedings of the I-RIM 2021 Conference, Roma, Italy, 8-10 Oct. 2021, https://i-rim.it/en/list_of_papers2021-2/ . Preprint available at https://arxiv.org/abs/2110.11662?context=cs

[P14] G. Berton, C. Masone, V. Paolicelli and B. Caputo, "Viewpoint Invariant Dense Matching for Visual Geolocalization," 2021 IEEE/CVF International Conference on Computer Vision (ICCV), Montreal, QC, Canada, 10-17 Oct. 2021, pp. 12149-12158, doi: 10.1109/ICCV48922.2021.01195, Electronic ISBN:978-1-6654-2812-5, Electronic ISSN: 2380-7504

[P13] G. Moreno Berton, V. Paolicelli, C. Masone and B. Caputo, "Adaptive-Attentive Geolocalization from few queries: a hybrid approach," 2021 IEEE Winter Conference on Applications of Computer Vision (WACV), Waikoloa, Hawaii, US, 3-8 Jan. 2021, pp. 2917-2926, doi: 10.1109/WACV48630.2021.00296, Electronic ISBN:978-1-6654-0477-8, Electronic ISSN: 2642-9381

[P12] P. Miermeister, M. Lächele, R. Boss, C. Masone, C. Schenk, J. Tesch, M. Kerger, H. Teufel, A. Pott, H. H Bülthoff, "The CableRobot simulator large scale motion platform based on cable robot technology," 2016 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Daejeon, South Korea, 9-14 Oct. 2016, pp. 3024-3029, doi: 10.1109/IROS.2016.7759468, Electronic ISBN:978-1-5090-3762-9, Electronic ISSN: 2153-0866

[P11] C. Masone, H. H. Bülthoff and P. Stegagno, "Cooperative transportation of a payload using quadrotors: A reconfigurable cable-driven parallel robot," 2016 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Daejeon, South Korea, 9-14 Oct. 2016, pp. 1623-1630, doi: 10.1109/IROS.2016.7759262, Electronic ISBN:978-1-5090-3762-9, Electronic ISSN: 2153-0866

[P10] C. Schenk, C. Masone, P. Miermeister and H. H. Bülthoff, "Modeling and analysis of cable vibrations for a cable-driven parallel robot," 2016 IEEE International Conference on Information and Automation (ICIA), Ningbo, China, 1-3 Aug. 2016, pp. 454-461, doi: 10.1109/ICInfA.2016.7831867, Electronic ISBN:978-1-5090-4102-2

[P9] S. Rajappa, C. Masone, H. H. Bülthoff and P. Stegagno, "Adaptive Super Twisting Controller for a quadrotor UAV," Stockholm, Sweden, 16-21 May 2016 IEEE International Conference on Robotics and Automation (ICRA), 2016, pp. 2971-2977, doi: 10.1109/ICRA.2016.7487462, Electronic ISBN:978-1-4673-8026-3

[P8] C. Schenk, H. H. Bülthoff and C. Masone, "Robust adaptive sliding mode control of a redundant cable driven parallel robot," IEEE 2015 19th International Conference on System Theory, Control and Computing (ICSTCC), Cheile Gradistei, Romania, 14-16 Oct. 2015, pp. 427-434, doi: 10.1109/ICSTCC.2015.7321331, Electronic ISBN:978-1-4799-8481-7

[P7] C. Masone, P. Robuffo Giordano, H. H. Bülthoff and A. Franchi, "Semi-autonomous trajectory generation for mobile robots with integral haptic shared control," 2014 IEEE International Conference on Robotics and Automation (ICRA), Hong Kong, China, 31 May-7 June 2014, pp. 6468-6475, doi: 10.1109/ICRA.2014.6907814, Electronic ISBN:978-1-4799-3685-4, Print ISSN: 1050-4729

[P6] C. Masone, A. Franchi, H. H. Bülthoff and P. R. Giordano, "Interactive planning of persistent trajectories for human-assisted navigation of mobile robots", 2012 IEEE/RSJ International Conference on Intelligent Robots and Systems, Vilamoura-Algarve, Portugal, 7-12 Oct. 2012, pp. 2641-2648, doi: 10.1109/IROS.2012.6386171, Electronic ISBN:978-1-4673-1736-8, Electronic ISSN: 2153-0866

[P5] A. Nesti, C. Masone, M. Barnett-Cowan, P. Robuffo Giordano, H. H. Bülthoff and P. Pretto, "Roll rate thresholds and perceived realism in driving simulation", In Driving Simulation Conference 2012 Europe, Paris, France, 6-7 Sept. 2012.

[P4] A. Franchi, C. Masone, H. H. Bülthoff and P. Robuffo Giordano, "Bilateral teleoperation of multiple UAVs with decentralized bearing-only formation control," 2011 IEEE/RSJ International Conference on Intelligent Robots and Systems, San Francisco, CA, USA, 25-30 Sept. 2011, pp. 2215-2222, doi: 10.1109/IROS.2011.6094525, Electronic ISBN:978-1-61284-456-5, Electronic ISSN: 2153-0866

[P3] C. Masone, P. Robuffo Giordano and H. H. Bülthoff, "Mechanical design and control of the new 7-DOF CyberMotion simulator," 2011 IEEE International Conference on Robotics and Automation, Shanghai, China, 9-13 May 2011, pp. 4935-4942, doi: 10.1109/ICRA.2011.5980436, Electronic ISBN:978-1-61284-385-8, Print ISSN: 1050-4729

[P2] P. Robuffo Giordano, C. Masone, J. Tesch, M. Breidt, L. Pollini and H. H. Bülthoff, "A novel framework for closed-loop robotic motion simulation - part II: Motion cueing design and experimental validation," 2010 IEEE International Conference on Robotics and Automation, Anchorage, AK, 3-7 May 2010, pp. 3896-3903, doi: 10.1109/ROBOT.2010.5509945, Print ISBN:978-1-4244-5038-1, Print ISSN: 1050-4729

[P1] P. Robuffo Giordano, C. Masone, J. Tesch, M. Breidt, L. Pollini and H. H. Bülthoff, "A novel framework for closed-loop robotic motion simulation - part I: Inverse kinematics design," 2010 IEEE

International Conference on Robotics and Automation, Anchorage, AK, 3-7 May 2010, pp. 3876-3883, doi: 10.1109/ROBOT.2010.5509647, Print ISBN:978-1-4244-5038-1, Print ISSN: 1050-4729

## Other

[O3] C. Masone, “Planning and control for robotic tasks with a human-in-the-loop”, Ph.D. dissertation, Stuttgart, 16 July 2014, http://dx.doi.org/10.18419/opus-4589

[O2] A. Franchi, C. Masone and P. Robuffo Giordano, “A Synergetic High-level/Reactive Planning Framework with Application to Human-Assisted Navigation”, In 2012 IEEE IROS Workshop on Real-time Motion Planning: Online, Reactive, and in Real-time, Vilamoura, Portugal, 12 Oct. 2012.

[O1] C. Masone, A. Franchi, H. H. Bülthoff, P. Robuffo Giordano. Shared Trajectory Planning for Human-in-the-loop Navigation of Mobile Robots in Cluttered Environments. In 5th Int. Work. on Human-Friendly Robotics, Bruxelles, Belgium, 18-19 Oct. 2012.