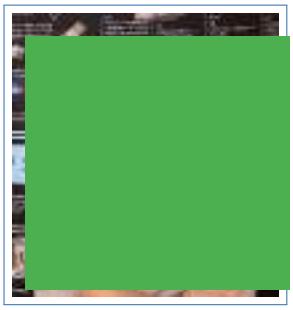

Marco Sagliano

Curriculum Vitae

Experience

2018–now **Visiting GNC Specialist**, Japanese Aerospace Exploration Agency, Chofu, Japan.
Guidance and Control Engineer for CALLISTO (Cooperative Action Leading to Launcher Innovation in Stage Toss back Operations), a VTVL Reusable Rocket Demonstrator jointly developed by DLR, CNES and JAXA

Detailed responsibilities:
- Guidance and Control Technical Leader and System Engineer for Phases B-C-D: the activity included the coordination of all the development, analysis, validation and verification activities of the corresponding subsystems, and the compliance with the system and mission requirements.
- Development of Guidance and Control scheme during the aerodynamic descent, powered descent and landing phases of CALLISTO.
- Coordination of CALLISTO Guidance & Control activities between DLR and JAXA.

2022–2024 **Visiting Scientist**, San Diego State University, San Diego, United States.
3-months visiting period spanned over three years to work on advanced Entry, Descent, and Landing Guidance applications. Hosted by Prof. Ping Lu, SDSU Department Head

2011–2018 **GNC Research Engineer**, Space Systems Institute, German Aerospace Center, Bremen, Germany.
Analysis and Development of Guidance and Control for Entry-Descent-Landing / Formation Flying / Rendezvous scenarios.

Detailed responsibilities:
- Technical leader, coordinator, and main developer of SPARTAN, a DLR-developed pseudospectral algorithm for optimal control;
- Development of Control for DLR VTVL Demonstrator EAGLE
- Development of Guidance and Control for DLR Project ATON ATON
- Development of Navigation solution for DLR Project SINPLEX SINPLEX
- Analysis and Development of OCP-based and Drag-tracking based algorithms for Entry-guidance schemes;
- Supervision of students for internships and master theses;

2008-2011 **GNC Engineer**, Advanced Space Systems Technology Business Unit, GMV, Madrid, Spain.
Analysis and Development of guidance and control for Formation Flying / Rendezvous scenarios. Integration and Verification of the GNCDE platform.

Detailed responsibilities:
- Developer of guidance and control algorithms for Formation Flying and Rendezvous missions in elliptical/circular orbits and L_2 scenarios;
- Configuration control, packages integration and verification / validation responsible for the GNCDE project;

Education

2012-2016 **PhD in Production Techniques**, *University of Bremen*, Germany, *Magna Cum Laude*.

2005–2008 **Master of Science**, *University of Naples Federico II*, Italy, *110/110 Cum Laude and Honors*.

2002–2005 **Bachelor of Science**, *University of Naples Federico II*, Italy, *110/110*.

PhD Thesis

Title **Development of a novel algorithm for high performance reentry guidance**

Supervisors Prof. H. Dittus, University of Bremen and Prof. E. Mooij, Delft University of Technology

Description The thesis deals with the development of a new approach to the entry-guidance problem, based on online generation of sub-optimal trajectories, and nonlinear feedback control derived from sliding mode theory.

Masters Thesis

Title **Models Development for Performances Analysis of Electromagnetic Control in Satellite Formation Flight**

Supervisor Prof. Michele Grassi, University of Naples Federico II

Description This thesis explored the use of electromagnetic control for several formations of satellites in LEO orbit.

Bachelor Thesis

Title **Control of Aerospace Vehicles by means of Magnetic Actuators**

Supervisor Prof. Michele Grassi, University of Naples Federico II

Description This thesis dealt with the analysis and the development of an attitude control law based on the use of magneto-torquers for small-to-medium satellites.

Funding

2025-2030 ERC Consolidator Grant for the project STARGATE, 2MEur

2025-2027 Rita Levi Montalcini Award, 77.5kEur, turned down due to conflicts with the ERC Consolidator Grant

2024-2025 Special Research Grant provided by the Federal Ministry for Economic Affairs and Climate Action to develop guidance and control methods in the context of the CALLISTO activity - Phase D, 81kEur

2023-2024 Special Research Grant provided by the Federal Ministry for Economic Affairs and Climate Action to develop guidance and control methods in the context of the CALLISTO activity - Phase D, 145kEur

2022-2023 Special Research Grant provided by the DLR Space branch to develop guidance and control methods in the context of the CALLISTO activity - Phase C, 127kEur

2020-2022 Special Research Grant provided by the DLR Space branch to develop guidance and control methods in the context of the CALLISTO activity - Phase B, 204kEur

2020-2023 EU MSCA IF Global Fellowship for the project STRATOS, awarded, but turned down due to conflicts with the CALLISTO grants, 264kEur

2020-2021 PI for the ASTRIA study, a research on guidance and control for reusable boosters conducted for the Korean Aerospace Research Institute, and successfully completed in June 2021, 89kEur

2018-2020 Special Research Grant provided by the DLR Space branch to develop guidance and control methods in the context of the CALLISTO activity - Phase A, 175kEur

2015-2016 Co-PI of the ESA study AIM-Copins for the design of two cubesats to study binary-asteroid systems (200kEur, 60kEur to DLR)

Fellowships and Awards

2021-2024 Included in the Stanford World's Top 2% for the category single year in Aeronautics and Astronautics, Ranked #574 out of 51361 (2021), #341 out 49631 (2022), #224 out of 55422 (2023), #275 out of 58309 (2024)

2023 Italian National Scientific Habilitation for Full Professorship (Abilitazione Scientifica Nazionale - Professore di I fascia, Settore 09/A1)

2022 Italian National Scientific Habilitation for Associate Professorship (Abilitazione Scientifica Nazionale - Professore di II fascia, Settore 09/A1)

2018-2024 Excellent Reviewer - Journal of Guidance, Control, and Dynamics

2018 MSCA Seal of Excellence for EU proposal "'STRATOS"'

2016 Best session paper at the guidance, navigation, and control conference, AIAA SciTech, San Diego

2016 Best session presenter at the guidance, navigation, and control conference, AIAA Scitech, San Diego

2008 Committee honor mention together with my master's degree

Editorial activities

2024–now Associate Editor for the AIAA Journal of Guidance, Control, and Dynamics

2023 Guest Editor for MDPI Aerospace - title of special issue: GNC for the Moon, Mars, and Beyond

Patents

2024 Method and Apparatus for Multiphase to Single-phase embedding modelling for powered descent guidance (Verfahren, Vorrichtung und Raumfahrzeug für eingeschränkten rischen Eintritt) Ref: 2024/169 / V/DLR-0822-DE (under evaluation)

2020 Method, Apparatus and Spacecraft for Constrained Atmospheric Entry (Verfahren, Vorrichtung und Raumfahrzeug für eingeschränkten rischen Eintritt) Ref: EPO - 17211042.1

2018 Method and Apparatus for Spacecraft Inertia Matrix Identification via Convex Optimization (Vorrichtung und Verfahren zum Identifizieren einer Trägheitsmatrix eines Raumfahrzeugs) - Ref: DPMA - 102018118673.8

2017 Method and Apparatus for High-Accuracy Powered Descent Guidance (Landeverfahren und Landesystem) - Ref: DPMA - 102017219076.0

Invited Talks

2025 Six-Degree-of-Freedom Entry to Powered Descent Optimization for High-Mass Mars Landings, SciTech Forum and Exposition, Orlando, United States

2025 Transformer-based Robust Feedback Guidance for Atmospheric Powered Landing, SciTech Forum and Exposition, Orlando, United States

2025 Operational Atmospheric Landing Guidance for Reusable Rockets, SciTech Forum and Exposition, Orlando, United States

2024 CALLISTO: from Design to Validation, San Diego State University, San Diego, United States

2024 Advances in Pseudospectral Convex Optimization Methods for Entry, Descent, and Landing Applications, University La Sapienza, Rome, Italy

2024 Advances in Pseudospectral Convex Optimization Methods for Entry, Descent, and Landing Applications, Politecnico di Milano, Milan, Italy

2024 Six-Degrees-of-Freedom Aero-Propulsive Entry Trajectory Optimization, SciTech Forum and Exposition, Orlando, United States

2024 Powered Atmospheric Landing Guidance for Reusable Rockets: the CALLISTO studies, SciTech Forum and Exposition, Orlando, United States

2024 Advances in Pseudospectral Convex Optimization Methods for Entry, Descent, and Landing Applications, JAXA, Tsukuba, Japan

2023 Advances in Pseudospectral Convex Optimization Methods for Entry, Descent, and Landing Applications, Korean Symposium on Launch Vehicles, South Korea

2023 Six-Degrees-of-Freedom Rocket Landing Optimization by Augmented Convex-Concave Decomposition, SciTech Forum and Exposition, National Harbor, United States

2023 Six-Degrees-of-Freedom Rocket Landing Optimization by Augmented Convex-Concave Decomposition, San Diego State University, United States

2022 Structured Robust Control for the Aerodynamic Steering of Reusable Rockets, IFAC ROCOND Conference, Kyoto, Japan

2021 Pseudospectral Convex Optimization for Entry, Descent, and Landing, San Diego State University, San Diego, United States

2021 Real-Time Optimal Guidance for Reusable Rockets: a Pseudospectral Approach, 1st ASCenSIon Workshop - Technical University of Dresden, Dresden, Germany

2021 Real-Time Optimal Guidance for Reusable Rockets: a Pseudospectral Approach, Tokyo University of Science, Tokyo, Japan

2020 Sequential Pseudospectral Convex Optimization for Descent and Landing: A Unified Approach, International Workshop on Guidance and Control for Reusable Launch Vehicles, Dae-Jeon, South Korea

2019 CALLISTO Overview and DLR/JAXA Joint Activity", German Parliament Delegation in official State Visit, Tsukuba, Japan

2019 Towards Real-Time Optimal Guidance - Entry, Descent, Landing, and Beyond, Korean Aerospace Research Institute, Dae-Jeon, South Korea

2019 Towards Real-Time Optimal Guidance - Entry, Descent, Landing, and Beyond, Seoul National University, Seoul, South Korea

Specialist Books Chapters

2023 Autonomous Descent Guidance via Sequential Pseudospectral Convex Programming, Autonomous Trajectory Planning and Guidance Control for Launch Vehicles, Springer

2017 SPARTAN: A Novel Pseudospectral Algorithm for Entry, Descent, and Landing Analysis, Advances in Aerospace Guidance, Navigation and Control: Selected Papers of the 4th CEAS Specialist Conference on Guidance, Navigation and Control, Springer

2014 Target Relative Navigation Results from Hardware-in-the-Loop Tests Using the SINPLEX Navigation System, Volume 151 of the Advances in the Astronautical Sciences Series, Univelt, ISBN: 978-0877036098, pages 171-184, `http://www.univelt.com/book=4484`

2013 SINPLEX: A Small Integrated Navigation System for Planetary Exploration, Volume 149 of the Advances in the Astronautical Sciences Series, Univelt, ISBN:978-0877036012, pages 249-264, `http://www.univelt.com/book=4190`

Journal Publications

2025 Analytical Treatise on Endo-Atmospheric Fuel-Optimal Rocket Landings, **Sagliano M.**, Lu P., Seelbinder D., Theil S., Journal of Guidance, Control, and Dynamics, 2024, doi: 10.2514/1.G008547

2024 Guidance, Navigation, and Control for the Moon, Mars, and Beyond (Editorial), **Sagliano M.**, Aerospace MDPI, 2024, doi: 10.3390/aerospace11100863

2024 Generalized Predictive Control; ARIX vs ARIMAX-based Designs for a Floating Spacecraft Emulator Using a Quadcopter, Silveira A., **Sagliano M.**, Trentini R., Seelbinder D., Theil S., IEEE Transactions on Industry Applications, 2024, doi: 10.1109/TIA.2024.3481393

2024 The CALLISTO and ReFEx Flight Experiments at DLR - Challenges and Opportunities of a Wholistic Approach, Rickmer P., Dumont E., Krummen S., Redondo Gutierrez J. L., Bussler L., Kottmeier S., Wübbels G., Martens H., Woicke S., **Sagliano M.**, Häseker J., Witte L., Sippel M., Bauer W., Peetz H. J., Acta Astronautica, 2024, doi: 10.1016/j.actaastro.2024.09.024

2024 Physical Modeling and Simulation of Reusable Rockets for GNC Verification and Validation, Farì S., **Sagliano M.**, Macés Hernández J. A., Schneider A., Heidecker A., Schlotterer M., Woicke S., Aerospace MDPI, 2024, doi: 10.3390/aerospace11050337

2024 Six-Degrees-of-Freedom Rocket Landing Optimization via Augmented Convex-Concave Decomposition, **Sagliano M.**, Lu P., Seelbinder D., Theil S., Journal of Guidance, Control, and Dynamics, 2024, doi: 10.2514/1.G007570

2023 Unified-Loop Structured H-Infinity Control for Aerodynamic Steering of Reusable Rockets, **Sagliano M.**, J. M. Hernández, S. Farí, A. Heidecker, M. Schlotterer, S. Woicke, D. Seelbinder, S. Krummen, E. Dumont, Journal of Guidance, Control, and Dynamics, Vol. 46, N. 5, 2023, doi: 10.2514/1.G007077

2023 Direct-Indirect Hybrid Strategy for Optimal Powered Descent and Landing, Spada F., **Sagliano M.**, Topputo F., Journal of Spacecraft and Rockets, 2023, doi: 10.2514/1.A35650

2021 Optimal Drag-Energy Entry Guidance via Pseudospectral Convex Optimization, **Sagliano M.**, Mooij E., Aerospace Science and Technology, 2021, Vol. 117, October, doi: 10.1016/j.ast.2021.106946

2021 Callisto: a demonstrator for reusable launcher key technologies, Dumont E., Ishimoto S., Tatiossian P., Klevanski J., Reimann B., Ecker T., Witte L., Riehmer J, **Sagliano M.**, Giagkozoglou S., Petkov I., Rotärmel W., Schwarz R., Seelbinder D., Markgraf M, Sommer J., Pfau D., Martens H., Transactions of the Japan Society for Aeronautical and Space Sciences, Aerospace Technology Japan, 2021, Vol. 19, No. 1, doi: 10.2322/tastj.19.106

2020 Modeling of a Tethered Testbed for a VTVL Vehicle, **Sagliano M.**, Theil S.,, Schramm J., Schwarzwald M., Hindawi Modelling and Simulation in Engineering, 2020, doi: 10.1155/2020/8523514

2020 Survey of Autonomous Guidance Methods for Powered Planetary Landing, Song Z., Wang C., Theil S., Seelbinder D., **Sagliano M.**, Liu X., Shao Z., Frontiers of Information Technology & Electronic Engineering, 2020, Vol. 21 No. 5, doi: 10.1631/FITEE.1900458

2020 DLR Reusability Flight Experiment ReFEx, Bauer W., Rickmers P., Kallenbach A., Stappert S., Wartemann V., Merrem C., Schwarz R., **Sagliano M.**, Grundmann J. T., Flock A., Thiele T., Kiehn D., Bierig A., Windelberg J., Ksenik E., Bruns T., Ruhe T., Elsäßer H., Acta Astronautica, 2020, Vol. 168, March, doi: 10.1016/j.actaastro.2019.11.034

2020 Design, Development, and Flight Testing of the Vertical Take-Off and Landing GNC Testbed EAGLE, Dumke M., Trigo G., **Sagliano M.**, Saranrittichai P., Theil S., CEAS Space Journal, 2020, Vol. 12, No. 1, doi: 10.1007/s12567-019-00269-5

2019 Generalized hp Pseudospectral Convex Optimization for Powered Descent and Landing, **Sagliano M.**, Journal of Guidance, Control, and Dynamics, 2019, Vol. 42 No.7, doi: 10.2514/1.G003731

2018 Simulations and flight tests of a new nonlinear controller for the EAGLE lander, **Sagliano M.**, Dumke M., Theil S., Journal of Spacecraft and Rockets, 2018, doi: 10.2514/1.A34161

2018 Pseudospectral Convex Optimization for Powered Descent and Landing, **Sagliano M.**, Journal of Guidance, Control, and Dynamics, 2018, Vol. 41 No.2, doi: 10.2514/1.G002818

2018 GTOC 9: results from the German Aerospace Center (team DLR), Hallmann M., Schlotterer M., Heidecker A., **Sagliano M.**, Fumenti F., Maiwald V., Schwarz R., Acta Futura, 2018, doi: 10.5281/zenodo.1139250

2017 On the Radau Pseudospectral Method: Theoretical and Implementation Advances, **Sagliano M.**, Theil S., Bergsma M., D'Onofrio V., Whittle L., Viavattene G., CEAS Space Journal, 2017, doi: 10.1007/s12567-017-0165-5

2017 Adaptive Disturbance-based High-order Sliding Mode Guidance for Hypersonic Entry Vehicles, **Sagliano M.**, Mooij E., Theil S., Journal of Guidance, Control, and Dynamics, 2017, Vol.40 No.3, doi: 10.2514/1.G000675

2017 Onboard Trajectory Generation for Entry Vehicles via Adaptive Multivariate Pseudospectral Interpolation, **Sagliano M.**, Mooij E., Theil S., Journal of Guidance, Control, and Dynamics, 2017, Vol.40 No.2, doi: 10.2514/1.G001817

2016 Safe Landing Area Determination For a Moon Lander by Reachability Analysis, Arslantas Y. E., Oehlschlägel T., **Sagliano M.**, Acta Astronautica, 2016, vol. 128, pp. 607-615, December 2016, doi: 10.1016/j.actaastro.2016.08.013

2014 Performance analysis of linear and nonlinear techniques for automatic scaling of discretized control problems, Sagliano M., Operations Research Letters, 2014, doi: 10.1016/j.orl.2014.03.003

Conference Proceedings

2024 Relative Navigation for the In-Air Capturing of a Winged Reusable Launch Vehicle, Singh S., Luyten B., **Sagliano M.**, HiSST: 3rd International Conference on High-Speed Vehicle Science Technology, Busan, South Korea

2024 Six-Degree-of-Freedom Aero-Propulsive Entry Trajectory Optimization, **Sagliano M.**, Lu P., Johnson B., Seelbinder D., Theil S., AIAA Scitech Forum and Exposition, Orlando, United States

2024 Fast Desensitized Optimal Control for Rocket Powered Descent and Landing, Robbiani T., **Sagliano M.**, Topputo F., Seywald H., AIAA Scitech Forum and Exposition, Orlando, United States

2024 Powered Atmospheric Landing Guidance for Reusable Rockets: the CALLISTO studies, **Sagliano M.**, Heidecker A., Farí S., Macés Hernández J. A., Schlotterer M., Woicke S., Seelbinder D., Dumont E., AIAA Scitech Forum and Exposition, Orlando, United States

2024 Bayesian Models for Uncertainty Estimation in Aerodynamic Databases of Reusable Launch Vehicles, Krummen S., Schraad J. M., Ecker T., Ertl M., Reimann B., Klevanski J., Riehmer J., Eichel S., **Sagliano M.**, Briese L. E., Dumont E., AIAA Scitech Forum and Exposition, Orlando, United States

2024 CALLISTO Reusable rocket stage demonstrator: consolidating the design, Dumont E., Woicke S., **Sagliano M.**, Krieger A., Krummen S., Callsen S., Stief M., Bergmann K., Koch A., Markgraf M., Windelberg J., Eichel S., Klevanski J., Ecker T., Ertl M., Reimann B., Mierheim O., Glaser T., Heinrich L., IEEE Aerospace Conference, Big Sky, United States

2023 Six-Degree-of-Freedom Rocket Landing Optimization by Augmented Convex-Concave Decomposition, **Sagliano M.**, Lu P., Seelbinder D., Theil S., AIAA Scitech Forum and Exposition, National Harbor, United States

2023 Direct-Indirect Hybrid Strategy for Optimal Powered Descent and Landing, Spada F., **Sagliano M.**, Topputo F., AIAA Scitech Forum and Exposition, National Harbor, United States

2022 Booster Dispersion Area Management through Aerodynamic Guidance and Control, **Sagliano M.**, Seelbinder D., Theil S., Im S., Lee K., AIAA Scitech Forum and Exposition, San Diego, United States

2022 CALLISTO: A Prototype Paving the Way for Reusable Launch Vehicles in Europe and Japan, Dumont E., Illig M., Ishimoto S., Chavagnac C., Saito Y., Krummen S., Eichel S., Martens H., Giagkozoglou S., Häseker J., Ecker T., Klevanski J., Krziwanie F., Rotärmel W. Schröder S., Schneider A., Grimm C., Woicke S., **Sagliano M.**, Schlotterer M., Markgraf M., Braun B., Aicher M., Briese L., Petkov I., Riehmer J., Reimann, B., 73rd International Astronautical Congress, Paris, France

2022 CALLISTO: Towards Reusability of a Rocket Stage: Current Status, Dumont E., Ishimoto S., Illig M., **Sagliano M.**, Solari M., Ecker T., Hauke M., Krummen S., Desmariaux J., Saito Y., Ertl M., Klevanski J., Reimann B., Woicke S., Schwarz R., Seelbinder D., Moritz A., 33rd ISTS Conference, Beppu, Japan

2021 Towards a reusable first stage demonstrator: Callisto-technical progresses & challenges, Sven Krummen, Jean Desmariaux, Yasuhiro Saito, Marcelo Boldt, Lale Evrim Briese, Nathalie Cesco, Christophe Chavagnac, Elisa CLIQUET-MORENO, Etienne Dumont, Tobias Ecker, Silas Eichel, Moritz Ertl, Sofia Giagkozoglou, Thilo Glaser, Christian Grimm, Michel Illig, Shinji Ishimoto, Josef Klevanski, Norbert Lidon, Olaf Mierheim, Jean-François Niccolai, Siebo Reershemius, Bodo Reimann, Johannes Riehmer, **Marco Sagliano**, Henning Scheufler, Anton Schneider, Silvio Schröder, René Schwarz, David Seelbinder, Malte Stief, Jens Windelberg, Svenja Woicke, 72nd International Astronautical Congress, Dubai, UAE

2021 An Instantaneous Impact Point Guidance for Rocket with Aerodynamics Control, Jung K.W., Lee C.H., Lee J., Lee K., **Sagliano M.**, Seelbinder D., Theil S., 21st IEEE International Conference on Control, Automation, and Systems, Jeju, South Korea

2021 SPARTAN: Rapid Trajectory Analysis via Pseudospectral Methods, **Sagliano M.**, Seelbinder D., Theil S., ESA ICATT Conference, Online event

2021 Robust control for reusable rockets via structured h-infinity synthesis, **Sagliano M.**, Tsukamoto T., Heidecker A., Macés Hernández J., Farí S., Schlotterer M., Woicke S., Seelbinder D., Ishimoto S., Dumont E., ESA GNC Conference, Online event

2021 Ascent Flight Control System for Reusable Launch Vehicles: Full Order and Structured H-infinity Designs, Macés Hernández J., **Sagliano M.**, Heidecker A., Seelbinder D., Schlotterer M., Farí S., Theil S., Woicke S., Dumont E., ESA GNC Conference, Online event

2021 Onboard guidance for reusable rockets: aerodynamic descent and powered landing, **Sagliano M.**, Heidecker A., Macés Hernández J., Farí S., Schlotterer M., Woicke S., Seelbinder D., Dumont E., AIAA Scitech Forum and Exposition, 2021, online event

2021 Apollo 11 reloaded: Optimization-based trajectory reconstruction, **Sagliano M.**, AIAA Scitech Forum and Exposition, 2021, online event

2021 Open-source visualization of reusable rocket motion. approaching Simulink-Flightgear co-simulation, **Sagliano M.**, AIAA Scitech Forum and Exposition, 2021, online event

2021 Self-scaling collocation methods preserving constants of motion, **Sagliano M.**, Hölzel M., AIAA Scitech Forum and Exposition, 2021, online event

2021 Ascent and descent guidance of multistage rockets via pseudospectral methods, Garrido J., **Sagliano M.**, AIAA Scitech Forum and Exposition, 2021, online event

2019 Guidance and control strategy for the CALLISTO flight experiment, **Sagliano M.**, Tsukamoto T., Máces-Hernández J., Seelbinder D., Ishimoto S., Dumont E., EUCASS, Madrid, Spain

2018 Generalized hp Pseudospectral Convex Programming for Powered Descent and Landing, Sagliano M., AIAA Guidance, Navigation, and Control Conference, Kissimmee, United States

2018 Simulations and flight tests of a new nonlinear controller for the EAGLE lander, **Sagliano M.**, Dumke M., Theil S., AIAA Guidance, Navigation, and Control Conference, Kissimmee, United States

2018 Optimal Drag-Energy Entry Guidance via Pseudospectral Convex Optimization, **Sagliano M.**, Mooij E., AIAA Guidance, Navigation, and Control Conference, Kissimmee, United States

2018 Stochastic Optimal Trajectory Generation via Multivariate Polynomial Chaos, Whittle L., **Sagliano M.**, AIAA Guidance, Navigation, and Control Conference, Kissimmee, United States

2018 Preliminary Guidance and Navigation Design for the Upcoming DLR Reusability Flight Experiment (ReFEx), Rickmers P., Kallenbach A., Stappert S. **Sagliano M.**, Trigo G.F., Schwarz R., The 69th International Astronautical Congress, Bremen, Germany, 2018

2018 Performance Analysis of Real-Time Optimal Guidance Methods for Vertical Take-Off, Vertical Landing Vehicles, Wenzel A., **Sagliano M.**, Seelbinder D., The 69th International Astronautical Congress, Bremen, Germany, 2018

2018 An Update of the Upcoming DLR Reusability Flight Experiment - ReFEx, Rickmers P., Bauer W., Sippel M., Stappert S., Schwarz R., **Sagliano M.**, Trigo G. F., Wübbels G., Martens H., The 69th International Astronautical Congress, Bremen, Germany, 2018

2017 EAGLE - Environment for Autonomous GNC Landing Experiments, Dumke M., **Sagliano M.**, SaranRittichai P., Trigo G., Theil S., The 10th International ESA Conference on Guidance, Navigation and Control systems, Salzburg, Austria, 2017

2017 Upcoming DLR Reusability Flight Experiment, Bauer W., Rickmers P., Kallenbach A., Stappert S. Schwarz R., **Sagliano M.**, et Al., The 68th International Astronautical Congress, Adelaide, Australia, 2017

2017 SPARTAN: A Novel Pseudospectral Algorithm for Entry, Descent, and Landing Analysis, **Sagliano M.**, Theil S., D'Onofrio V., Bergsma M., The 4th CEAS EuroGNC, Specialist Conference on Guidance, Navigation and Control, Warsaw, Poland

2016 Onboard Trajectory Generation for Entry Vehicles via Adaptive Multivariate Pseudospectral Interpolation, **Sagliano M.**, Mooij E., Theil S., AIAA Guidance, Navigation, and Control Conference, San Diego, United States

2016 Exact Hybrid Jacobian Computation for Optimal Trajectory Generation via Dual Number Theory, D'Onofrio V., **Sagliano M.**, Arslantas Y. E., AIAA Guidance, Navigation, and Control Conference, San Diego, United States

2016 Development of a Combined Attitude and Position Controller for a Satellite Simulator, Daitx H., Schlotterer M., Whidborne J., **Sagliano M.**, The 67th International Astronautical Congress, Guadalajara, Mexico, 2016

2014 Safe Landing Area Determination For a Moon Lander by Reachability Analysis, Arslantas Y. E., Oehlschlägel T., **Sagliano M.**, Braxmaier C., Theil S., The 65th International Astronautical Congress, Toronto, Canada, 2014

2015 SPARTAN: An improved global pseudospectral algorithm for high-fidelity entry-descent-landing guidance analysis, Huneker L., **Sagliano M.**, Arslantas Y. E., The 30th International Symposium on Space Science and Technology, Kobe, Japan

2015 Real Time Adaptive Feedforward Guidance for Entry Vehicles, **Sagliano M.**, Oehlschlägel T., Mooij E., Theil S., The 3rd CEAS EuroGNC, Specialist Conference on Guidance, Navigation and Control, Toulouse, France

2014 SHEFEX-3 Optimal Feedback Guidance, **Sagliano M.**, Theil S., Mooij E., AIAA Space, San Diego, United States

2014 Mars Rendezvous Relative Navigation Implementation for SINPLEX, **Sagliano M.**, Steffes S., Theil S.,AIAA/AAS Astrodynamics Specialist Conference, San Diego, United States

2014 On-Ground Testing Optical Navigation Systems for Exploration Missions, Krüger H., Theil S., **Sagliano M.**, Hartkopf S., 9th ESA International Conference on Guidance, Navigation and Control Systems, Porto, Portugal

2014 Approximation of attainable landing area of a moon lander by reachability analysis, Arslantas Y. E., Oehlschlägel T., **Sagliano M.**, Braxmaier C., Theil S., The 17th International Conference on Hybrid Systems: Computation and Control Berlin, Germany

2013 SINPLEX: A small integrated navigation system for planetary exploration, Steffes S., Theil S., Dumke M., Heise D., **Sagliano M.**, Samaan M., et al., 36th Annual AAS Guidance and Control Conference, Breckenridge, USA

2013 Hybrid Jacobian Computation for Fast Optimal Trajectories Generation, **Sagliano M.**, Theil S., AIAA Guidance, Navigation, and Control Conference, Boston, USA

2012 A Radau PseudoSpectral Method-based Guidance Reentry Algorithm, **Sagliano M.**, Theil S., The 63rd International Astronautical Congress, Naples, Italy, 2012

2012 TronTool: Representing a Moon Landing Scenario in TRON, **Sagliano M.**, Krüger H., Theil S., Global Space Exploration Conference, Washington D.C., USA, 2012

2011 GNCDE: Exploiting the capabilities of development environments for GNC design, Gandia F., Paoletti A., Tomassini A., **Sagliano M.**, Ankersen F., 4th International Conference on Spacecraft Formation Flying Missions and Technologies, St. Hubert, Quebec, Canada

2011 An explicit formulation of the transition matrix for formation flying maneuvers in L2 point, Sagliano M., 4th International Conference on Spacecraft Formation Flying Missions and Technologies, St. Hubert, Quebec, Canada

Memberships and further technical activities

2018-now Senior Member of the American Institute of Aeronautics and Astronautics

2013-2018 Member of the American Institute of Aeronautics and Astronautics

2015-Present Technical reviewer for the AIAA Scitech Conference

2016-Present Technical reviewer for Acta Astronautica

2016-Present Technical reviewer for CEAS Euro GNC Conference

2017-Present Technical reviewer for CEAS Space Journal

2017-Present Technical reviewer for Aerospace Science and Technology

2018-Present Technical reviewer for European Control Conference

2018-Present Technical reviewer for Indian Control Conference

2018-Present Technical reviewer for Journal of Guidance, Control, and Dynamics

2018-Present Technical reviewer for Journal of Aerospace Engineering

2018-Present Technical reviewer for IEEE Transactions on Aerospace and Electronic Systems

2018-Present External reviewer for PhD Candidates at the University of Rome "'La Sapienza"'

Computer skills

- Matlab
- Octave
- C/C++
- Simulink
- LaTeX
- Python

Languages

Italian **Mother tongue**

English **Full professional proficiency**

Spanish **Full professional proficiency**

German **Conversational level**

Interests

- Traveling
- Soccer
- History
- Chess
- Reading
- Jazz