CURRICULUM VITAE

Informazioni personali	
Cognome Nome	Ansalone Luigi
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Titoli di studio e professionali ed esperienze lavorative	
Titolo di studio	Laurea in Ingegneria Aerospaziale Laurea Specialistica in Ingegneria Astronautica Dottorato di Ricerca in Ingegneria Aerospaziale
Altri titoli di studio e professionali	Iscrizione all'albo degli Ingegneri di Roma Master in Istituzioni e Politiche Spaziali
Esperienze professionali *(incarichi ricoperti)*	Responsabile Ufficio Fasi A, Direzione Programmi Componente del Team dei Delegati dell'Agenzia Spaziale Italiana per l'ESCC (European Space Components Coordination), Alternate Member for PSWG (Policy and Standards Working Group) Advisor per il Program Board ESA: Human spaceflight, Microgravity and Exploration programme board. Exploration and Utilisation Board - PB-

	HME/EUB Prefeasibility Analyzer and Background Planner Manager per la missione PRISMA Revisore esterno per la valutazione dei prodotti della VQR 2015- 19 ed inserimento nell'Albo dei revisori, presso ANVUR - Agenzia Nazionale di Valutazione del Sistema Universitario e della Ricerca Componente del team del Data Policy Resource Sharing Team (JM DPRS Team) del Programma PLATiNO Project Manager di vari programmi divisi tra moduli abitati, sviluppo di componenti legati a tecnologie fotoniche, sistemi di osservazione della Terra. Responsabile di missione del payload LUGRE Deputy Program Manager del Programma PLATiNO, comprendente la missione PLT-1 con payload SAR e la missione PLT-2 con payload TIR Responsabile tecnico del progetto SPOT con Sapienza Università di Roma Componente per decine di commissioni relative a concorsi, valutazioni comparative, congruità, collaudi e verifiche di conformità Responsabile di programma per la missione PRISMA di Seconda Generazione Responsabile di programma per la missione GEOSAR Responsabile di sistema per il Troubleshooting System della missione PRISMA Supporto alle attività tecnologiche per gli sviluppi iperspettrali della missione SHALOM Componente del team ASI/JPL per la missione SBG TIR Tutor dei borsisti ASI/ESA presso ESRIN per le attività legate all'Intelligenza Artificiale per l'Osservazione della Terra
Capacità linguistiche	Inglese - Ottimo Spagnolo - Buono Francese - Basico
Capacità nell'uso delle	Utilizzo di applicativi Microsoft

tecnologie	Utilizzo di software vari
Altro *(partecipazione a convegni e seminari, pubblicazioni, collaborazioni a riviste, ecc., ed ogni altra informazione che si ritiene di dover pubblicare)*	• J8: C. Porzi, F. Falconi, G. Parca, L. Ansalone, P. Ghelfi and A. Bogoni, "Fast-Reconfigurable Microwave Photonics Phase Shifter Using Silicon Microring Resonators," in IEEE Journal of Quantum Electronics, vol. 57, no. 1, pp. 1-9, Feb. 2021, Art no. 0600409, doi: 10.1109/JQE.2021.3049531. • J7: F. Falconi, S. Melo, F. Scotti, M. N. Malik, M. Scaffardi, C. Porzi, L. Ansalone et al., "A Combined Radar & Lidar System Based on Integrated Photonics in Silicon-on-Insulator," in Journal of Lightwave Technology, vol. 39, no. 1, pp. 17-23, 1 Jan.1, 2021, doi: 10.1109/JLT.2020.3023496. • J6: D. Spiller, E. Magionami, V. Schiattarella, F. Curti, C. Facchinetti, L. Ansalone, A. Tuozzi, "On-orbit recognition of resident space objects by using star trackers", Acta Astronautica, Volume 177, 2020, Pages 478-496, DOI: 10.1016/j.actaastro.2020.08.009. • J5: Spiller, D., Curti, F., Ansalone, L., "Inverse-Dynamics Particle Swarm Optimization for Spacecraft Minimum-Time Slew Maneuvers with Constraints," Aerotecnica Missili & Spazio, The Journal of Aerospace Science, Technology and Systems, Vol.96, No.3, July-September 2017, 111-123. DOI: 10.19249/ams.v96i3.302 • J4: Spiller D., Ansalone L., Curti F., "Particle Swarm Optimization for Time-Optimal Spacecraft Reorientation with Keep-Out Cones", Journal of Guidance, Control and Dynamics Vol. 39, No. 2 (2016), pp. 312-325. doi: 10.2514/1.G001228 • J3: Ansalone L., Grava E., Curti F., "Experimental results of a Terrain Relative Navigation algorithm using a simulated lunar scenario", Acta Astronautica, Volume 116, November–December 2015, Pages 78–92, doi:10.1016/j.actaastro.2015.06.022 • J2: Ansalone L., Curti F., "A genetic Algorithm for Initial Orbit Determination from a Too Short Arc Optical Observation", Advances in Space Research, Volume 52, Issue 3, August 1, 2013, pp. 477-489, DOI: http://dx.doi.org/10.1016/j.asr.2013.04.004 • J1: Perrotta G., Stipa M., Silvi D., Coltellacci S., Curti G., Colonna G., Formica T., Casali V., Fossati T., Di Matteo F., Zelli M., Rinaldi M., Ansalone L., Di Salvo A, "Mission-constrained design drivers and technical solutions for the MAGIA satellite", Experimental Astronomy, pp. 1-20,8 December 2010 • C53 Joel J. K. Parker, Fabio Dovis, Benjamin Anderson, Luigi Ansalone, Benjamin Ashman, Frank H. Bauer, Giuseppe D'Amore, et al. The Lunar GNSS Receiver Experiment (LuGRE), ION 2022 Session B3: Lunar Navigation and Time, 26/01/2022 • C52: D. Spiller, L. Ansalone, Challenges and opportunities in hotspots temperature estimation by using PRISMA hyperspectral imagery, 24-26 march 2021, WHISPERS 2021 • C51 Andrea Taramelli Emiliana Valentini, Laura Piedelobo, Serena

Sapio, Luigi Ansalone, Rosamaria Salvatori, **Copernicus Hyperspectral Imaging Mission (CHIME),** Training course on Hyperspectral Remote Sensing in Svalbard 6-10 September 2021

- C50: L. Ansalone PRISMA mission: capabilities of hyperspectralobservations Training course on Hyperspectral Remote Sensing in Svalbard 6-10 September 2021

- C49: Emiliana Valentini (CNR ISP) and Laura Piedelobo (IUSS) Co-authors: S. Troffa (IUSS), C. Marinelli (ISPRA), A. Tornato (ISPRA), D. Spiller (ASI), L. Ansalone (ASI), A. Taramelli (IUSS-ISPRA) Modeling Hyperspectral features variability and fractional cover composition, Hyperspectral Remote Sensing Workshop 2021: PRISMA Mission and beyond 13th - 14th April 2021

- C48: L. Ansalone, G. Varacalli The PRISMA FollowOn Mission: PRISMA Second Generation Hyperspectral Remote Sensing Workshop 2021: PRISMA Mission and beyond 13th - 14th April 2021

- C47: D. Spiller, L. Ansalone **Preliminary Results of the Prefeasibility Analyzer and the Background Optimizer for the PRISMA Mission** ESA Φ-WEEK 11-15 October 2021

- **C46: L. Ansalone The PRISMA Second Generation Mission, challenges and opportunities** ESA Φ-WEEK 11-15 October 2021

- C45: Dario Spiller, Stefania Amici, Luigi Ansalone, Alessandro Piscini, James Wheeler , Synergetic Use of Multiple Optical-SAR High Spatial Resolution Satellites to Characterize Wildfires, ESA Φ-WEEK 11-15 October 2021

- C44: D. Spiller, **L. Ansalone** , S. Amici, A. Piscini, P.P. Mathieu, Analysis And Detection Of Wildfires By Using Prisma Hyperspectral Imagery, ISPRS2021, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLIII-B3- 2021, 215–222, 2021 https://doi.org/10.5194/isprs- archives- XLIII-B3-2021-215-2021
- C43: D. Spiller, **L. Ansalone** , F. Carotenuto and P. P. Mathieu, "Crop Type Mapping Using Prisma Hyperspectral Images and One-Dimensional Convolutional Neural Network," 2021 IEEE International Geoscience and Remote Sensing Symposium IGARSS, 2021, pp. 8166-8169, doi: 10.1109/IGARSS47720.2021.9554175.
- C42: A. Bogoni, F. Falconi, ..., **L. Ansalone** , P. Ghelfi, Combined coherent radar/lidar system on chip, Proceedings Volume 11852, International Conference on Space Optics — ICSO 2020; 118526G (2021) https://doi.org/10.1117/12.2600290
- C41: V. Stanzione, M. Molina, V. Arciuli, ..., **L. Ansalone** , PLT- 1 SAR mission: PLATiNO multi- mission platform approaching first flight, IAC 2021, Dubai, United Arab Emirates, 25-29 October 2021.
- C40: G. Conforti, F. Curti, **L. Ansalone** , C. Facchinetti, A. Tuozzi, PSO-based Gauss' Algorithm for Too Short Arc Initial Orbit Determination for Ground SPOT, IAC 2021, Dubai, United Arab Emirates, 25- 29 October 2021.
- C39: M.S. Farissi, I. Agostinelli, M. Mastrofini, F. Curti, C. Marzo, C. Facchinetti, **L. Ansalone** , Hardware implementation of the SPOT Payload for Orbiting Objects Detection using Star Sensors, IAC 2021,

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- C38: **L. Ansalone** , C. Facchinetti et al, A technological perspective on materials for a multi purpose pressurized module for lunar surface exploration, EUROMAT 2021, 14 June 2021
- C37: D. Spiller, **L. Ansalone** , et al., Wildfire detection and monitoring by using PRISMA hyperspectral data and 3D convolutional neural networks, EGU 2021, 23rd EGU General Assembly, held online 19- 30 April,
- C36: D. Spiller, **L. Ansalone** et al, Challenges Of The Experimental Tools For The Asi Prisma Mission: The Prefeasibility Analyzer And The Background Mission Optimizer, AIDAA 2021, 31 august- 3 september 2021, Pisa
- C35: F. Curti, M. Mastrofini, I. Agostinelli, C: Facchinetti, **L. Ansalone** , A. Tuozzi, Star Sensor Image On- Board Processing For Orbiting Objects Detection-Spot, AIDAA 2021, 31 august-3 september 2021, Pisa
- C34: S. Amici, D. Spiller, **L. Ansalone** , Wildfire Temperature Estimation by Comparing PRISMA and ECOSTRESS data, AGU 2021, New Orleans, 13-17 december 2021
- C33: C. Porzi, F. Falconi, **L. Ansalone** , P. Ghelfi and A. Bogoni, "Fast silicon photonics wavelength- selective phase shifter", Proc. 46th Eur. Conf. Integr. Opt. (ECIO), pp. 1-3, May 2020.
- C32: M. Faraci, M. Dami, E. Fossati, C. Facchinetti, F. Longo, M. Cosi, **L. Ansalone** et al Calibration And Validation Of The PRISMA Payload And Preliminary Results During Commissioning, Whispers 2019, Amsterdam, 25 Sept
- C31: M. Faraci, E. Fossati, M. Cosi, F. Sarti, F. Longo, C. Facchinetti, G. Varacalli, **L. Ansalone** et al, The PRISMA Payload And Products – Preliminary Results Of Commissioning phase, IAC 2019, Washington DC, USA, 21-25 October 2019
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- C28: G. Impresario, G. 'Amore, C. Stallo, **L. Ansalone** , A. Tuozzi, GNSS and GALILEO for Cis- lunar and Moon Navigation, 2018 IEEE 4th International Forum on Research and Technology for Society and Industry (RTSI), 2018, pp. 1-5, doi: 10.1109/RTSI.2018.8548504.
- C27: P. Sacco, F. Muscolo, M.C. Noto, **L. Ansalone** , et al, Toward a better European Maritime governance: the EUCISE2020 project, IAC 2017, Adelaide 25-29 September 2017
- C26: **L. Ansalone** , S. Mari, C. Facchinetti et al, PRISMA Mission: Opportunities And Main Innovations, AIDAA 20017, Palermo, September 18-19
- C25:G. Impresario, **L. Ansalone** , C. Facchinetti, et al, Remotely Piloted Aircraft Systems: Rules, Scenarios And Technology, AIDAA 20017, Palermo, September 18-19

- C24: Valentini G., Mari S:, Scopa T., De Luca G.F., Cardone M., Croce A., Trematerra O., Vicari D., Cutigni M., " *COSMO- SKYMED di Seconda Generazione System Access Portfolio* ", presented by **Ansalone L.** , IGARSS 2016, July 10-15 2016, Beijing, China
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- C22: **Ansalone L** ., Ianelli S., Pellegrini R., Formaro R., " *Electric Propulsion As An Enabling Technology For A Very Low Earth Orbit Mission*", Space Propulsion Conference 2016, Rome, 2-6 May 2016
- C21: **Ansalone L.** , Facchinetti C., Longo F., Varacalli G., Formaro R., "Approach And Perspectives Of The Italian Space Agency For Mini And Microsatellites", *3rd IAA Conference on University Satellite Missions and Cubesat Workshop*, Rome, 30 November-5 December 2015
- C20: Spiller D., Curti F., **Ansalone L.** , "Inverse dynamics particle swarm optimization for spacecraft minimum time maneuvers with constraints", *XXIII Conference of the Italian Association of Aeronautics and Astronautics – AIDAA*, Torino, 16-19 November 2015
- C19: Tuozzi A., Facchinetti C., **Ansalone L.** , Salvatore V., Bellapadrona R.A., "Civil Aviation, the adoption of new systems and applications: institutional impacts", *2015 International Association of Institutes of Navigation World Congress*, Prague, 20-23 October 2015
- C18: Facchinetti C., **Ansalone L.** , Tuozzi A., "Trends in GNSS Italian application scenarios in transportation", *2015 International Association of Institutes of Navigation World Congress* , Prague, 20- 23 October 2015
- C17: **Ansalone L.** , Facchinetti C., Longo F., Formaro R., "Italian Challenges and Opportunities for Small Satellites; a Scientific, Technological and Industrial Perspective", *66 th International Astronautical Congress*, 12-16 October 2015, Jerusalem
- C16: Curti F., Torre F., **Ansalone L.** , "Autonomous Guidance and Control Algorithm for Lunar Landing with Hazard Avoidance", *66 th International Astronautical Congress*, 12-16 October 2015, Jerusalem
- C15: **Ansalone L.** , Ianelli S., Formaro R., "A System Study on Drag Compensation with Electric Propulsion in Very Low Earth Orbit", *66 th International Astronautical Congress*, 12-16 October 2015, Jerusalem
- C14: Curti F., Spiller D., **Ansalone L.** , Procopio D., Becucci S., Boldrini F., Fidanzati P., "Determining High Rate Angular Velocity from Star Tracker Measurements", *66 th International Astronautical Congress* , 12-16 October 2015, Jerusalem
- C13: Curti F., Spiller D., **Ansalone L.** , Becucci S., Boldrini F., Sechi G., "High Angular Rate Determination Algorithm based on Star Sensing", 38 th Annual AAS Guidance & Control Conference, Breckenridge Colorado, January 30-February 4, 2015, AAS 15-098
- C12: Curti F., Parisse M., **Ansalone L.** , Nardi E., Cassiano P., Moriani M., Testi F.M., Paiano S., "Multi- purpose Experimental Test- bed for space and planetary exploration", *2 nd IAA Conference on Dynamics and Control of Space Systems,* Rome, March 24- 26, 2014, IAA- AAS-DyCoSS2-14-12-01
- C11: **Ansalone L.** , Curti F., "An Heuristic Approach to the problem of Initial Orbit Determination: a test case with GEO observations", *2 nd IAA Conference on Dynamics and Control of Space Systems,* Rome, March 24-26, 2014, IAA-AAS-DyCoSS2-14-05-01

- C10: Moroni C., **Ansalone L.** , Curti F., "Analysis and Experimentation of an Optical Flow based Navigation Algorithm for a Lander", *2 nd IAA Conference on Dynamics and Control of Space Systems,* Rome, March 24-26, 2014, IAA-AAS-DyCoSS2-14-02-06
- C9: Di Roberto R., **Ansalone L.** , Cappelletti C., "UNISAT- 5: A Microsatellite for Space Debris Monitoring *", 63rd International Astronautical Congress*, October 1-5 2012, Naples, Italy
- C8: **Ansalone L.** , Curti F., "Space Debris Orbit Determination from an ISS Onboard Camera *", AAS – First ISS Research and Development*

Conference, June 26-28 2012, Denver, Colorado

- C7: Guariniello C., **Ansalone L.** , Curti F., "Autonomous Capture of Non-Cooperative Spacecraft with a Space Free- Flyer", *3rd Council of European Aerospace Societies Conference hosted by XXI AIDAA Congress,* 24 - 28 October 2011, Venice, Italy
- C6: **Ansalone L.** , Cappelletti C., Curti F., Graziani F., Di Roberto R., "Study on Debris Detection, Identification and Orbit Reconstruction Using Ground and Space Based Telescopes", *62nd International Astronautical Congress*, 3 - 7 October 2011, Cape Town, South Africa
- C5: Gil- Fernandez J., Cadenas R., Prieto T., **Ansalone L.** , "Innovative Navigation Techniques for Autonomous NEO Proximity and Landing Operations", *8th International ESA Conference on GNC,* 5 - 10 June 2011, Carlsbad, Czech Republic
- C4: **Ansalone L.** , Gil Fernández J., Cadenas Gorgojo R., "High Fidelity Simulators for Proximity Phases of NEO Missions" , *4th International Conference on Astrodynamics Tools and Techniques,* 3 - 6 May 2010, ESAC Madrid, Spain
- C3: Curti F., **Ansalone L.** , Ciabuschi S., "A Simple Navigation System of a Lunar Rover", Italian Space Agency workshop: *Mobile robotics for unmanned lunar exploration*, 1 - 2 July 2009, Rome, Italy
- C2: **Ansalone L.** , Curti, F., Schirone L., "Automatic Tracking of a Photovoltaic System for Polar Robotic Missions", *XX AIDAA Congress* , 29 June - 3 July 2009, Milan, Italy
- C1: **Ansalone L.** , Curti F., Graziano M., "Lunar Sun- Synchronous Navigation with Automatic Sun Tracking System", *European Navigation Conference ENC-GNSS 2009*, 3 - 6 May 2009, Naples, Italy

Autorizzo il trattamento dei miei dati personali ai sensi del Regolamento (UE) 2016/679 e del D. Lgs. 196/2003 come modificato ed integrato dal D. Lgs. 101/2018

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