Juan-Diego Florez

Georgia Institute of Technology, Atlanta, GA – Advisor: Dr. Panagiotis Tsiotras Aug. 2018 - May Master of Science (MS) in Robotics Engineering, Magna Cum Laude Aug. 2014 - May Bachelor of Science (ISS) in Mechanical Engineering, Magna Cum Laude Aug. 2014 - May Bronda Institute of Technology, Melbourne, FL – Advisor: Dr. Beshoy Morkos Relevant Experience Magna Cum Laude Aug. 2014 - May Georgia Institute of Technology, Dynamics and Control Systems Lab, Atlanta, GA Developing, in a team of three, SstLSAM, an conocular visual Simultaneous Localization and Mapping (vSLAM) pipeline for orbital relativ navigation which uses factor graph estimation and Gaussian Splatting reconstruction [C++, Python, OpenCV, GTSAM, Machine Learning] Extending SatSLAM to multi-agent operation, ensuring distributed estimation, lean information sharing, and real-time performance [ROS: Contributing to the createllistic inagele generation, pipeline and creating a dataset of realistic satellite inspection regine 5, Blender, OpenGL] Intern - Autonomous Space Systems May 2022 - Aug Verus Research, AFRL Local Intelligent Networked Collaborative Satellites Lab, Albuquergue, NM Designed the system identification and control procedure for quadcopter steering [Python] Created the information-sharing scheme between autonomous agents and ground control [ROS2] Graduate Research Assistant - Human-Robot Artistic Collaboration Georgia Institute of Technology, Borg Lab, Atlanta, GA Applied Human traje	Doctor of Philosophy (PhD) in Robotics, Minor in Math Methods for Autonomy	Aug. 2020 - May 2025
Master of Science (MS) in Robotics Engineering Aug. 2018 - Maj. Worcester Polytechnic Institute, Worcester, AMA — Advisor: Dr. Marko Popovic Aug. 2014 - Maj. Bachelor of Science (BS) in Mechanical Engineering, Magna Cum Laude Aug. 2014 - Maj. Florida Institute of Technology, Melbourne, FL — Advisor: Dr. Beshoy Morkos Relevant Experience Graduate Research Assistant - Multi-Agent Satellite Inspection Jan. 2023 - P Georgia Institute of Technology, Dynamics and Control Systems Lab, Atlanta, GA Developing, in a team of three, SatSLAM, a monocular visual Simultaneous Localization and Mapping (VSLAM) pipeline for orbital relativ navigation which uses factor graph estimation and Gaussian Splatting reconstruction [C++, Python, OpenCV, GTSAM, Machine Learning] Extending SatSLAM to multi-agent operation, ensuring distributed estimation, lean information sharing, and real-time performance [ROS: Contributing to the creation of a photorealistic image-generation pipeline and creating a dataset of realistic satellite inspection trajector defining a new standard for training vision models for satellite inspection [Python, Unreal Engine 5, Blender, OpenGL] Inter - Autonomous Space Systems May 2022 - Aug Verus Research, AFRL Local Intelligent Networked Collaborative Satellites Lab, Albuquerque, NM Jan. 2021 - Dec Georgia Institute of Technology, Borg Lab, Atlanta, GA Applied human trajectory modeling to robot motion tasks using factor graph optimization [GTSAM, Python, C++] Contributed to the design	Georgia Institute of Technology, Atlanta, GA — Advisor: Dr. Panagiotis Tsiotras	
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Relevant Publications	Relevant Publications	- L- J

- 2. J.-D. Florez, M. Dor, and P. Tsiotras, "Initialization of Monocular Visual Navigation for Autonomous Agents Using Modified Structure from Small Motion," 2024, arXiv. (Submitted to ACC25)
- 3. G. Chen, S. Bayek, J.-D. Florez, W. Qian, L. Sang-Won, S. Hutchinson, and F. Dellaert, "GTGraffiti: Spray Painting Graffiti Art from Human Painting Motions with a Cable Driven Parallel Robot," 2022 International Conference on Robotics and Automation (ICRA), Philadelphia, PA, USA, 2022, pp. 4065-4072.
- 4. J. D'Agostino, E. Clarrissimeaux, S. Moffat, J. D. Florez-Castillo, F. Sanchez, M. Bowers, and M. B. Popovic, "Novel Compact Robotic Flow Control Valve for Bioinspired Exosuit and Other Applications," in Biomedical Engineering Systems and Technologies: 13th International Joint Conference, BIOSTEC 2020, Valletta, Malta, February 24–26, 2020, Revised Selected Papers 13, 2021, pp. 17–38.
- 5. J.-D. Florez-Castillo, "Novel Bidirectional Elastic Nonlinear Element (BENE) for Robotic Antagonistic Actuation," M.S. Thesis, WORCESTER POLYTECHNIC INSTITUTE, 2020.