SIMON C. PATANÉ

www.linkedin.com/in/simoncpatané

EDUCATION

University of Michigan, Ann Arbor — *December 2016*
M.Eng in Space Engineering

Vassar College — *May 2015*
B.A. in Physics & Astronomy
Minor in International Politics

TECHNICAL SKILLS

General Software	Python, MS Project, LaTeX
Tools	Jama, Cameo MCSE, SPENVIS/SRIM, STK, Solidworks PDM, Windchill
Expertise	Space systems engineering, robotics, ISRU, ISAM/SAML, lunar infrastructure

PROFESIONAL EXPERIENCE

Redwire Space — June 2020 - Present
Systems Engineer III — *Jacksonville, FL*

- Broad responsibility for end-to-end systems engineering execution for multiple projects per NASA 7123.1 and 7120.5 and related standards
- Manages requirements definition, decomposition, traceability, and verification planning within Jama database
- Designed Jama database structure to enable efficient requirements documentation and reporting
- Facilitates interface definition and control via regular working groups and ICD/IRD maturation across internal and external teammates
- Performs mission performance analysis to validate mission architecture and performance metrics against predictive models (STK, Excel-based, etc.)
- Develops Concept of Operations (ConOps) and system architecture documentation to ensure alignment with stakeholder objectives throughout design lifecycle
- Contributes In-space Servicing, Assembly, and Manufacturing (ISAM) and VLEO subject matter expertise to bid & proposal efforts, including $74MM OSAM-2 mission, Mason Tipping Point, and DARPA projects
- Coordinates milestone gate reviews preparation and delivery for multiple customers (NASA, DARPA)
- Responsible for controlling system budgets and identifying technical performance metrics
- Identifies risks and mitigation strategies for technical and programmatic assessments
- Participates in ongoing process development within Systems Engineering functional group
- Experienced running FMEA/FMECA process for spacecraft and pressurized payload development

Made In Space, Inc. (Redwire Space, June 2020+) — January 2017 - October 2022
Archinaut Systems Lead — *Moffett Field, CA & Jacksonville, FL*

- Responsible for executing systems engineering across entire Archinaut Phase I IRMA project (2017-2018) as part of the NASA STMD Tipping Point program
- Architected multi-phase design reference mission roadmap & ConOps development for In-space Servicing, Assembly, and Manufacturing for civil & national security space missions
- Coordinated system engineering technical execution for the OSAM-2 mission through AI&T (2019-2022)
- Directed cohort of 5 systems engineers to ensure cross-functional oversight of OSAM-2 design
- Facilitated OSAM-2 requirements maturation and iteration based upon stakeholder objectives
- Owned V&V planning and execution for OSAM-2 spacecraft and constituent subsystems, including subcontractor activities

CONFERENCES & AFFILIATIONS

- AIAA Senior Member & Space Settlement Technical Committee Member
- Session Chair for "Out of Earth Manufacturing - II" at 1st International Conference on Additive Manufacturing for Air, Space, and Land Transportation, March 8 2022.
- Panelist for "Out of Earth Manufacturing - I" at 1st International Conference on Additive Manufacturing for Air, Space, and Land Transportation, March 8 2022.
- NSMMS CRASTE 2019. *Archinaut: A Path to Flight Demonstration*

PUBLICATIONS

Juli Lawless, Simon Patané, Rylee Rollins, Mitchel Ledbetter and Ryan Cook. "Future ISAM Architectures for National Security Space," AIAA 2022-4299. ASCEND 2022. October 2022. `https://doi.org/10.2514/6.2022-4299`

Kari Abromitis, Simon C. Patané, German Acosta Quiros, Daniel Hillsberry, Al Tadros, Justin Kugler. "Design for ISAM: Mission Architectures for Sustainable Exploration and Development," IAC 2021. September 2022.

Simon Patané, Kari Abromitis, German Acosta Quiros, Paul Shestople, Dash Kieler and Michael P. Snyder. "On-orbit Servicing, Assembly, and Manufacturing (OSAM) Enhancing Climate Research," AIAA 2021-4189. ASCEND 2021. November 2021. `https://doi.org/10.2514/6.2021-4189`

Gerard T. van Belle, Dan Hillsberry, John Kloske, Justin Kugler, Simon Patané, Noah Paul-Gin, Jessica Piness, Daniel Riley, Jack Schomer, Mike Snyder, Thorin Tobiassen. "Optimast structurally connected interferometry enabled by in-space robotic manufacturing and assembly", Proc. SPIE 11446, Optical and Infrared Interferometry and Imaging VII, 114462K (13 December 2020); `https://doi.org/10.1117/12.2563084`

John J. Schomer, Michael Snyder, and Simon Patané. "Development Path for In-Space Additive Manufacturing," 2018 AIAA SPACE and Astronautics Forum and Exposition, AIAA SPACE Forum, (AIAA 2018-5187)

Simon Patané, John Schomer, and Michael Snyder. "Design Reference Missions for Archinaut: A Roadmap for In-Space Robotic Manufacturing and Assembly," 2018 AIAA SPACE and Astronautics Forum and Exposition, AIAA SPACE Forum, (AIAA 2018-5188)

Simon Patané, Eric R. Joyce, Michael P. Snyder, and Paul Shestople. "Archinaut: In-Space Manufacturing and Assembly for Next-Generation Space Habitats," AIAA SPACE and Astronautics Forum and Exposition, AIAA SPACE Forum, (AIAA 2017-5227)

Michael P. Snyder, Jan Clawson, Eric R. Joyce, Andrew Rush, and Simon Patané. "Development of a Sustainable Earth Orbit Economy," AIAA SPACE and Astronautics Forum and Exposition, AIAA SPACE Forum, (AIAA 2017-5366)

Eric R. Joyce, Max Fagin, Paul Shestople, Michael P. Snyder, and Simon Patané. "Made In Space Archinaut: Key Enabler for Asteroid Belt Colonization," AIAA SPACE and Astronautics Forum and Exposition, AIAA SPACE Forum, (AIAA 2017-5364)