ROVER AUTONOMOUS NAVIGATION DEVELOPMENT

Toulouse, FRANCE

From 2000 to 2021, the Monegasque company Venturi established itself as a pioneer in high-performance electric mobility: breaking world records, undertaking expeditions in extreme environments, competing in Formula E, driving technological innovation, and creating iconic two- and four-wheeled vehicles.

Since 2021, Venturi Space (Monaco–Switzerland–France) has been extending this expertise to space exploration by designing mobility solutions for the Moon and Mars. As the strategic partner of the North American company Venturi Astrolab, Inc., the enterprise is developing critical technologies – hyper-deformable wheels, high-performance batteries, and advanced battery management systems – for Venturi Astrolab's lunar rovers FLIP and FLEX.

In 2025, Venturi Space unveiled MONA LUNA, a 100% European lunar rover designed to support the ambitions of ESA and CNES. In this context, the company is recruiting a rover system manager.

Venturi Space is pioneering advanced mobility solutions for lunar exploration.

As the Head of Autonomous Navigation Division, you will define and implement a new approach to autonomous navigation based on continuous vision. You will lead a team of experts in robotics, vision systems, and software engineering to deliver robust, reliable, and innovative navigation solutions for lunar environments.

You will also drive R&D initiatives for new sensors and perception technologies, including LiDAR and advanced imaging systems.

YOUR MAIN RESPONSABILITIES

- Provide technical leadership and mentorship within the navigation team.
- Lead the design and development of path planning and trajectory tracking controllers for autonomous lunar rovers.
- Develop and implement a vision-based continuous navigation strategy.
- Drive innovation in image processing, sensor fusion, and real-time perception algorithms.
- Oversee calibration and measurement processes for imaging sensors to ensure accuracy and reliability.
- Collaborate closely with robotics teams to integrate navigation solutions into rover platforms.
- Define and validate software architectures for autonomous navigation systems.

- Ensure the use of modern programming languages and frameworks for high-performance, maintainable code.
- Contribute to system-level design decisions and integration with other functional chains (navigation, avionics, power, communication, thermal).
- Lead R&D programs for new sensors and imaging technologies, including LiDAR, stereo vision, and advanced optical systems.

REQUIREMENTS

- Proven experience in technical leadership within robotics or autonomous navigation projects.
- Strong expertise in path planning, trajectory tracking, and control algorithms.
- Solid background in vision-based navigation, image processing, sensor fusion, and real-time perception.
- Hands-on experience with calibration and measurement of imaging sensors.
- Proficiency in modern programming languages (e.g., C++, Python, RUST) and frameworks for high-performance software.
- Ability to define and validate software architectures for complex autonomous systems.
- Familiarity with system-level integration across multiple functional domains.
- Track record of driving innovation and leading R&D initiatives in advanced sensing technologies.

Why Join Us?

- Be part of a cutting-edge lunar exploration program shaping the future of space mobility.
- Work in an international environment with leading experts and partners across Europe.
- Competitive salary and benefits package.
- Opportunity to lead innovation in one of the most exciting sectors of the space industry.

Ready to take on this technological and space challenge?
Apply now and submit your complete application (CV, diplomas, certificates) directly on our website www.venturi.space/en/careers and join us in this extraordinary adventure!

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