ROVER ROBOTIC AND CONTROLS ENGINEER

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.

Venturi Space is pioneering advanced mobility solutions for lunar exploration and unveiled MONA LUNA in 2025, a 100% European lunar rover designed to support the ambitions of ESA and CNES.

Venturi Space France (in Toulouse) is recruiting a Robotics and Control Systems Engineers to develop advanced control laws and robotic solutions for rovers equipped with hyper-deformable wheels. You will play a key role in designing algorithms and systems that ensure optimal traction, stability, and manoeuvrability in extreme lunar and Martian environments.

YOUR MAIN RESPONSABILITIES

- Design and implement control laws for robotic mobility systems using hyper-deformable wheels.
- Develop algorithms for traction control, wheel deformation management, and adaptive locomotion.
- Establish performance specifications for actuators, sensors, and control hardware.
- Conduct simulations and validation tests to ensure robustness under lunar and Martian conditions.
- Collaborate with mechanical, avionics, and thermal teams to ensure seamless integration of control systems.
- Contribute to mission analysis for rover mobility strategies on extraterrestrial terrains.

REQUIREMENTS

- Master's degree (or equivalent) in Robotics, Control Engineering, Mechatronics, or related field.
- Minimum 3 years of experience in robotic systems, control law design, or mobility solutions.
- Strong knowledge of:
    - Advanced control theory (nonlinear, adaptive, robust control).
    - Robotic locomotion, vehicle dynamics and control, and wheel-soil interaction modeling.
    - Simulation tools (MATLAB/Simulink, ROS, or similar).
- Familiarity with sensors and actuators for robotic mobility systems.

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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