



## Italian Innovation in the US: Meccanotecnica Riesi Works with MIT on Advancing Robotics Research

Posted by Machines Italia | 31 Aug 2012

**You must be logged in to submit a rating for this entry.**

Italy's Meccanotecnica Riesi (MR) was approached by the Robotic Mobility Group Laboratory of *Massachusetts Institute of Technology* (MIT) for the production of a wheel prototype which it manufacturers that would help MIT, in conjunction with NASA-JPL, to better understand the underlying mechanics of wheel-terrain interaction.

MIT's Robotic Mobility Group required precise machining because, "a vehicle's ability to navigate soft soil has strong implications for both its power efficiency and mobility." MR collaborated with MIT to design and manufacture a fully instrumental wheel. Using its machineries they were able to create lightweight and durable components made in aluminium. Carmine Senatore, a postdoctoral associate with the Robotic Mobility Group, stated that "collaborating with Meccanotecnica Riesi was an overall great experience. They have provided valuable manufacturing insights during the design stage, they have delivered on time, and they have manufactured a good quality product for a reasonable price!"

MR worked together with MIT to design and manufacture a fully instrumented wheel for terramechanics experiments. Currently, there is a lot of research going on in this field; results will allow scientists and engineers to better understand the issues related to the manoeuvrability on foreign surfaces. MIT laboratory stated that "this work will have important implications for small robot design, simulation, and autonomous navigation, and will lead to the development of systems that are more mobile, robust, and cost effective."

### About Meccanotecnica Riesi

Meccanotecnica Riesi has a long and proud history of making contributions using its manufacturing expertise for crucial parts in terramechanics research projects. The discipline of terramechanics, studying the interaction between vehicles and deformable terrain, was introduced in the 1960s. Recently, various agencies have been trying to use terramechanic methods and technologies to develop small, lightweight robots to act as planetary rovers. Meccanotecnica Riesi has been glad to oblige them.

---

### Source

Meccanotecnica Riesi

## Tags

italian innovation, massachusetts institute of technology, meccanotecnica riesi, nasa, robotic mobility group laboratory, terramechanics