

Comitato Leonardo graduation awards

Leonardo invests in the next generation of talent, rewarding a young scientist for their thesis on computer vision

- **Leonardo encourages scientific citizenship through the promotion of STEM (Science, Technology, Engineering and Mathematics) disciplines**
- **The award recognises a study into the artificial reproduction of human vision, a fundamental technology for Leonardo which develops systems based on cognitive processes**

Rome, 23 February 2018 – Leonardo is committed to promoting scientific citizenship and the STEM disciplines (Science, Technology, Engineering and Mathematics), part of its wider objective to develop a worldwide culture of innovation, inspire the next generation and support young talent. In the most recent manifestation of this commitment, the Company has chosen Cristiano Massaroni, a recent IT graduate from La Sapienza University in Rome, as winner of the prestigious Comitato Leonardo graduation awards. The award, was presented on ‘Italian Quality Day’ by Leonardo CEO, Alessandro Profumo and attended by the President of the Italian Republic.

The winning dissertation focuses on the field of computer vision, a discipline that studies the emulation of the human brain’s image processing functions. Computer vision technology lends itself to a wide range of fields and is fundamental to the cognitive processes at the heart of many of Leonardo’s systems. Applications include the movement of unmanned platforms, decision making in complex command and control systems, surveillance for security systems and environmental monitoring.

In the dissertation, a mathematical model is proposed to create an innovative system of real-time information analysis, drawn from dynamic images. This analysis is then applied to video surveillance and sensitive targets. Here, images are captured by special ‘PTZ’ (Pan, Tilt and Zoom) cameras and then an algorithm automatically distinguishes foreground objects such as objects, people and vehicles from the background. Foreground objects can then be identified, classified and tracked, following movement over time and highlighting anomalies. The system as a whole therefore goes further than allowing an intelligent computer system to “see”, giving the machine the ability to interpret content and identify areas of interest.

The award is the latest step in the Company’s outreach to young people, which is aimed at promoting the technological skills needed for future innovation and sustainable development.