

# Recent advances in people tracking and re-identification for mobile robots

*Matteo Munaro*

With the advent of reliable and affordable RGB-D sensors, such as the Microsoft Kinect, a rich source of information became available to mobile robots. New techniques for people tracking and re-identification have been developed which exploit these data and allow robots to track people robustly and in real time. In this talk, I will give an overview of the recent works on RGB-D people detection and tracking with a focus on mobile robotics applications. I will also describe novel techniques exploiting human skeletal information obtainable from 3D data for recognizing people at short and long term.

## ***Biography***

Matteo Munaro is a Post-Doctoral Research Fellow at the University of Padova's Intelligent Autonomous Systems Laboratory and a Scientist with Open Perception. He researches people detection, tracking and re-identification with color cameras and RGB-D sensors for mobile robots. From November 2009 to October 2010, he was a Marie Curie Fellow at IFREMER in Toulon (France), working on seabed image mosaicking and 3D reconstruction by means of laser-triangulation systems mounted on Autonomous Underwater Vehicles. In April 2010, he was a Visiting Researcher at the VICOROB Laboratory of the University of Girona (Spain). From September–December 2012, he was a visiting PhD student at BIWI, ETH Zurich (Switzerland). As a Point Cloud Library developer, he has contributed algorithms for people detection from RGB-D data, contributed to the SwRI/NIST Code Sprint, and was a speaker for the PCL tutorial at ICRA 2013 and organizer of the PCL Tutorial and Workshop on 3D Robot Perception at IAS 2014. He is also the lead developer of the OpenPTrack project, an open source library for people tracking in networks of 3D cameras.