Autonomous Mobile Robots for more detailed, repeatable and safe Environment Perception

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Growing capabilities of mobile robots allow unmanned exploration of inaccessible and dangerous terrains. Sensors, algorithms, and artificial intelligence provide a new degree of autonomy to simplify the deployment of ground robots, drones, and submarines, and to extend perception to new dimensions.

In this talk we will present our recent field deployments of autonomous mobile robots in search and rescue and surveying missions. In particular we will stress the potential of techniques from robotics in humanitarian demining and elaborate on state of the art capabilities and challenges of unmanned micro aerial vehicles as mine detection devices.