KUBOTA LAB.

Intelligent Space Robotics
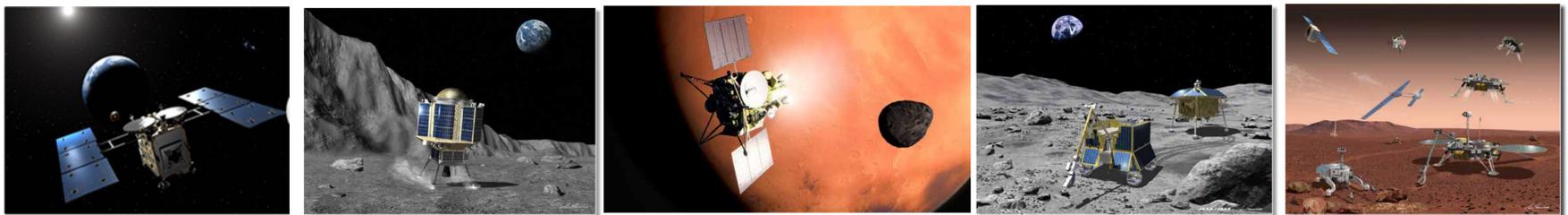
Departments of Informatics and Electronics

Space Robotics Engineering

Department of Electrical Engineering and Information Systems,
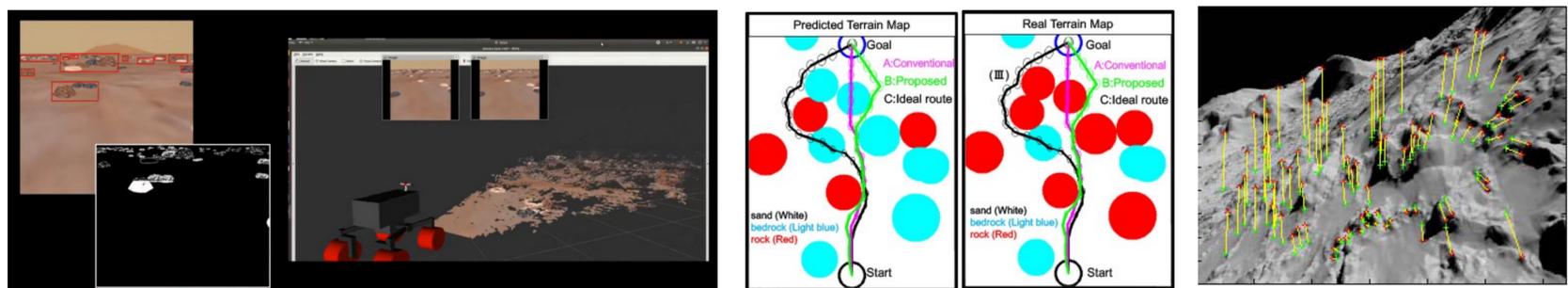Graduate School of Engineering

https://robotics.isas.jaxa.jp/kubota_lab/en/

Advanced intelligence is strongly required for spacecraft or explorer to land on and explore the surface directly, safely, reliably, and efficiently in deep space such as the moon, planets, small bodies. Kubota Lab is promoting some researches on intelligent explorer for the near future missions, SELENE-series, Hayabusa series, Mars missions, and other missions.

Recognition by Robotic Vision and Behavior Planning

This theme includes research on vision system for planetary exploration, image processing, recognition algorithm, terrain mapping, sensor fusion, obstacle detection, natural terrain understanding, visual tracking, behavior planning, etc.

Autonomous Exploration Rover System with AI

This theme includes research on intelligent path planning for rover, SLAM technology, path planning, terrain map making for traverse, self-diagnosis, exploration strategy planner, machine learning for optimal exploration, etc.

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