

## Editorial Notes

As a major means for humanity to advance, unmanned system has taken its firm role whenever direct interaction between human and environment is not possible. Being major, the development of an unmanned system technology is never a standalone project. It consists of unyielding efforts in developing technologies from various engineering fields, and more unyielding efforts making them work together in synergy. The second issue of the Journal of Unmanned System Technology presents select papers about latest works in the development of unmanned system technology. Every work presented can be seen as a depiction of each stage of its unmanned system; some in their early stages, some in their later stages with their rewarding results.

The first paper by Higashino et.al developed a UAV system for survey missions in harsh environment in Antarctica. Their endeavor has earned them precious results of geomagnetic map on one of magnetically blind spots on Earth.

The next three papers deals with the path planning of mobile robots. Santoso et.al developed a method of using cellular automata to construct optimal trajectory for mobile robot movements. Cellular automata itself is a concept known since 1940s, and has seen its extended applications in many engineering fields. In separate paper, Erfianto et.al studied the characteristics of autonomous multi-agent robot system known as flocking behavior, or swarming behavior. In their works, they identified some parameters that affect flocking behavior. In a related study, Page et.al developed a multi-vehicle simulator system called “cluster simulator” to investigate the potentials of cooperative control algorithms. The system was tested to run simple scenarios with satisfactory results.

From underwater system domain, the majority of unmanned system requires massive cable size to ensure robustness in their broadband communication and supply lines between ground station and the drones, thus limiting their effective exploration range. Nazem et.al introduced a novel signal processing technique such that utilization of non-hybrid cable for underwater application.

In the Technical Note section, Srigrarom et.al reported their ongoing work in developing of bird-like type flapping wing micro aerial vehicle by attempting to mimic flights by albatross, which are characterized by long-distance-long-endurance flights and high lift generating flights (during take-off/start-up). They works began with investigating the unsteady flow generated by an albatross-like flapping wing and its acoustic characteristics.

We hope that all readers find this issue not only stimulating but also useful for their ongoing research endeavors.

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