Deep Learning Methods and Applications for Unmanned Aerial Vehicles

Guest Editor:

Dr. Sung Ju Hwang
Graduate School of Artificial Intelligence and School of Computing, Korea Advanced Institute of Science and Technology, 291 Daehak-ro, Yuseong-gu, Daejeon 34141, Republic of Korea

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Message from the Guest Editor

Over the recent years, unmanned aerial vehicles (UAVs) have become more widespread, as they have been adopted to various practical applications, including aerial photography, surveillance, disaster relief, rescue missions, cargo delivery, and even air travels. These applications require accurate perception of the environments and self-control for successful completion of the tasks. While deep-learning-based AI systems have obtained impressive performance on various perception and control tasks, their large memory and computational requirements make it difficult for them to be applied to devices with limited computing power, such as embedded GPU systems on UAVs. Moreover, UAVs' unique operating environment gives rise to new problems that are not found in conventional environments (e.g., small object detection, 3D navigation, lack of training data, multi-agent learning).

In this Special Issue on "Deep Learning Method and Application for Unmanned Aerial Vehicles", we plan to tackle such practical difficulties that exist with applying deep learning-based AI systems to UAVs.

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Special Issue

Editor-in-Chief

Prof. Dr. Flavio Canavero
Department of Electronics and Telecommunications, Politecnico di Torino, 10129 Torino, Italy

Message from the Editor-in-Chief

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