



Seminar Announcement
**Columbia University Electrical
Engineering Department**

Professor Se Young Chun

Seoul National University

Date: Friday, Oct. 11

Time: 4.00 pm - 5.00 pm

Location: 750 CEPSR

Seminar: Designing Light-weight Deep Networks for Diverse Image Restoration Tasks

Electrical Engineering Seminar Series

Designing Light-weight Deep Networks for Diverse Image Restoration Tasks

Since the advent of deep learning, image enhancement was one of the first applications of it to outperform classical algorithms. Large models usually perform better in image restoration tasks, but it is often desirable to achieve excellent performance with small networks, especially for embedded systems. In this talk, I will go over some of the works where my Lab has designed small networks for diverse image restoration tasks such as progressive single image deblurring model (ECCV 2020), all-in-one model for multiple degradations (CVPR 2023) and its extension to image demosaicing for modern non-Bayer image sensors (ICCV 2023) as well as our recent work on pretraining-tuning architecture based on LoRA, but with flexible ranks for efficiency (ECCV 2024).

About Professor Se Young Chun

Se Young Chun received his Ph.D. degree in Electrical Engineering: Systems from the University of Michigan, Ann Arbor in 2009. He is currently a Professor in the Department of Electrical and Computer Engineering and the Interdisciplinary Program in AI, Seoul National University, South Korea. He is an associate editor of IEEE Transactions on Image Processing and IEEE Transactions on Computational Imaging as well as a member of IEEE Bio Imaging and Signal Processing Technical Committee. He was the recipient of the 2015 Bruce Hasegawa Young Investigator Medical Imaging Science Award from the IEEE Nuclear and Plasma Sciences Society. His research interests include computational imaging algorithms using deep learning and statistical signal processing for applications in medical imaging and computer vision.