

# **Multimedia Communications** and Signal Processing Lab.

## Deep Learning for Image Processing

- > Single Image Dehazing via Deep Learningbased Image Restoration
- ➤ Color Restoration of Underwater Images Based on Deep Learning
- Underwater Object Detection based on Deep Learning
- ➤ Knowledge Distillation of Pose Estimation Network
- > Two-stage Image Inpainting with Structure and Texture-aware Learning











## Deep Learning for Data Analysis

- Great Maintenance Time Prediction for Wind Turbine
- ➤ Application of Big Data Analysis
- ➤ Forecasting The Approval Rate of Politicians based on Social Media



#### AR VR MR

- ➤ VR Immersive Virtual Social Platform Construction
- ➤ Multi-sensory AI Virtual Reality Interactive System









### 3D reconstruction

- ➤ Rigid / Non-rigid 3D Reconstruction
- > Deep Learning-based Warp Field Estimation for Non-rigid 3D Reconstruction
- > Two-dimensional Monocular Image Depth **Information Prediction**









## Video coding

- ➤ Deep Learning-based Improvement for Picture Quality and Coding Performance
- Image Deblocking Based on Deep Learning



