

# 学术报告会

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地点：电信群楼2-406会议室

## Robustness and Benign Overfitting in Deep

## Neural Networks

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### Abstract:

With the development of artificial intelligence, the robustness and generalization of machine learning models have attracted more and more attention. In this talk, we will introduce the robustness and the benign overfitting phenomenon for deep neural networks. Specifically, we first discuss the impact on the robustness of deep neural networks from three aspects of network width, depth, and initialization. Then, for two different problem settings of classification and regression, we introduce the benign overfitting phenomenon discovered in deep neural networks. We hope that participants can have a general understanding of the benign overfitting phenomenon in deep learning and know how to correctly select the appropriate network structure and initialization to improve the robustness of the network via this talk.

### Biography:

Zhenyu Zhu is currently an ELLIS Ph.D. student supervised by Volkan Cevher at École Polytechnique Fédérale de Lausanne (EPFL) and co-supervised by Francesco Locatello at the Institute of Science and Technology Austria (IST-A). Previously I obtained B.S. from USTC and M.S. from EPFL. He has broad interests in deep learning theory and related fields, with a particular focus on statistical learning theory, generalization, robustness, and causal inference.