

RU-DUT Joint Student Workshop on Advanced ICT

Date and Time: Jan. 16, 2019 13:00-18:00

Venue: Ritsumeikan University, BKC, Creation Core CC102

Program

13:00-13:10

Welcome and Brief Introduction of Research Center (Prof. Yen-Wei Chen, Ritsumeikan Univ.)

13:10-16:30 Part 1: Student Presentations

13:10-14:25 Session 1: DUT Presentations Chair: Yoshihiro Todoroki, Kyohei Takeda (RU)

- 1.1 Finite-time combination synchronization of uncertain complex networks by sliding mode control
Zhang Meng (Dalian University of Technology)
- 1.2 Classification of EEG signals using hybrid feature extraction and ensemble neural network
Ren Weijie (Dalian University of Technology)
- 1.3 Spectral-spatial classification of hyperspectral image based Chaon discriminant sparsity preserving embedding
Zhang Chengkun (Dalian University of Technology)
- 1.4 A variable-weighted distributed fault detection method based on dynamic feature characterization
Zhong Kai (Dalian University of Technology)
- 1.5 Large-scale chaotic time series analysis and prediction based on structured manifold broad learning system
Feng Shoubo (Dalian University of Technology)

14:25-14:35 Coffee Break

14:35-16:05 Session 2: RU Presentations Chair: Zhang Meng, Ren Weiji (DUT)

- 2.1 Automatic Detection of Focal Liver Lesions in Multi-Phase Images Using a Multi-Channel and Multi-Scale CNN
Yoshihiro Todoroki (Chen Lab. Ritsumeikan University)
- 2.2 Reconstruction of Micro CT-like Images from Clinical CT Images Using Machine Learning: A Preliminary Study
Kyohei Takeda (Chen Lab. Ritsumeikan University)
- 2.3 Automatic Segmentation of Epicardial Adipose Tissue Using Deep Learning

Ziyu Zhao (Chen Lab. Ritsumeikan University)

2.4 Transparent Fused Visualization of Surface and Volume based on Iso-surface Highlighting

Miwa Miyawaki (Tanaka Lab. Ritsumeikan University)

2.5 3D Reconstruction and Transparent Visualization of Indonesian Cultural Heritage from a Single Image

Jiao Pan (Tanaka Lab. Ritsumeikan University)

2.6 Study of the influence of obesity on coronary risk factors within type 2 diabetes patients

Leng Ke (Hirabayashi Lab. Ritsumeikan University)

2.7 Cine-MR Image segmentation for assessment of small bowel motility function using a 3D U-Net

Kazuki Otsuki (Chen Lab. Ritsumeikan University)

16:20-16:30 Coffee Break

16:30-17:30 Part 2: Invited Talk Chair: Yen-Wei Chen (RU)

A little bit "deeper" than just "deep learning" -- My thoughts on AI/deep learning

Dr. Xiang Ruan (Founder & CEO tiwaki Co., Ltd. Japan)

17:30-17:35 Closing (Prof. Ming Han, Dalian University of Technology)

18:30-20:30 Banquet

HAZUMIYA (<https://tabelog.com/shiga/A2502/A250201/25005959/dtlmap/>)

Invited Talk: A little bit "deeper" than just "deep learning"-- My thoughts on AI/deep learning

We are in the third boom of Artificial Intelligence (AI). Different from many other technology booms so far, current AI boom which is mainly driven by great success of deep learning, is removing boundary between academy and engineering, and make new technology become applicable extremely faster than ever before. As a technologist who has both academic and industry background, in this talk, I would like to discuss how current AI technology, especially deep learning changes researchers and engineers' career path, and shapes our future business.

My talk will include two parts:

- in the first part, I will introduce my company tiwaki Co.,Ltd, a young AI startup. Following by showing our cutting-edge technology and its applications, I would like to present tiwaki's vision on edge computing based deep learning.
- in the second part, I will discuss how deep learning is removing boundary between academy and engineering, and its upside and downside to people who is working in the relevant fields.

The talk is more general than specific on certain algorithm or technology.

Bio. of invited speaker:

Xiang Ruan received the BE degree from Shanghai Jiao Tong University, Shanghai, China, in 1997, and the ME and PhD degrees from Osaka City University, Osaka, Japan, in 2001 and 2004, respectively. He was with OMRON corporation, Kyoto Japan from 2007 to 2016 as an expert engineer. He is current founder and CEO of tiwaki Co., Ltd., Japan. His research interests include computer vision, machine learning, and image processing. He has published over 50 papers in many top tier journals and conferences such as TPAMI, TIP, CVPR and ICCV, to name some of many, where he also serves as reviewer. He is maintainer of well-known saliency detection dataset DUT-OMRON and DUTS., and also author of python implementation of Manifold Ranking Saliency algorithm. He holds over 60 patents (including both grant and application) in his career by far.