

## IEEE Computational Intelligence Society Distinguished Lecturer Program

**Speaker:** Sushmita Mitra, Indian Statistical Institute, India

**Inviting Chapter:** IEEE Computational Intelligence Society Thailand Chapter

**Date:** 19 November 2020

**Number of Participants:** 30 People

**Lecture Title:** Intelligent Biomedical Image Analysis

### Abstract:

Medical imaging inherently entails imperfection, and is therefore an appropriate domain for involving computational intelligence. We introduce the concepts of quantitative imaging and radiomics, followed by a discussion on segmentation by clustering. Next we describe an automated and fast detection algorithm for brain tumor in MRI, and its efficient segmentation. Visual saliency is utilized for a fast localization and detection of the tumor. Use of just a single user-provided seed for an efficient delineation of the GBM tumor is also elaborated. The role of neuro-fuzzy feature selection in brain tumor detection and its classification is also detailed. Finally a discussion on Radiogenomics, and Personalized Medicine concludes the talk.

Website: <https://deeplearningandaiwinterschool.github.io/#Day2>





## Day 2: Thursday, 19 November 2020 (Bangkok time UTC+7)

Time	Activity
CSBio2020 Keynote Talk I	
08.00 - 09.00 am.	<b>Speaker:</b> <i>Intawat Nookaew</i> , University of Arkansas for Medical Sciences (UAMS), USA <b>Topic:</b> Uncovering RNA and DNA Modifications from Native Sequences
ICONIP2020 Keynote Talk II	
09.00 - 10.00 am.	<b>Speaker:</b> <i>Stephen Grossberg</i> , Boston University, USA <b>Topic:</b> Explainable and Reliable AI: Comparing Deep Learning with Adaptive Resonance
10.00 - 10.30 am.	Coffee Break, Group Photo and Networking
ICONIP2020 Invited Talk I	
10.30 - 11.30 am.	<b>Speaker:</b> <i>Tianbao Yang</i> , University of Iowa, USA <b>Topic:</b> Large-scale Deep AUC Maximization and Applications in Medical Image Classification
11.30 am. - 12.00 pm.	Lunch Break, Group Photo and Networking
Women in Science and Engineering (WISE) Session: IEEE-CIS Distinguished Lecturer Talk	
12.00 - 01.00 pm.	<b>Speaker:</b> <i>Sushmita Mitra</i> , Indian Statistical Institute, India <b>Topic:</b> Intelligent Biomedical Image Analysis
WISE Academic Talk	
01.00 - 02.00 pm.	<b>Speaker:</b> <i>Ling Li</i> , Curtin University, Australia <b>Topic:</b> Affinity learning with the diffusion process
WISE Academic Talk	
02.00 - 03.00 pm.	<b>Speaker:</b> <i>Jing Li</i> , The Hong Kong Polytechnic University, Hong Kong <b>Topic:</b> Language Understanding in Social Interactions
WISE Academic Talk	
03.00 - 04.00 pm.	<b>Speaker:</b> <i>Tiranees Achalakul</i> , King Mongkut's University of Technology Thonburi, Thailand <b>Topic:</b> How Big Data and AI change the way we live?
WISE Industry Talk	
04.00 - 05.00 pm.	<b>Speaker:</b> <i>Gabriela Csorka</i> , Naver Labs Europe, France <b>Topic:</b> Deep Domain Adaptation for Visual Applications

4th Deep Learning and AI Winter School (DLAI4) - Shared screen with speaker view

**Intelligent Analysis of Brain Images**

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## DLAI4 Day 2 (WISE)

Affinity learning with diffusion process

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Curtin University

**Language Understanding in Social Interactions**

Jing Li  
The Hong Kong Polytechnic University  
Nov 19, 2020

**The Digital Era**

Assoc. Prof. Dr. Tiranees Achalakul  
Government Big Data Institute  
GBDI

**Visual Domain Adaptation in the Deep Learning Era**

Gabriela Csorka

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NAVER LABS

Featuring 5 Women in Science and Engineering talks