Report on the Distinguished Lecture given by Pau-Choo (Julia) Chung to the French CIS chapter

Form of the presentation: Because of the pandemic, Pau-Choo (Julia) Chung's visit to the French CIS chapter originally scheduled had to be converted into a virtual lecture.

Date of Presentation: November 19, 2020, 9:00AM-10:30AM (Paris time).

Organisers of Presentation: Adrien Revault d'Allonnes (IEEE France Section CIS Chapter chair), Bernadette Bouchon-Meunier (IEEE France Section CIS Chapter vice-chair)
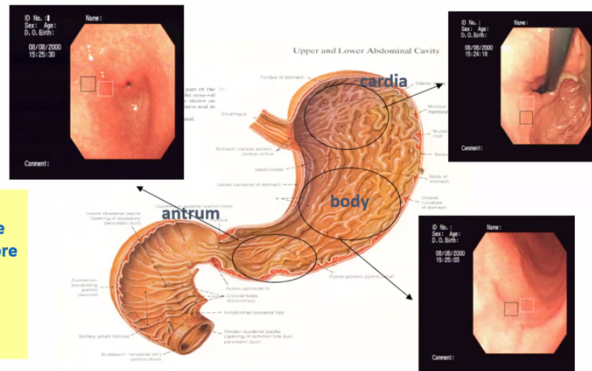
Title of Presentation: Deep Learning Networks for Medical Image Analysis: its past, future, and issues

Abstract of Presentation: Recent advancement of image understanding with deep learning neural networks has brought great attraction to those in image analysis into the focus of deep learning networks. While researchers on video/image analysis have jumped on the bandwagon of deep learning networks, medical image analyzers would be the coming followers. The characteristics of medical images are extremely different from those of photos and video images. The application of medical image analysis is also much more critical. For achieving the best effectiveness and feasibility of medical image analysis with deep learning approaches, several issues have to be considered. In this talk we will give a brief overview of the development of neural networks for medical image analysis in the past and the future trends with deep learning. Several issues in regard of the data preparation, techniques, and clinic applications will also be discussed.

Description of the Event: The talk was widely publicized on the France Section website and the LIP6 website, as well as through various emails and eNotices to the CIS France Section Chapter, to LIP6 members and to national AI networks.
A total of 58 participants attended the very well received lecture, giving rise to several questions from participants, with detailed answers by Julia Chung.
Some screenshots of the event are included below.

Adrien Revault d'Allonnes,
Bernadette Bouchon-Meunier
November 19, 2020

Endoscopy images : Histological finding

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cardia

body

antrum

Upper and Lower Abdominal Cavity

histological results
AIS: Acute Inflammation Score
CIS: Chronic Inflammation Score
HPD: H. pylori density
AT: Atrophy
IM: Intestinal Metaplasia
LF: Lymphoid Follicles

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Réunion Zoom

Bernadette Bo... | julia | Adrien RA | Nicolás Vila Bl... | giovannacaste...

● En cours d'enregistrement

Generate data?

Data Augmentation by rotation, reflection,....

Transfer Learning?

From general image?

From other medical images?

Effective tuning method?

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Participants (55)

Tapez pour filtrer...

BB Bernadet... (Animateur, moi)
j julia
1678758 Yousif Hamad
AF Adam Faci
AR Adrien RA
aj adulam jeyasothy
Anastasiia Safonova
A Antonin
A Arnaud
BB Bartosz Boguslawski
BG Bertrand Granado
BF Bryan Fauquembergue
CM Christophe Marsala
CG Clément Gobé
C Colliaux
CB Corentin Blz
DR Daniel Ruiz-Aguilera

Inviter | Muet tous | Activ...s muet | Plus ⌄

Kidney Spatial constraint based on spine

	Spine	kidney
location	bottom middle of the image	right beside the spine
size	medium	medium
tissue	bone	Soft tissue
shape		compact
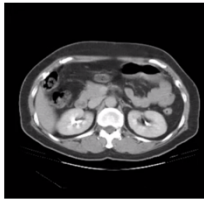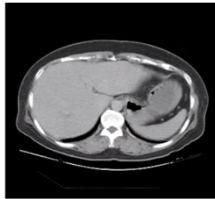
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Sylvain Hochberg

Marie-Jeanne Les...

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Nature-Inspired Problem Solving

IEEE Computational Intelligence Society, France Chapter

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Deep Learning Networks for Medical Image Analysis: its past, future, and issues

The French Chapter on Computational Intelligence IEEE is happy to invite you to a lecture given by Prof. Dr. Pau-Choo (Julia) Chung, subsidised under the IEEE Computational Intelligence Society Distinguished Lecturer Program and the IEEE France:
Date and time: 19 November at 9:00AM
Lieu : https://zoom.us/j/97775114653?pwd=QVh5S01PNkdGdDlBTkR4QmZyZUZNZz09

Abstract: Recent advancement of image understanding with deep learning neural networks has brought great attraction to those in image analysis into the focus of deep learning networks. While researchers on video/image analysis have jumped on the bandwagon of deep learning networks, medical image analyzers would be the coming followers. The characteristics of medical images are extremely different from those of photos and video images. The application of medical image analysis is also much more critical. For achieving the best effectiveness and feasibility of medical image analysis with deep learning approaches, several issues have to be considered. In this talk we will give a brief overview of the development of neural networks for medical image analysis in the past and the future trends with deep learning. Several issues in regard of the data preparation, techniques, and clinic applications will also be discussed.

Bio: Pau-Choo (Julia) Chung (S'89-M'91-SM'02-F'08) received the Ph.D. degree in electrical engineering from Texas Tech University, USA, in 1991. She then joined the Department of Electrical Engineering, National Cheng Kung University (NCKU), Taiwan, in 1991 and has become a full professor in 1996. She served as the Head of Department of Electrical Engineering (2011-2014), the Director of Institute of Computer and Communication Engineering (2008-2011), the Vice Dean of College of Electrical Engineering and Computer Science (2011), the Director of the Center for Research of E-life Digital Technology (2005-2008), and the Director of Electrical Laboratory (2005-2008), NCKU. She was elected Distinguished Professor of NCKU in 2005 and received the Distinguished Professor Award of Chinese Institute of Electrical Engineering in 2012. She also served as Program Director of Intelligent Computing Division, Ministry of Science and Technology (2012-2014), Taiwan. She was the Director General of the Department of Information and Technology Education, Ministry of Education (2016-2018). She served the Vice President for Members Activities, IEEE CIS (2015-2018).

Dr. Chung's research interests include computational intelligence, medical image analysis, video analysis, and pattern recognition. Dr. Chung participated in many international conferences and society activities. She served as the program committee member in many international conferences. She served as the Publicity Co-Chair of WCCI 2014, SSCI 2013, SSCI 2011, and WCCI 2010. She served as an Associate Editor of IEEE Transactions on Neural Network and Learning Systems(2013-2015) and the Associate Editor of IEEE Transactions on Biomedical Circuits and Systems.

Dr. Chung was the Chair of IEEE Computational Intelligence Society (CIS) (2004-2005) in Tainan Chapter, the Chair of the IEEE Life Science Systems and Applications Technical Committee (2008-2009). She was a member in BoG of CAS Society (2007-2009, 2010-2012). She served as an IEEE CAS Society Distinguished Lecturer (2005-2007) and the Chair of CIS Distinguished Lecturer Program (2012-2013). She served on two terms of ADCOM member of IEEE CIS (2009-2011, 2012-2014), the Chair of IEEE CIS Women in CI (2014). She is a Member of Phi Tau Phi honor society and is an IEEE Fellow since 2008.