Asia-Pacific Signal and Information Processing Association

Taiwan Local Chapter

APSIPA

APSIPA Industrial Distinguished Leader Forum 2021
September 24th, 2021 (Taiwan Time GMT+8)

Theme: Digital Technologies Related to COVID-19

Motivation:
Today, COVID-19 continues to disrupt many aspects of our society and everyone's daily life rhythms. Amid lockdowns, working-from-home, and remote learning, especially with elevation of anxiety and mental stress, digital technologies related to COVID-19 have been accelerated with unprecedented demands worldwide.

CHALLENGES BRING OPPORTUNITIES!

With these CHALLENGES brought forth by recurrent pandemics and remote activity being a norm, this forum provides a platform for experience sharing of new disruptive OPPORTUNITIES with yet more emphasis on cross pollination between academia & industry in fostering Innovation for humanity!

Organizers:
ASPIPA Taiwan Chapter
Chair, Chris Gwo Giun Lee, National Cheng Kung University, Taiwan

APSIPA Industrial Relations and Development
Vice President, Seishi Takamura, NTT Corporation, Japan

Virtual Forum on Sept. 24th , 2021(Taiwan Time GMT+8)
Conference Link to be provided

Topic: APSIPA Industrial Distinguished Leader Forum 2021
Time: Sep 24, 2021 09:00 AM Taipei

Join Zoom Meeting
https://us02web.zoom.us/j/82205375021?pwd=SXJDR3lwWGxac2YzMDlRalpBQ1NVZz09

Meeting ID: 822 0537 5021
Passcode: 101875
One tap mobile
+1 301 715 8592 US (Washington DC)
+1 312 626 6799 US (Chicago)
+1 346 248 7799 US (Houston)
+1 669 900 6833 US (San Jose)
+1 929 205 6099 US (New York)
+1 253 215 8782 US (Tacoma)
Meeting ID: 822 0537 5021
Passcode: 101875
Find your local number: https://us02web.zoom.us/u/kcoybR9ogM

Asia-Pacific Signal and Information Processing Association

Taiwan Local Chapter

APSIPA

Program Schedule:

Schedule Detail (9:15AM ~ 12:33PM)

- **9:15 ~ 9:30:** Login
- **9:30 ~ 9:36:** Opening Remarks
  Anthony Kuh, Ph.D., President, APSIPA
  Seishi Takamura, Ph.D., Vice President APSIPA Industrial Relations and Development

- **9:36 ~ 9:40:** Photo Session

- **Industrial Distinguished Leader Panel**

  Distinguished Speaker I (9:40 ~ 10:00)
  Ching-Yung Lin, Ph.D.: Designing COVID-19 Vaccines that Overcome Future Variants

  CEO, Graphen, USA, Adjunct Professor, Depts. of Electrical Engineering and Computer Science, Columbia University, USA

  Distinguished Speaker II (10:00 ~ 10:20)
  Pengfei Xia, Ph.D.: Millimeter Wave Wireless for 5G Cellular, and Potential Applications for COVID-19 Inactivation

  Amazon, USA

  Distinguished Speaker III (10:20 ~ 10:40)
  Cheng-Kuang Lee, Ph.D.: Accelerated Healthcare and Life Science – NVIDIA CLARA

  Senior Solution Architect; Leader of NVAITC-Taiwan, NVIDIA AI Technology Center, **(NVAITC) | NVIDIA**

  Distinguished Speaker IV (10:40 ~ 11:00)
  Dejan Milojicic, Ph.D.: Factors and Technologies Impacting Future of Workforce

  Distinguished Technologist, Hewlett Packard Labs

- **11:00 ~ 11:10:** Break, but NO Coffee ☺

- **11:10 ~ 11:30: Panel Discussion**

- **12:30 ~ 12:33:** Closing Remarks
  Chris Gwo Giun Lee, Ph.D., Deputy VP APSIPA Industrial Relations and Development

Speaker's Information:

Ching-Yung Lin, CEO, Graphen, USA, Adjunct Professor, Depts. of Electrical Engineering and Computer Science, Columbia University, USA

Short Bio

Dr. Ching-Yung Lin is the CEO of Graphen, Inc. since 2017 and an Adjunct Professor in the Depts. of EECS in Columbia University since 2005. Graphen's mission is to build a novel full-brain AI platform to solve industry challenges in Finance, Medical, Automotive, Energy, and Cybersecurity. Graphen Medical has been utilizing that platform, Ardi, to design vaccines based on the molecular structure of virus proteins and antibodies. By considering nearly a million of possible mutations, now or future, and more than two million of the genetically sequenced worldwide SARS-Cov-2 viruses, we are able to predict functions of mutations and find ways to fight with them through vaccine design.

Before founding Graphen, he was the IBM Chief Scientist, specialized in Graph Computing, and created the Network Science and Machine Intelligence department at IBM T. J. Watson Research Center. Dr. Lin was named an IEEE Fellow in Nov 2011, the first in the area of Network Science. He was also an Adjunct Professor in NYU, 2014, and in Univ. of Washington, 2003-2009. Inspired by human's brain being a network of billions of nodes, his research interest has been on realizing Artificial Intelligence of full brain functioning via fundamental R&D breakthrough. He led several large-scale global AI projects of 30~120 researchers in the last 20 years, including then the largest US social media monitoring project of researchers from Columbia, CMU, Northeastern, Northwestern, UC Berkeley, Stanford Research Institute, Rutgers, Minnesota, and NMU, and projects for the governments and industries in US, EU, China, Russia, and Southeastern Asia.

Dr. Lin was invited as a keynote or plenary speaker in 70+ conferences, including a panel speaker together with the White House Chief Data Scientist in the interim annual American Medical Association meeting in 2015. He was invited to speak in US Federal Reserve, European Central Bank, US FINRA. He was the Chair of IEEE CAS Multimedia TC 2009-10 and the General Chair of IEEE Intl. Conf. on Multimedia and Expo 2009. In 2003, he initiated and led 111 researchers in 23 worldwide institutes on video annotation to pave the foundation of Machine Learning in Computer Vision. His webpage was the Top 1 search result of Baidu search on Big Data Analytics 2015-2017. Dr. Lin's works won 7 best paper awards and were featured 4 times by the BusinessWeek magazine, including being the Top Story of the Week in May 2009. In 2010, IBM Exploratory Research Career Review selected Dr. Lin as a researcher in the category of "most likely to have the greatest scientific impact for IBM and the world."

Pengfei Xia, Amazon, USA

Short Bio

Dr. Pengfei Xia received B. Eng. and M. Eng. degrees from the University of Science and Technology of China, and Ph.D. degree from the University of Minnesota, Twin Cities, all in Electrical and Computer Engineering. His main research interest is in signal processing, machine learning, wireless communications, internet of things, massive random access, detection and estimation, error control coding, iterative detection and decoding. He has published numerous international journal/conference papers, and holds more than one hundred U.S. patents. He is a co-recipient of the IEEE Signal Processing Society Best Paper Award 2011. He is a Fellow of IEEE, for his contributions to multi-input multi-output millimeter wave wireless communications.

Cheng-Kuang (CK) Lee, Senior Solution Architect; Leader of NVAITC-Taiwan, NVIDIA AI Technology Center, (NVAITC) | NVIDIA

Short Bio

Dr. Cheng-Kuang (CK) Lee currently serves as a senior solution architect since 2018 and leads NVAITC-TW (NVIDIA AI Technology Center – Taiwan). Dr. Lee worked in TSMC during 2016 - 2018 as a principal engineer of YEP (Yield Excellence Program) for developing machine learning and deep learning technology for defect inspection. From 2012 to 2016, he was an assistant professor of EE department and Graduate Institute of medical mechatronics of Chang Gung University (CGU). He received the B.S degree in Physics in 2003, and the PhD degree in 2010 from Graduate Institute of Photonics and Optoelectronics, both from National Taiwan University (NTU). His research and scientific interests include deep learning and machine learning algorithm development, medical or industrial imaging system, like Optical Coherence Tomography/Microscopy, ultrasound, MRI, CT etc.

In 2020, Dr. Lee supported NVIDIA global Covid-19 Federated Learning project (called NVIDIA EXAM) to predict oxygen need in triage based on EMR CXR data, and the research result is under review of Nature Medicine. Well-trained model with high accuracy has been released on NGC (NVIDIA GPU Cloud) for worldwide medical institutes and users to download. He also supported the National Taiwan University Hospital to develop HeaortaNet, a model for segmenting heart, ascending/descending aorta with non-contrast CT. This model can benefit for risk prediction of Myocardial infarction. He led a team in NVIDIA to win Top 4 rank in the world of PREDICTIVE ANALYTICS COMPETITION (PAC 2019) for predicting brain age based on structural Magnetic Resonance Imaging, collaborated with NTHU prof Chi-Chun (Jeremy) Lee's lab to win Top 1 rank of Interspeech 2019 ComParE challenge, and obtained Silver medal (20/468 Top 5%) in Inclusive Images Challenge (Google AI challenge) on Kaggle.com in 2018.

Milojicic, Dejan S, Distinguished Technologist, Hewlett Packard Labs

Short Bio

Dejan is a distinguished technologist and director at Hewlett Packard Labs, Palo Alto, CA [1998-present]. Previously, he worked in the OSF Research Institute, Cambridge, MA [1994-1998] and Institute “Mihajlo Pupin”, Belgrade, Serbia [1983-1991]. He received his PhD from the University of Kaiserslautern, Germany (1993); and his MSc/BSc from Belgrade University, Serbia (1983/86). His research interests include systems software, distributed computing, systems management, and HPC. Dejan has over 200 papers, 2 books and 65 allowed/granted patents. Dejan is an IEEE Fellow (2010), ACM Distinguished Engineer (2008), and HKN and USENIX member. Dejan was on 8 PhD thesis committees and he taught a Cloud Management course in San Jose State University. He mentored over 50 interns. Dejan was president of the IEEE Computer Society (2014). Dejan was editor-in-chief of IEEE Computing Now (2008-2012) and Distributed Systems Online (2008-2009) and he has served on many editorial boards and TPCs

.