



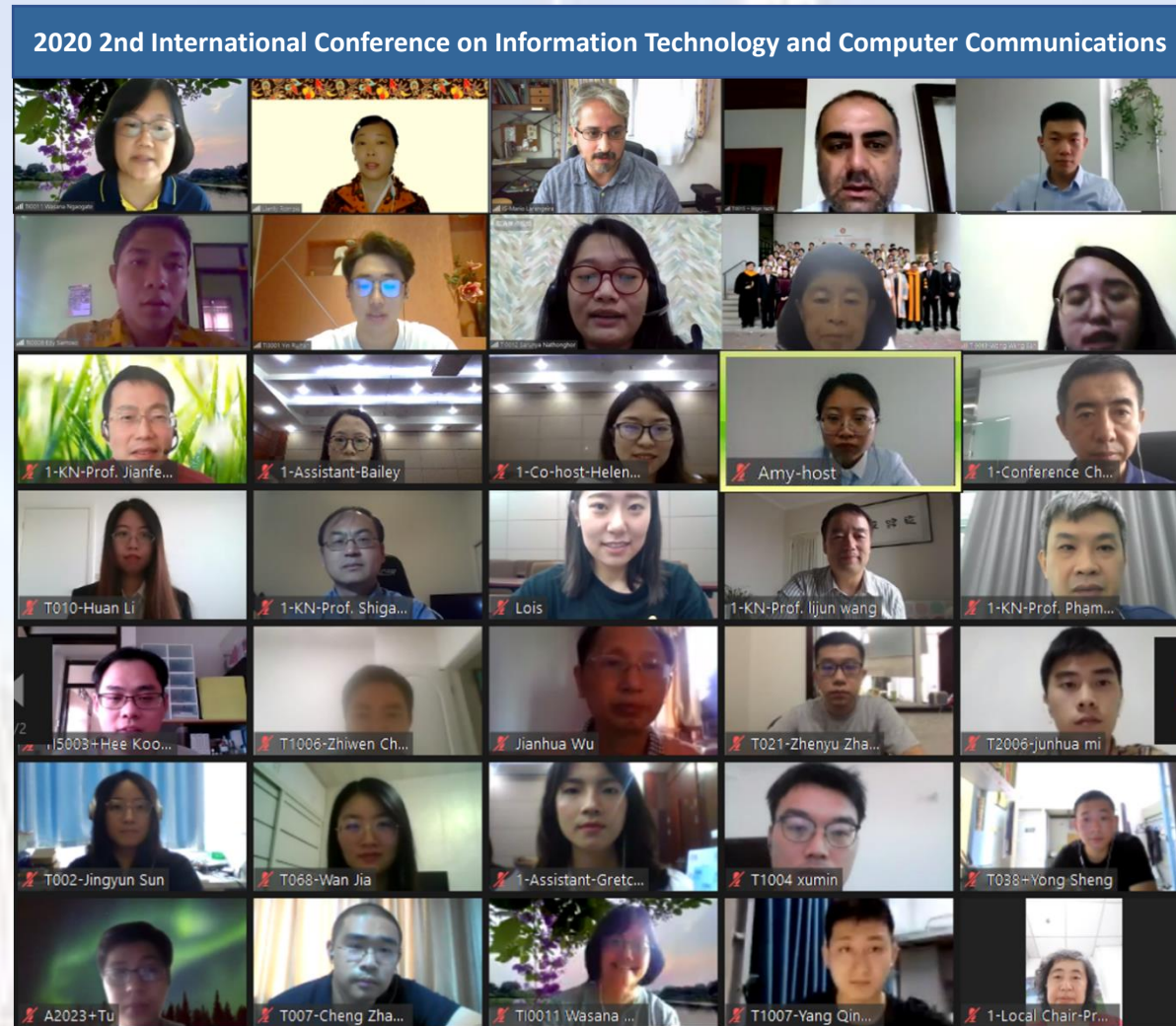
Greetings from ITCC conference group!

On behalf of the organizing committees, we would like to thank you for your support and the favors you have done to ITCC 2020. ITCC 2020 was held successfully during August 14-16, 2020.

Due to the COVID-19 pandemic, the safety of the participants remains the top priority. After careful consideration, in light of the global health emergency and the travel restrictions, ITCC 2020 was special arranged into online conference, so that delegates can participate in the video conference under a safe, productive and well-attended atmosphere. I believe that even at the online conference, everyone has gain something and had a good time.

During the conference, Prof. Jianfei Cai from Monash University, Australia, Prof. Lijun Wang from North China University of Technology, China, Prof. Pham The Bao from Sai Gon University, Vietnam and Prof. Jixin Ma from University of Greenwich, UK have attended the conference as keynote speakers. Dr. Mario Larangeira from Tokyo Institute of Technology/IOHK, Japan and Dr. Lianly Rompis from Universitas Katolik De La Salle Manado, Indonesia have attended the conference as invited speakers. In addition, many researchers, engineers, academicians as well as industrial professionals from all over the world have presented their research results and development activities. Thank all for the support and coming.

# CONFERENCE GROUP PHOTO



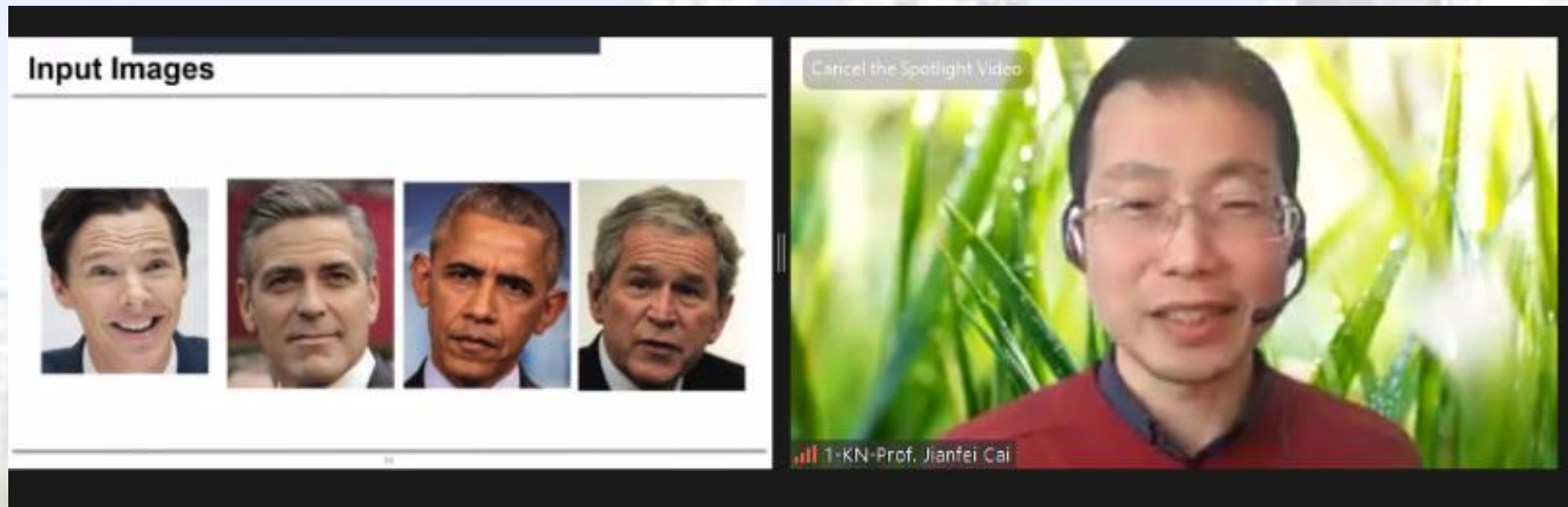
## KEYNOTE SPEECHES

### *Keynote Speech I*

*Title: Deep Learning Based 3D Human Analysis with Limited Labels*

*Prof. Jianfei Cai*

*Monash University, Australia*





## *Keynote Speech II*

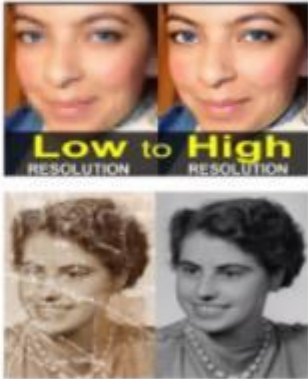
*Title: Ai Super Resolution Techniques and Its Applications*

*Prof. Lijun Wang*

*North China University of Technology, China*


**SR Techniques: what?**

- **Old and daily needs:**  
Photo upscaling or zoom in, several decades ago [Huang et al, 1984] → near recent
- **Definition**  
Recover a high-resolution image or video from the corresponding low-resolution counterparts.
- **Many applications**
  - Image and video restoration
  - Text/object recognition in surveillance videos
  - Medical image reconstruction
  - VR content generation



The image shows two rows of face photos. The top row shows a woman's face, with the left image labeled 'Low Resolution' and the right image labeled 'High Resolution'. The bottom row shows an older woman's face, also with 'Low Resolution' and 'High Resolution' labels. The text 'Low to High' is written across the middle of the images.

Cancel the Spotlight Video



A video feed of a man speaking. He is wearing a striped shirt. In the background, there is a framed calligraphy scroll on the wall.

*Keynote Speech III*

*Title: Coronary Artery Segmentation in Medical Image*

*Prof. Pham The Bao*

*Sai Gon University, Vietnam*



The image shows a presentation slide on the left and a video of the speaker on the right. The slide features the SGU logo (Bai Huc Sai Gon, Saigon University) and the CCCIS 2020 logo. The title of the presentation is "CORONARY ARTERY SEGMENTATION IN MEDICAL IMAGE" in blue capital letters. Below the title, the speaker's name "Pham The Bao" and affiliation "IC-IP Lab" are listed. The video shows a man with dark hair, wearing a blue shirt and white earbuds, resting his chin on his hand. A small name tag "Pham The Bao" is visible at the bottom left of the video frame.

## Keynote Speech IV

Title: About the Dividing Instant Problem (DIP)

Prof. Jixin Ma

University of Greenwich, UK

### 2.2 Theories and Models

Relating Relation	point $t_1$ to point $t_2$	Interval $t_1$ to interval $t_2$	point $t_1$ to interval $t_2$	interval $t_1$ to point $t_2$
Equal	$t_1 \bullet$ $t_2 \bullet$	$t_1 \rightarrow$ $t_2 \rightarrow$	Not Applicable	Not Applicable
Before	$t_1 \bullet$ $t_2 \bullet$	$t_1 \rightarrow$ $t_2 \rightarrow$	$t_1 \bullet$ $t_2 \rightarrow$	$t_1 \rightarrow$ $t_2 \bullet$
After	$t_1 \bullet$ $t_2 \bullet$	$t_1 \rightarrow$ $t_2 \rightarrow$	$t_1 \bullet$ $t_2 \rightarrow$	$t_1 \rightarrow$ $t_2 \bullet$
Meets	Not Applicable	$t_1 \rightarrow$ $t_2 \rightarrow$	$t_1 \bullet$ $t_2 \rightarrow$	$t_1 \rightarrow$ $t_2 \bullet$
Met-by	Not Applicable	$t_1 \rightarrow$ $t_2 \rightarrow$	$t_1 \bullet$ $t_2 \rightarrow$	$t_1 \rightarrow$ $t_2 \bullet$
Overlaps	Not Applicable	$t_1 \rightarrow$ $t_2 \rightarrow$	Not Applicable	Not Applicable
Overlapped-by	Not Applicable	$t_1 \rightarrow$ $t_2 \rightarrow$	Not Applicable	Not Applicable
Starts	Not Applicable	$t_1 \rightarrow$ $t_2 \rightarrow$	$t_1 \bullet$ $t_2 \rightarrow$	Not Applicable
Started-by	Not Applicable	$t_1 \rightarrow$ $t_2 \rightarrow$	Not Applicable	$t_1 \rightarrow$ $t_2 \bullet$
During	Not Applicable	$t_1 \rightarrow$ $t_2 \rightarrow$	$t_1 \bullet$ $t_2 \rightarrow$	Not Applicable
Contains	Not Applicable	$t_1 \rightarrow$ $t_2 \rightarrow$	Not Applicable	$t_1 \rightarrow$ $t_2 \bullet$
Finishes	Not Applicable	$t_1 \rightarrow$ $t_2 \rightarrow$	$t_1 \bullet$ $t_2 \rightarrow$	Not Applicable
Finished-by	Not Applicable	$t_1 \rightarrow$ $t_2 \rightarrow$	Not Applicable	$t_1 \rightarrow$ $t_2 \bullet$

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1-KN-Prof. Jixin Ma

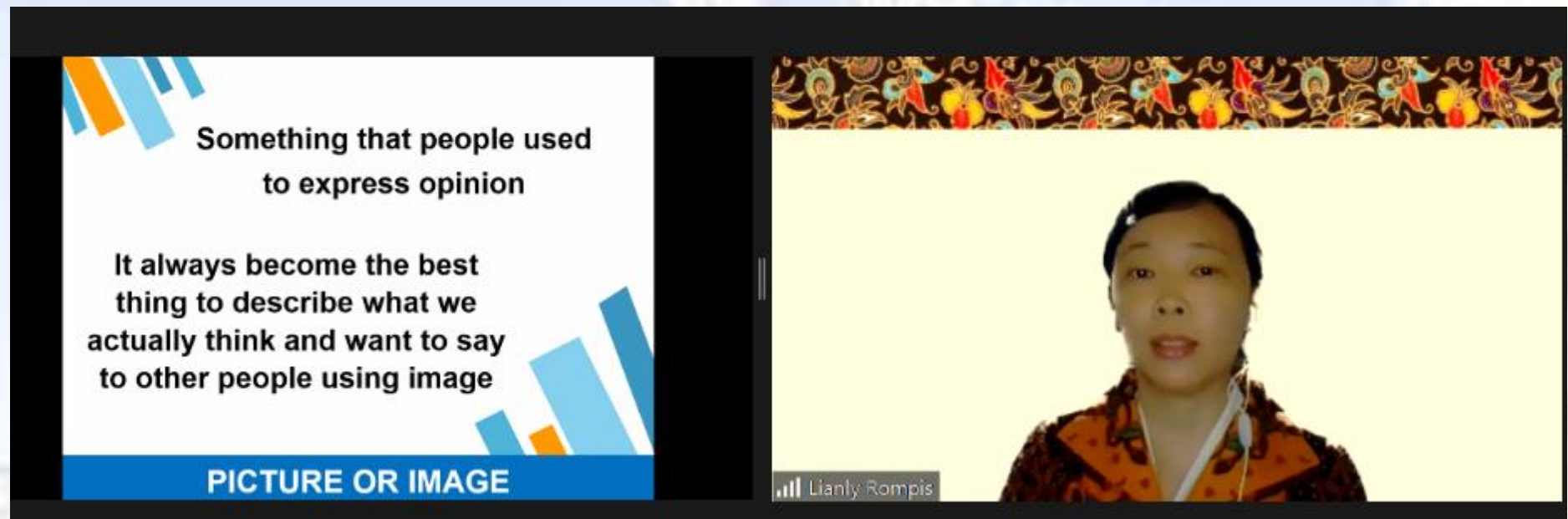


*Invited Speech I*

*Title: Explore the Informative Images: From 2D to Augmented Reality and Future Works*

*Dr. Lianly Rompis*

*Universitas Katolik De La Salle Manado, Indonesia*



The image shows a video conference interface. On the left, there is a presentation slide with a white background and blue and orange geometric shapes. The text on the slide reads: "Something that people used to express opinion", "It always become the best thing to describe what we actually think and want to say to other people using image", and "PICTURE OR IMAGE" at the bottom. On the right, there is a video feed of a woman, Dr. Lianly Rompis, wearing a traditional Indonesian batik patterned orange and black garment. She is speaking into a microphone. The background of the video feed is a solid light yellow color. At the bottom of the video feed, there is a small black bar with the text "Lianly Rompis" and a signal strength icon.

*Invited Speech II*

*Title: The classical Mental Poker Research in the time of the Blockchain*

*Dr. Mario Larangeira*

*Tokyo Institute of Technology/IOHK, Japan*

# Technical Challenges



8/16/2020

Mental Poker  
Technical Challenges

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## BEST PRESENTATION

*Title: Partially Reversible Gray Image Data Hiding based on Adjacent Pixel Difference*

*Ruihan Yin*

*Glasgow College, University of Electronic Science and Technology, China*

*Shenzhen Research Institute, Wuhan University, China*



The image is a composite of two parts. On the left is a presentation slide titled "Reversible Data Hiding(RDH)". It features a tree diagram where "RDH" branches into "Spatial domain", "Transform domain", and "Encrypted domain". The "Spatial domain" further branches into three methods: "Method 1: Lossless Data Compression" (with sub-points: "Weak robustness", "Cannot be recovered completely"), "Method 2: Difference Expansion" (with sub-points: "Large capacity", "Overflow"), and "Method 3: Histogram Modification" (with sub-points: "Large capacity", "High quality"). On the right is a video feed of a man with dark hair and glasses, wearing a white shirt, speaking. A small inset in the top right of the video shows a vase with pink flowers. At the bottom of the video feed, a status bar reads "TI3001 Yin Ruihan".

Reversible Data Hiding(RDH)

RDH

- Spatial domain
  - Method 1: Lossless Data Compression
    - Weak robustness
    - Cannot be recovered completely
  - Method 2: Difference Expansion
    - Large capacity
    - Overflow
  - Method 3: Histogram Modification
    - Large capacity
    - High quality
- Transform domain
- Encrypted domain

TI3001 Yin Ruihan



ITCC 2021 will continue at Guangzhou, China next year. We hope the coronavirus situation will become better soon, and everyone can have a good health. Thank you so much for your support and understanding.

We really look forward to seeing you face to face next year!

Best regards,

ITCC Conference Group

August, 2020

