# **Table of Contents**

Part I Conference Schedule Summary2
Part II Keynote Speeches4
Keynote Speech 1: Privacy Protection in Video Live Streaming4
Keynote Speech 2: Personal Authentication Systems with Graphics5
Keynote Speech 3: Toward INTERBEING in the Metaverse: On the Symbiosis between Internet and Human Being6
Part III Poster Session7
Poster Presentations
List of Posters7
Part IV Oral Presentations
General Guidelines
Session 1: Electronics Technology and VLSI10
Session 2: Internet Technology and Signal Processing11
Session 3: Information Communication and Communication Networks
Part V Conference Venue14
Part VI Acknowledgements16

\* The Program is used for CECNet 2023 Academic Exchange Only

# **Part I Conference Schedule Summary**

Friday, November 17, 2023			
Time	Schedule	Location/Link	
14:00-19:00	Physical Registration	Lobby of Regency Art Hotel	
15:00-17:00	MS Teams Testing	http://www.academicconf.com/teamslink?confname=cecnet2023	

#### Notice (for offline participants):

- 1. Please show us the acceptance letter or paper ID for registration;
- 2. Please take the name card during conference, Macao Pass<sup>1</sup> for meals and field visit tickets while joining the field visit.

Saturday, No	ovember 18, 2023 Ballroom III, Regency Art Hotel				
MS Teams Link: http://www.academicconf.com/teamslink?confname=cecnet2023					
09:00-09:05	Keynote Speeches are chaired by: Prof. Gi-Chul Yang, Mokpo National University, South Korea				
09:05-09:45	Keynote Speech 1: Privacy Protection in Video Live Streaming Prof. Chi-Man Pun, University of Macau, China				
09:45-10:25	Keynote Speech 2: Personal Authentication Systems with Graphics Prof. Gi-Chul Yang, Mokpo National University, South Korea				
10:25-10:50	Group Photo & TEA BREAK				
10:50-11:30	Keynote Speech 3: Toward INTERBEING in the Metaverse: On the Symbiosis between Internet and Human Being Prof. Martin Maier, Institut National de la Recherche Scientifique (INRS), Canada				
11:30-12:00	Poster Presentations				
12:00-14:00	LUNCH BREAK (A Pousada Café 玲瓏閣餐廳)				
14:00-17:25	Oral Session 1: Electronics Technology and VLSI				
18:30	Gather at the Lobby of Regency Art Hotel, <u>Set off on time at 18:30</u> to Macao Tower				

<sup>&</sup>lt;sup>1</sup> Macao Pass will be provided during registration for dinner on November 19th and Lunch on November 20th. Macao Pass can be used in Public Transit, Convenience Store, Supermarket, Café and Self-service Vending Machine in Macao.

18:30-21:00	Buffet Dinner at Macao Tower (With Buffet Dinner Ticket)
21:00	Gather at the Ground Floor of Macao Tower, <u>Set off on time at 21:00</u> , Back to Regency Art Hotel

Sunday, No	ovember 19, 2023	<b>Ballroom III, Regency Art Hotel</b>
MS Teams Li	nk: http://www.academicconf.co	m/teamslink?confname=cecnet2023
08:30-12:10	Oral Session 2: Internet	Technology and Signal Processing
12:10-14:00	LUNCH BREAK (A Po	usada Café 玲瓏閣餐廳)
14:00-17:30	Oral Session 3: Informa	ntion Communication and Communication Networks

Monday, N	ovember 20, 2023	Macao City, China
09:00	Gather at the Lobby of Regency Art l	Hotel, <u>Set off on time at 09:00</u>
09:00-16:00	One Day Field Visit of Macao City (w	rith Field Visit Ticket)
16:00	Gather at the Ground floor of Venet to Regency Art Hotel	ian Macao, <u>Set off on time at 16:00,</u> Back

## **Part II Keynote Speeches**

## **Keynote Speech 1: Privacy Protection in Video Live Streaming**



Prof. Chi-Man Pun

Computer and Information Science, University of Macau, China

**Biography:** Chi-Man Pun received his Ph.D. degree in Computer Science and Engineering from the Chinese University of Hong Kong in 2002, and his M.Sc. and B.Sc. degrees from the University of Macau. He had served as the Head of the Department of Computer and Information Science, University of Macau from 2014 to 2019, where he is currently a professor, and in charge of the Image Processing and Pattern Recognition Laboratory. He has investigated many externally funded research projects as PI, and has authored/co-authored more than 200 refereed papers in many top-tier journals and conferences. He also has two US Patents granted and is the recipient of the Macao Science and Technology Award 2014. Dr. Pun has served as the General Chair/Co-chair and the Program/Local Chair for many international conferences. He has also served as the SPC/PC member for several top CS conferences such as AAAI, CVPR, ICCV, ECCV, etc. His research interests include Image Processing and Pattern Recognition; Multimedia Information Security, Forensic and Privacy; Adversarial Machine Learning and AI Security, etc.

**Abstract:** With the prevailing of live video streaming, establishing an online pixelation method for privacy-sensitive objects is an urgency. Caused by the inaccurate detection of privacy-sensitive objects, simply migrating the tracking-by-detection structure into the online form will incur problems in target initialization, drifting, and over-pixelation. To cope with the inevitable but impacting detection issue, we propose a novel Privacy-sensitive Objects Pixelation (PsOP) framework for automatic personal privacy filtering during live video streaming. Leveraging pre-trained detection networks, our PsOP is extendable to any potential privacy-sensitive objects pixelation. Employing the embedding networks and the proposed Positioned Incremental Affinity Propagation (PIAP) clustering algorithm as the backbone, our PsOP unifies the pixelation of discriminating and indiscriminating pixelation objects through trajectories generation. In addition to the pixelation accuracy boosting, experiments on the streaming video data we built show that the proposed PsOP can significantly reduce the over-pixelation ratio in privacy-sensitive object pixelation.

## **Keynote Speech 2: Personal Authentication Systems with Graphics**



Prof. Gi-Chul Yang

Mokpo National University, South Korea

Biography: Gi-Chul Yang received his M.S. degree from Department of Computer Science, the University of Iowa, USA in 1986 and Ph.D. degree in Computer Science and Telecommunications Program from the University of Missouri, USA in 1993. Currently, he is a Professor at Mokpo National University, where he has been working since September 1993. He was also a Director of Information & Computing Institute, School of Information Engineering and University Library at Mokpo National University. His research interests include Artificial Intelligence (AI) and Human-Computer Interaction (HCI). He published the research articles more than 200 and got several patents. He was working on personal authentication schemes and published papers in various Journals including 'TIM: Secure and Usable Authentication for Smartphones' to be published in Journal of Information Security and Applications. He is, currently, pursuing to develop more secure and user-friendly authentication system using EEG data and AI technique. He was a Visiting Scholar at Heriot-Watt University, University of Hamburg, University Institute of Lisbon and University of Porto in 2002, 2015 and 2022 respectively. He collaborated with professors at Linkoping University, University of Zurich, University of Missouri, University of Auckland, Drexel University, Queen Mary University in London, Surrey University and University of Hawaii. He is an author of several books (written in Korean) and was an editor of Springer's Transactions of Engineering Technologies. He gave keynote speeches and served as a committee member of various international conferences including a conference chair and co-chair. He is, also, an editorial board member of International Journals such as American Journal of Computer Science and Technology (AJCST) and Journal of Image and Graphics (JOIG).

**Abstract:** Currently, the most commonly used personal authentication method is a text-based password system. In this talk, several graphical password systems that can replace text-based password systems will be introduced, and a new personal authentication system using a graphical password system will be introduced. The existing text-based authentication solutions bring in the trade-off issue between security and usability. The main reason is short passwords are easy to remember but not secure enough as they are vulnerable to password guessing or shoulder surfing attacks. In contract, long passwords can ensure security, but they raise usability issues due to the difficulty of memorising, recalling, and inputting passwords. In this talk, number of image-based authentication solutions will be proposed. The next-generation personal authentication system to be introduced in this talk has strong security and high usability.

**Keywords:** Authentication, Security, Graphical Password **Acknowledgements:** This work was supported by Mokpo National University

# **Keynote Speech 3: Toward INTERBEING in the Metaverse: On the Symbiosis between Internet and Human Being**



**Prof. Martin Maier** 

Institut National de la Recherche Scientifique (INRS), Montréal, Canada

**Biography:** Martin Maier is a full professor with the Institut National de la Recherche Scientifique (INRS), Montréal, Canada. He was educated at the Technical University of Berlin, Germany, and received MSc and PhD degrees both with distinctions (summa cum laude) in 1998 and 2003, respectively. He was a recipient of the two-year Deutsche Telekom doctoral scholarship from 1999 through 2001. In 2003, he was a postdoc fellow at the Massachusetts Institute of Technology (MIT), Cambridge, MA. He was a visiting professor at Stanford University, Stanford, CA, 2006 through 2007. He was a co-recipient of the 2009 IEEE Communications Society Best Tutorial Paper Award. Further, he was a Marie Curie IIF Fellow of the European Commission from 2014 through 2015. In 2017, he received the Friedrich Wilhelm Bessel Research Award from the Alexander von Humboldt (AvH) Foundation in recognition of his accomplishments in research on FiWi-enhanced mobile networks. In 2017, he was named one of the three most promising scientists in the category "Contribution to a better society" of the Marie Skłodowska-Curie Actions (MSCA) 2017 Prize Award of the European Commission. In 2019/2020, he held a UC3M-Banco de Santander Excellence Chair at Universidad Carlos III de Madrid (UC3M), Madrid, Spain. He is co-author of the book "Toward 6G: A New Era of Convergence" (Wiley-IEEE Press, January 2021) and author of the sequel book "6G and Onward to Next G: The Road to the Multiverse" (Wiley-IEEE Press, February 2023).

**Abstract:** For all the fascination with the Metaverse, the term has no consensus definition or consistent description. Most industry leaders define it in the manner that fits their own worldviews and/or capabilities of their companies. Notwithstanding, it is fair to assume that there can be only one Metaverse – just as there is "the Internet," not "an Internet" or "the Internets." In virtual worlds, it is common practice to talk to strangers with no introduction whatsoever and invite them to join efforts in pursuit of a task, thereby creating a sense of shared community and an ideal community-individual relationship. In this keynote, we will report on our work on cyber-physical-social systems in the emerging Metaverse for integrating human, artificial, and natural intelligence with the help of digital twins and Web3 blockchain technologies. In particular, we outline our ideas on the virtual society's symbiosis between Inter(net) and (human) being in the future Metaverse enabled by a stronger and more resilient nexus between real and virtual worlds for transferring the value created in these digital realms into our own real world, giving rise to the powerful concept of Interbeing, a word that is not in the dictionary yet.

# **Part III Poster Session**

## Materials Provided by the Conference Organizer:

- ♦ X Racks & Base Fabric Canvases (60cm×160cm, see the figure)
- $\diamond$  Adhesive Tapes or Clamps

#### Materials Provided by the Presenters:

- ♦ Home-made Posters
- ♦ Posters printed by CECNet 2023 Committee

#### **Requirements for the Posters:**

- ♦ Materials: not limited, can be posted on the Canvases
- ♦ Size: 60cm×160cm
- ♦ Horizontal Head: please make the conference name 'CNT 2023' and the paper number 'CNT\*\*\*\*' as the head of the poster in order to make all the posters unified.



## **Poster Presentations**

Time: 11:30-12:00 Saturday, November 18, 2023 Conference Room: Ballroom III, 1F

## **List of Posters**

CNT3325	<b>Building an Immersive Augmented Reality Game System for E-Health</b> <b>and E-Learning: Technical Framework and Architecture</b> <i>Cecilia Cheng, Department of Psychology, The University of Hong Kong, China</i>
CNT3344	<b>Study of A Stars-Parallel Hyperchaos Laser Synchronization LAN with</b> <b>Two Type of Erbium-Doped Fiber Lasers</b> <i>Yuzheng Lu, Electronic Engineering School, Nanjing Xiaozhuang University, China</i>
CNT3352	All-Optical Sequence Matching (AOSM) Enabled All-Optical Switching for Optical Data Center Networking Xin Li, School of Electronic Engineering, Beijing University of Posts and Telecommunications, Beijing, China
CNT3354	<b>Simplified Monocular Ranging Anomalous Behaviour Detection Model for</b> <b>Security Monitoring Applications</b> <i>Ping Wang, Chongqing University of Posts and Telecommunications, China</i>
CNT3383	Magnetic Field-insensitive Anapole State in Gyromagnetic Media Yujie Zhang, School of Information Science and Engineering, Shandong University, China
CNT3391	<b>Control of Electronic States at the Interface of Semiconductor</b> <b>Nanocomposites and Its Application in Fuel Cells</b> Junjiao Li, Department of Electronic and Engineering, Nanjing Vocational Institute of Mechatronic Technology, China

# **Part IV Oral Presentations**

## **General Guidelines**

- ↓ All presentation times are shown in China Standard Time (GMT+8:00);
- Duration for Invited Oral Presentation: 25 Minutes of Presentation including 3-5 Minutes of Q&A;
- Duration for Regular Oral Presentation: 15 Minutes of Presentation including 2-3 Minutes of Q&A;
- All presenters are requested to reach the Session Room 15 minutes prior to the schedule time and complete their presentation on time;
- Presenters should prepare Power Pointer or PDF Files for Presentation with Paper ID (CNT\*\*\*\*) marked in the last page;
- Signed and stamped presentation certificate would be issued after presentation.

## **Offline Oral Presentation Guidelines**

### **Devices Provided by the Conference Organizer:**

- Laptops (with MS-Office & Adobe Reader)
- Projectors & Screen: Ratio 4:3
- Laser Sticks
- Microphones
- Please send us the PowerPoint once it is ready and have the PPT back up in a U-disk. For presenters who do not send the PowerPoint, please save it in the laptop of the corresponding session 15 mins in advance. Kindly tell the Session Chair (before the start of your session) that you are presenter.

## **Online Oral Presentation Guidelines**

- ♣ Online Oral Presentation will be conducted via Microsoft Teams Meeting.
- ➡ If a presenter cannot show up on time or has problem with internet connection, the session chair has the right to rearrange his/her presentation, and let the next presentation start.

## **Best Oral Presentations Selection Guidelines**

#### Selection Criteria:

ONE best presentation will be selected from EACH session based on the following criteria:

- ✓ Research Quality
- ✓ Presentation Performance
- ✓ Presentation Language
- ✓ Interaction with Listeners
- ✓ PowerPoint Design
- ✓ Effective Communications

#### Selectin Procedure:

- $\checkmark$  An assessment sheet will be delivered to listeners before the session.
- $\checkmark$  Write the numbers of two best presentations and submit the filled assessment sheet (with the

listener's name and signature) to the Session Chair before the session termination.

✓ The Session Chair will count the votes for each presentation and name the winner based on the maximal number of votes. The Session Chair has three votes but can use only one in favor of his/her own presentation (if any). To avoid any conflict of interests, only registered listeners are entitled to vote.

#### Nature of the Award:

- ✓ This award consists of free registration to the next conference CECNet 2024 and a certificate.
- $\checkmark$  The awards will be announced at the official website after the conference.

#### Assessment Sheet Sample

### **CECNet 2023 Oral Presentation Assessment**

Dear participants,

After carefully listening to the presentations of this session, please kindly recommend two excellent Oral Presentations with reference to the following evaluation criteria.

The Session Chair will count the votes from each presentation and select ONE Best Oral Presentation in this session. If there is a tie, the Session Chair will make the final decision.

The winner will be announced at the official website after the conference.

#### You can refer to the following Criteria:

Items	Assessment			
Content	Right, Logical, Original, Well-Structured			
Language	Standard, Clear, Fluent, Natural			
Performance	Spirited Appearance, Dress Appropriately, Behaves Naturally			
PPT	Layout, Structure, Typeset, Animation, Multimedia			
Reaction	Build a Good Atmosphere, Speech Time Control Properly			

#### Please write down paper ID and give reasons for your recommendation:

Paper ID	Reasons

Evaluated by: \_\_\_\_\_ (Paper ID: \_\_\_\_\_)

Note: When the session finished, please fill it out and give it to the Session Chair so that the Best Oral Presentation in this session can be selected.

## Session 1: Electronics Technology and VLSI

Time: 14:00-17:25 Saturday, November 18th, 2023 Conference Room: Ballroom III, 1F Session Chair: Dr. Wenqiang Pu, Shenzhen Research Institute of Big Data, China Online Room Link: http://www.academicconf.com/teamslink?confname=cecnet2023

		Hermetic Interlayer Interconnection Technology Based on
14:00-14:15	CNT3330	SAC305 Solder Paste
		Dr. Ziyuan Wang, School of Electronic Science & Engineering, Southeast University, China
		Acoustic Multichannel Transports of Valley Edge States in
14:15-14:30	CNT3359	Bilayer Sonic Crystals
		Prof. Hai Yang, School of Physics Science and Technology, Kunming University, China
	CNT3317	Optimistic Thompson Sampling for No-Regret Learning in
14:30-14:55	(Invited)	Unknown Games
	· · · ·	Dr. Wenqiang Pu, Shenzhen Research Institute of Big Data, China
	CNT3285	Adaptive State Estimation of Intelligent Connected Vehicles
14:55-15:20	(Invited)	Dr. Yan Wang, School of Mechanical and Aerospace Engineering, Nanyang
		Technological University, Singapore
15.20 15.25	CNT2202	Outage Performance of Dual-Hop Cellular Network with
15:20-15:35	CNT3382	<b>Underlaid V2V Communications</b> <i>Mr. Fan Wu, Hefei University of Technology, China</i>
	CNT3311	Integrated Silicon Spectrometer
15.25 16.00	01110011	Prof. Ang Li, Key Laboratory of Radar Imaging and Microwave Photonics,
15:35-16:00	(Invited)	Prof. Ang Li, Key Laboratory of Radar Imaging and Microwave Photonics, Ministry of Education Nanjing University of Aeronautics and Astronautics,
15:35-16:00		
15:35-16:00 16:00-16:15		Ministry of Education Nanjing University of Aeronautics and Astronautics,
16:00-16:15	(Invited)	Ministry of Education Nanjing University of Aeronautics and Astronautics, China
	(Invited) CNT3314	Ministry of Education Nanjing University of Aeronautics and Astronautics, China Coffee Break Intelligent Assembly Scheduling of Large Laser Devices Based on Neural Network
16:00-16:15	(Invited)	Ministry of Education Nanjing University of Aeronautics and Astronautics, China Coffee Break Intelligent Assembly Scheduling of Large Laser Devices
16:00-16:15 16:15-16:40	(Invited) CNT3314 (Invited)	Ministry of Education Nanjing University of Aeronautics and Astronautics, China Coffee Break Intelligent Assembly Scheduling of Large Laser Devices Based on Neural Network
16:00-16:15	(Invited) CNT3314	Ministry of Education Nanjing University of Aeronautics and Astronautics, China Coffee Break Intelligent Assembly Scheduling of Large Laser Devices Based on Neural Network Dr. Zhao Xiong, Laser Fusion Research Center, China Personalization or Popularity? A Matter of Arrow's Impossibility Theorem
16:00-16:15 16:15-16:40	(Invited) CNT3314 (Invited)	Ministry of Education Nanjing University of Aeronautics and Astronautics, China Coffee Break Intelligent Assembly Scheduling of Large Laser Devices Based on Neural Network Dr. Zhao Xiong, Laser Fusion Research Center, China Personalization or Popularity? A Matter of Arrow's Impossibility Theorem Mr. Hao Wang, Ratidar Technologies Co. Ltd, China
16:00-16:15   16:15-16:40   16:40-16:55	(Invited) CNT3314 (Invited) CNT3319	Ministry of Education Nanjing University of Aeronautics and Astronautics, China Coffee Break Intelligent Assembly Scheduling of Large Laser Devices Based on Neural Network Dr. Zhao Xiong, Laser Fusion Research Center, China Personalization or Popularity? A Matter of Arrow's Impossibility Theorem Mr. Hao Wang, Ratidar Technologies Co. Ltd, China Equivalent Circuit Simulation of Transverse Nonlinear
16:00-16:15 16:15-16:40	(Invited) CNT3314 (Invited)	Ministry of Education Nanjing University of Aeronautics and Astronautics, China Coffee Break Intelligent Assembly Scheduling of Large Laser Devices Based on Neural Network Dr. Zhao Xiong, Laser Fusion Research Center, China Personalization or Popularity? A Matter of Arrow's Impossibility Theorem Mr. Hao Wang, Ratidar Technologies Co. Ltd, China Equivalent Circuit Simulation of Transverse Nonlinear Vibration of a Single-axis Bogie
16:00-16:15   16:15-16:40   16:40-16:55	(Invited) CNT3314 (Invited) CNT3319	Ministry of Education Nanjing University of Aeronautics and Astronautics, China Coffee Break Intelligent Assembly Scheduling of Large Laser Devices Based on Neural Network Dr. Zhao Xiong, Laser Fusion Research Center, China Personalization or Popularity? A Matter of Arrow's Impossibility Theorem Mr. Hao Wang, Ratidar Technologies Co. Ltd, China Equivalent Circuit Simulation of Transverse Nonlinear Vibration of a Single-axis Bogie Mr. Feng Hao. School of Mechatronic Engineering, Lanzhou Jiaotong University, China
16:00-16:15   16:15-16:40   16:40-16:55	(Invited) CNT3314 (Invited) CNT3319	Ministry of Education Nanjing University of Aeronautics and Astronautics, China Coffee Break Intelligent Assembly Scheduling of Large Laser Devices Based on Neural Network Dr. Zhao Xiong, Laser Fusion Research Center, China Personalization or Popularity? A Matter of Arrow's Impossibility Theorem Mr. Hao Wang, Ratidar Technologies Co. Ltd, China Equivalent Circuit Simulation of Transverse Nonlinear Vibration of a Single-axis Bogie Mr. Feng Hao. School of Mechatronic Engineering, Lanzhou Jiaotong University, China Performance of the Modified MSE Upper Bounds under
16:00-16:15   16:15-16:40   16:40-16:55	(Invited) CNT3314 (Invited) CNT3319	Ministry of Education Nanjing University of Aeronautics and Astronautics, China Coffee Break Intelligent Assembly Scheduling of Large Laser Devices Based on Neural Network Dr. Zhao Xiong, Laser Fusion Research Center, China Personalization or Popularity? A Matter of Arrow's Impossibility Theorem Mr. Hao Wang, Ratidar Technologies Co. Ltd, China Equivalent Circuit Simulation of Transverse Nonlinear Vibration of a Single-axis Bogie Mr. Feng Hao. School of Mechatronic Engineering, Lanzhou Jiaotong University, China Performance of the Modified MSE Upper Bounds under Packet Loss and the gfGn Surroundings for the PTP Scenario
16:00-16:15   16:15-16:40   16:40-16:55   16:55-17:10	(Invited) CNT3314 (Invited) CNT3319 CNT3333	Ministry of Education Nanjing University of Aeronautics and Astronautics, China Coffee Break Intelligent Assembly Scheduling of Large Laser Devices Based on Neural Network Dr. Zhao Xiong, Laser Fusion Research Center, China Personalization or Popularity? A Matter of Arrow's Impossibility Theorem Mr. Hao Wang, Ratidar Technologies Co. Ltd, China Equivalent Circuit Simulation of Transverse Nonlinear Vibration of a Single-axis Bogie Mr. Feng Hao. School of Mechatronic Engineering, Lanzhou Jiaotong University, China Performance of the Modified MSE Upper Bounds under

## Session 2: Internet Technology and Signal Processing

Time: 08:30-12:10 Sunday, November 19th, 2023

**Conference Room: Ballroom III, 1F** 

Session Chair: Prof. Kaicheng Li, Huazhong University of Science and Technology, China Online Room Link: http://www.academicconf.com/teamslink?confname=cecnet2023

08:30-08:55	CNT3287 (Invited)	A VMD Harmonic Detection Method Based on Improved SVD Denoising Prof. Kaicheng Li, Huazhong University of Science and Technology, China
08:55-09:10	CNT3374	Self-supervised Sparse Direct Visual Odometry with Half- Geometric Correspondence Network Mr. Tenglong Zhang, Beijing Information Science & Technology University, China
09:10-09:25	CNT3375	Dynamic Talking-Head Generation with Speech EmotionRecognition and Intensity DetectionDr. Chen Fu, Graduate School of Science and Engineering, Hosei University,Japan
09:25-09:50	CNT3369 (Invited)	Design and Analysis of the Low-PAPR SynchronizationSequences for Unlicensed BandProf. Alexander Maltsev, Nizhny Novgorod State University, NizhnyNovgorod, Russia
09:50-10:05	CNT3316	Multi-skeleton Joint Behavior Recognition Method based on a Dual-stream NetworkDr. Hongda Mou, College of Artificial Intelligence, Chongqing Technology and Business University, China
10:05-10:30	CNT3212 (Invited)	Hyper Cutter Location Data-based Robot Interface for StandardizationProf. Fusaomi Nagata, Graduate School of Engineering, Sanyo-Onoda City University, Japan
10:30-10:45		Coffee Break
10:45-11:00	CNT3356	Improving Facial Emotional Recognition Using Convolution Neural Network with Minimal Layer Mr. Rogerant Tshibangu, Electrical Engineering Department, Mangosuthu University of Technology, South Africa
11:00-11:15	CNT3235	Network Model Based on the Theory of the Strong Product Graphs Dr. Weimin Qian, College of Computer Science, Qinghai Normal University, China
11:15-11:40	CNT3199 (Invited)	<b>Research on Integrated Energy Scheduling Based on Virtual</b> <b>Power Plant</b> <i>Prof. Tao Zhang, University of Science and Technology Beijing, China</i>

		Mitigating	Position	Bias	with	Regularizatio	on for
11:40-11:55	CNT3315	Recommend	ler Systems				
		Mr. Hao Wang,	Ratidar Techn	ologies C	o. Ltd, Chi	ina	
		Research o	n Multi-st	trategy	Improv	red Sparrow	Search
11:55-12:10	CNT3226	Optimizatio	n Algorithm	n			
11.55 12.10	01115220	Prof. Teng Fei	, Institute of I	Informatio	on Enginee	ering, Tianjin Uni	iversity of
		Commerce, Chi	ina				

## **Session 3: Information Communication and Communication Networks**

Time: 14:00-17:30 Sunday, November 19th, 2023 Conference Room: Ballroom III, 1F Session Chair: Dr. Tao Yang, Beijing University of Posts and Telecommunications, China Online Room Link: http://www.academicconf.com/teamslink?confname=cecnet2023

14:00-14:25	CNT3286 (Invited)	WDM Optical Network Monitoring Based on Digital OpticalLabelsDr. Tao Yang, State Key Laboratory of Information Photonics and OpticalCommunication, Beijing University of Posts and Telecommunications, China
14:25-14:40	CNT3347	Short-term Forecast of Ionospheric TEC Based on CSA- LSTMMr. Tong Zhu, Beijing Information Science & Technology University, China
14:40-14:55	CNT3368	Nature-inspiredOptimization:OptimizingDistanceofEmergencyResponseWagons enRouteToRailwayCrossingAccidentLocationMr. IsraelEdemAgbehadji,Faculty ofAccounting and Informatics,DurbanUniversity ofTechnology,SouthAfrica
14:55-15:10	CNT3366	EvolvingNetworkRepresentationLearningBasedonRecurrentNeuralNetworkDr, MingshuoNie, SoftwareCollege, NortheasternUniversity, China
15:10-15:25	CNT3367	Bipartite Evolving Network Representation Learning Basedon Reconstruction NetworkProf. Dongming Chen, Software College, Northeastern University, China
15:25-15:40	CNT3320	<b>Collaborative Filtering is a Lie or Not? It Depends on the</b> <b>Shape of Your Data Domain</b> <i>Mr. Hao Wang, Ratidar Technologies Co. Ltd, China</i>
15:40-15:55	CNT3192	DisruptionResilientDataDeliveryMechanismforCommunication in Smart GridsDr. Boyang Zhou, Intelligent Network Research Institute, Zhejiang Lab, China
15:55-16:10		Coffee Break

16:10-16:25	CNT3370	Low Overhead Adaptive Channel Equalizations for Upstream Burst Reception in 200Gbps Intensity Modulation-Coherent PONs Mr. Yuanzhe Sun, State Key Laboratory of Information Photonics and Optical Communications, Beijing University of Posts and Telecommunications, China
16:25-16:50	CNT3385 (Invited)	<b>Future Indoor Wireless Network: 802.11bn (Wi-Fi 8) and Its</b> <b>Evolution</b> <i>Prof. Gang Xie, Beijing University of Posts and Telecommunications, China</i>
16:50-17:15	CNT3303 (Invited)	Method and Algorithms for Improving Positioning Accuracy for Users with Restricted Signal Bandwidth in 5G NR Prof. Alexander Maltsev, Nizhny Novgorod State University, Nizhny Novgorod, Russia
17:15-17:30	CNT3396	On the Correspondence Principle for the Klein-Gordon and Dirac Equations Mr. Kevin Giovanni Hernández Beltrán, Universidad Dr. Andrés Bello, El Salvador

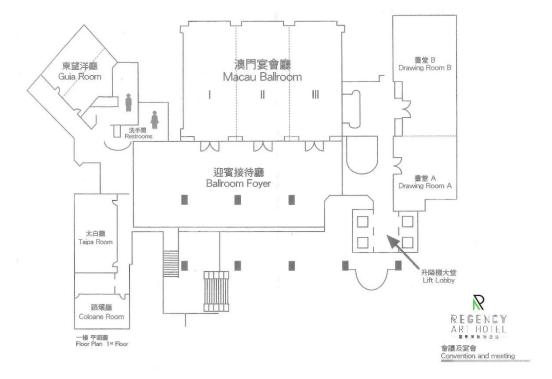
# **Part V Conference Venue**

## Regency Art Hotel 麗景灣藝術酒店

Website: www.regencyarthotel.com.mo/index.php/ Address: 2 Estrada Almirante Marques Esparteiro, Taipa, Macao Tel.: 853 2883 1234

## **Brief Introduction**





The Regency Art Hotel offers a 6 meters high ballroom with a total area of 349 square meters pillarless design and 4 multi-purpose function rooms equipped with audio-visual equipment. Chinese and Western or buffet menus are available to cater to all functions. Our experienced banquet team will go the extra mile to ensure the success of your event. It is the ideal venue for business meetings and private events from 10 to 300 persons.

## Access to Venue

## 1. Macao Airport (澳门国际机场) & Taipa Ferry Terminal (澳门凼仔客运码头) — Regency Art

## Hotel Macao

- About 4 KM
- Approx. 8 minutes by taxi
- Approx. 20 30 minutes by bus No. MT1

# 2. Border Gate Terminal (澳门关闸)(注:大陆方向为拱北口岸) — Regency Art Hotel Macao

- About 10 KM
- Approx. 20 30 minutes by taxi
- Approx. 45 60 minutes by bus No. 25B or No. 25.

# 3. Hong Kong- Zhuhai-Macao Bridge Frontier Port (港珠澳大桥澳门口岸) — Regency Art

## Hotel Macao

- About 16 KM
- Approx. 30 35 minutes by taxi

• Approx. 40 - 50 minutes. Take bus No.102X, get off at Chun Lai Garden (泉澧花园), walk about 380m to Regency Art Hotel Macao.

## 4. Cotai Frontier Post (路氹边检大楼) (莲花口岸) — Regency Art Hotel Macao

- About 4 KM
- Approx. 8 15 minutes by taxi
- Approx. 40 45 minutes by bus No.25, No.25B or No.26A

## Download the following picture if you need to take a taxi:

# Show to the Taxi Driver

# 請送我到麗景灣藝術酒店

## Please Take me to Regency Art Hotel

# 地址: 氹仔凼仔史伯泰海军将军马路2号

Address: 2 Estrada Almirante Marques Esparteiro, Taipa

# **Part VI Acknowledgements**

On behalf of the CECNet 2023 Organizing Committee, we would like to take this opportunity to express our sincere gratitude to our participants. We would also like to express our acknowledgements to the Technical Program Committee members who have given their professional guidance and valuable advice as reviewers. For those who contribute to the success of the conference organization without listing the name below, we would love to say thanks as well.

## **CECNet 2023 Technical Program Committee**

#### **Technical Program Committee Chair**

Prof. Antonio J. Tallón-Ballesteros, University of Huelva, Spain

#### **Technical Program Committee**

Dr. Abbas Al-Thaedan, Al-Muthanna University, Iraq

Dr. Ali Shahidinejad, University of the West of England Bristol Branch, Oman

Dr. Alzira Mota, Department of Mathematics, Polytechnic Institute of Porto, Portugal

Dr. Amine Khaldi, Associate professor, Computer science, Universite Kasdi Merbah Ouargla, Algeria

Dr. Antonio J. Tallón-Ballesteros, Department of Electronic, Computer Systems and Automation Engineering, University of Huelva, Spain

Dr. Aounallah Naceur, Associate Professor, University of Ouargla. Algeria

Dr. Arslan Khalid, Sirindhorn International Institute of Technology, Thammasat University, Thailand

Dr. Balasubramanian Padmanabhan, Hardware and Embedded Systems Lab, School of Computer Science and Engineering, Nanyang Technological University, Singapore

Dr. Bin Chen, Associate Professor, Tourism and Cultural College, Yunnan University, China

Dr. Broumi Said, Laboratory of Information Processing, Faculty of Science Ben M'Sik, University of Hassan II, Casablanca, Morocco

Dr. Chia Chao Kang, Xiamen University Malaysia, Malaysia

Dr. Chuan Ma, Nanjing University of Science of Technology, China

Dr. Daming Feng, CGG, USA

Dr. Daniele Giusto, Professor, Department of Telecommunications, University of Cagliari, Italy

Dr. Di Yuan, Harbin Institute of Technology, Shenzhen, China

Dr. Do Duy Tan, Computer and Communication Engineering Department, Ho Chi Minh City University of Technology and Education, Vietnam

Dr. Etimad Fadel, Associate Professor, Computer Science Department, Faculty of Computing & Information Technology, King Abdul Aziz University, Saudi Arabia

Dr. Goi Bok Min, Professor, Lee Kong Chian Faculty of Engineering and Science, Universiti Tunku Abdul Rahman, Malaysia

Dr. Hieu Nguyen, Associate Professor, Department of Science and Industrial System, USN Kongsberg Campus., Vietnam

Dr. Jency Rubia J, M.A.M College of Engineering and Technology, Anna University, India

Dr. Jifei Tang, Hangzhou Dianzi University, China

Dr. Jonny Paul Zavala De Paz, Professor, Universidad Politécnica de Querétaro, Mexico

Dr. Junji Cheng, Associate Professor, University of Electronic Science and Technology of China, China

Dr. Khalil Ismail Khalil Yousef, Associate Professor, Electrical Engineering Department, Faculty of Engineering, Assiut University Assiut, Egypt

Dr. K. Prahlada Rao, Gulbarga University, India

Dr. Koffka Khan, Department of Computer and Information Technology The University of the West Indies, West Indies

Dr. K. Senthil Kumar, Associate Professor, Department of ECE, Rajalakshmi Engineering College, India

Dr. Li Xiang, Associate Professor, Guilin University of Electronic Technology, China

Dr. Lu Leng, Professor, Nanchang Hangkong University, China

Dr. Marisol B. Correia, University of the Algarve, Portugal

Dr. Minxian Xu, Shenzhen Institutes of Advanced Technology, China

Dr. Mudassar Raza, University of Science and Technology of China (USTC), China

Dr. Nagesh Deevi, Associate Professor, Malla Reddy College of Engineering & Technology, Secunderabad, India

Dr. Nguyen Cong Phuong, Hanoi University of Science and Technology, Vietnam

Dr. Nguyen Phu Thuong Luu, HUTECH Institute of Engineering, Vietnam

Dr. Pritpal Singh, Institute of Theoretical Physics, Jagiellonian University, Poland

Dr. Ramiro de Sousa Barbosa, Professor, Institute of Engineering of Porto Rua Dr. António Bernardino de Almeida, Portugal

Dr. Raveendra K, Koneru Lakshmaiah Educational Foundation, India

Dr. Reza Roshani, Department of Computer Engineering, Technical and Vocational University (TVU), Iran

Dr. Serdar SOLAK, Information System Engineering, Kocaeli University, Turkey

Dr. Sérgio Duarte Correia, Professor, Polytechnic University of Portalegre, Portugal

Dr. Shamganth Kumarapandian, Department of Engineering, University of Technology and Applied Sciences, Oman

Dr. Smt. Rachana C R, Associate Professor, DoS in Computer Science, PG Wing of SBRR Mahajana First Grade College (Autonomous), Pooja Bhagavat Memorial Mahajana Education Centre, India

Dr. Stefano Cirillo, Department of Computer Science, University of Salerno, Italy

Dr. Subrato Bharati, Institute of Information and Communication Technology, Bangladesh University of Engineering and Technology, Bangladesh

Dr. S.Suresh, Professor, Department of Computer Science and Engineering, P. A. College of Engineering and Technology, India

Dr. Suresh Raikwar, Associate Professor, Department of Computer Engineering and Applications, GLA University, India

Dr. Tao Yang, State Key Laboratory of Information Photonics and Optical Communication, Beijing University of Posts and Telecommunications, China

Dr. Tao Zhang, Associate Professor, School of Automation, Beijing University of Science and Technology, China

Dr. Tianyi Mao, Amazon AWS Machine Learning Solution Lab, USA

Dr. Tarik A. Rashid, Professor, Computer Science and Engineering, University of Kurdistan Hewler, Iraq

Dr. Xie Gang, Associate Professor, Beijing University of Posts and Telecommunications, China

Dr. Wei Lu, Air Force Early Warning Academy, China

Dr. Weiwei Jiang, School of Information and Communication, Beijing University of Posts and Telecommunications, China

Dr. Zhiqun Gu, School of Information and Communication Engineering, Beijing University of Posts and Telecommunications, China

Dr. Zhuo Li, Associate Professor, College of Microelectronics, Tianjin University, China

Memo Pages				

