



Call for Papers

ICBIR 2023

Interdisciplinary Research Conference

Honorary Chairs

| | |
|--|----------------|
| Rungsun Lertnaisat | TNI, Thailand |
| President of Thai-Nichi Institute of Technology | |
| Thanaruk Theeramunkong | AIAT, Thailand |
| President of Artificial Intelligence Association of Thailand | |
| Pongsakorn Yuthagovit | IEEE, Thailand |
| Chair of IEEE Thailand Section, Thailand | |
| Yoshikazu Miyana | CIST, Japan |
| President of Chitose Institute of Science and Technology | |

General Chair

| | |
|--|---------------|
| Ruttikorn Varakulsiripunth | TNI, Thailand |
| Vice President, Thai-Nichi Institute of Technology | |

General Co-chair

| | |
|--------------------------|-----------------|
| Krisana Chinnasarn | BUU, Thailand |
| Kosin Chamnongthai | KMUTT, Thailand |
| Virach Sornlertlamvanich | MU, Japan |

Technical Program Chair

| | |
|------------------------|---------------|
| Warakorn Srichavengsup | TNI, Thailand |
|------------------------|---------------|

Technical Program Committee

| | |
|--------------------------|-----------------------|
| Booncharoen Sirinaovakul | KMUTT, Thailand |
| Apinunt Thanachayanont | KMITL, Thailand |
| Worapong Tangsirat | KMITL, Thailand |
| Prayoot Akkaraekthalin | KMUTNB, Thailand |
| Mana Sriyudthsak | CU, Thailand |
| Chiranut Sa-ngiamsak | KKU, Thailand |
| Saiyan Saiyod | KKU, Thailand |
| Paritud Bhandhubanyong | PIM, Thailand |
| Annop Monsakul | PIM, Thailand |
| Chirawan Chaisuan | CMU, Thailand |
| Worarat Sangmanee | KMITL, Thailand |
| Tiwa Park | DTC, Thailand |
| Pranee Jongsutjarittam | KU, Thailand |
| Ekarat Rattagan | NIDA, Thailand |
| Kuntpong Woraratpanya | KMITL, Thailand |
| Waree Kongprawechon | SIIT, TU, Thailand |
| Watson Chansajcha | BLS, Thailand |
| Samuel S. Chua | LPU, Philippines |
| Tsutomu Konosu | CIT, Japan |
| Akimitsu Hatta | KUT, Japan |
| Hideki Hosoda | Tokyo Tech, Japan |
| Kou Yamada | GU, Japan |
| Tatsuhiko Aizawa | SIT, Japan |
| Volodymyr Chernenko | EHU, Spain |
| Sanghyuk Lee | XJTLU, China |
| Manfred Glesner | TU Darmstadt, Germany |
| Hitoshi Isahara | OIDAI, Japan |
| Hiroshi Tsunoda | TOHTECH, Japan |
| KC Santosh | USD, USA |
| Yasushi Kiyoki | MU, Japan |
| Thatsanee Charoenporn | MU, Japan |
| Takafumi Nakanishi | MU, Japan |
| Kamfai Wong | CUHK, China |
| Pikul Vejjanugraha | TNI, Thailand |
| Ferdin Joe John Joseph | TNI, Thailand |

2023 8th International Conference on Business and Industrial Research
ICBIR2023 : 18-19 May, 2023 Bangkok, Thailand

Organizers : Thai-Nichi Institute of Technology (TNI) , Technology Promotion Association (Thailand-Japan) (TPA) and Artificial Intelligence Association of Thailand (AIAT)

The 8th International Conference on Business and Industrial Research (ICBIR2023) is a multidisciplinary academic conference which includes research in science, engineering, informatics, modern business, social science and linguistics since 2010. ICBIR2023 will provide opportunities for the Researchers, Academicians, Industry persons and students to interact and exchange ideas, experience and expertise in the current trend and upcoming technologies. Besides this, participants will have the opportunity to meet people with similar research interests which can lead to future research cooperation. The need for a multidisciplinary conference is to make transdisciplinary collaboration among researchers from around the globe. The areas of research covered by ICBIR are the most disruptive technologies currently undergoing a massive transformation. This conference is planned as the offline conference to be conducted in the second quarter of 2023. Special sessions are also open for academicians and researchers to collaborate with like minded researchers to bring a theme under one umbrella and proposals are invited for the same. Accepted papers will be submitted for inclusion into IEEE Xplore subject to meeting IEEE Xplore's scope and quality requirements. Sightseeing opportunities also will be provided to participants. Registration benefits are available for IEEE members, AIAT members and partner universities' faculty and students.

RESEARCH TOPICS (General Sessions)

- Track 1: Technology on Education, Language and Social Science:** Learning Management System (LMS), IT Application for Teaching and Learning, E-learning and Online Education, Computational Linguistic, Digital Technology for Social Development, Language Efficiency Improvement Strategy, Other related topics.
- Track 2: Information and Communication Technology:** Digital and Multimedia Technology, Computer Networks Performance, Networks and Cyber Security, Data Science and Analytics, Business Intelligence and Technology, Web Technology and Mobile Applications, AI and IoT, Natural Language Processing, Other related topics.
- Track 3: Sciences and Engineering:** Artificial Intelligence and Robotics, Computer Vision and Image Processing, Production and Automotive Engineering, Embedded System Architecture, Electrical Power Systems, Other related topics.
- Track 4: Modern Business Administration:** Digital Marketing, E-Logistics and Supply Chain, E-Business Management, Digital Innovation in Industrial Management, Banking & Risk Management Technology, IT Application for Finance & Accounting, Smart Tourism, Software System for Manufacturing, SAP/ERP, Other related topics.

Important Dates

| | | |
|-------------------------------|-----------------------------|-------------------|
| Deadline of Paper Submission: | January 31, 2023 | February 15, 2023 |
| Notification of Acceptance: | February 28, 2023 | |
| Deadline of Camera Ready: | March 24, 2023 | |
| Early Bird Registration: | January 27 - March 24, 2023 | |
| Regular Registration: | March 25 - April 7, 2023 | |
| Conference Date: | May 18-19, 2023 | |

Registration fee

| Categories | Regular presenter | | Student presenter | | Audiences |
|-------------------------------|-------------------|---------|-------------------|---------|-----------|
| | Early bird | Regular | Early bird | Regular | |
| Normal Participants | USD 300 | USD 350 | USD 200 | USD 250 | USD 100 |
| Members of IEEE, AIAT and MOU | USD 270 | USD 315 | USD 180 | USD 225 | USD 90 |



icbir.tni.ac.th

Contact ICBIR Secretariat : icbir@tni.ac.th Website : icbir.tni.ac.th

Call for Paper of Special Session - 1

"Language Processing in Data Analytics (LDA2023)"

Joint with

The 8th International Conference on Business and Industrial Research (ICBIR2023)

May 18-19, 2023, Bangkok, Thailand



Special Session Chair:

Virach Sornlertlamvanich, Ph.D.
Professor
Faculty of Data Science,
Musashino University
3-3-3 Ariake, Koto-ku,
Tokyo 135-8181, Japan.
URL: <https://www.virach.com/>
Email: virach@musashino-u.ac.jp

This special session is co-organized by Faculty of Data Science, Musashino University Japan (https://www.musashino-u.ac.jp/academics/faculty/data_science/), and Thai-Nichi Institute of Technology, Thailand (by the department of Data Science and Artificial Intelligence, TNI International College: <https://tnic.tni.ac.th/>).

Natural Language Processing (NLP) is a long-term challenge driving human sophisticated recognition tasks in artificial intelligence, specialized in language representation, understanding, and generation, which are the critical elements in machine translation, question answering, summarization, to name a few. Thanks to the recent advancement in deep learning and data science research, many NLP applications have been realized with the unprecedented boost in performance, and well-accepted in the practical use enhancing by the instant outreaching on the Internet and Internet of Things (IoT). NLP together with the data insight is magnifying human potentials to cope with the drastic change in the way of problem solving, and is growing interest in research of NLP and data science.

Aiming to cover state-of-the-art research on a variety of applications that take NLP, data science, machine learning and deep learning into account, both theoretical analysis and empirical solutions to real-world problems are welcome and/or encouraged.

Please submit your papers at: <https://icbir.tni.ac.th/submission/>

Special Session Technical Program Committee:

KC Santosh (santosh.kc@usd.edu, University of South Dakota, US)
Yasushi Kiyoki (kiyoki@sfc.keio.ac.jp, Musashino University, Japan)
Thatsanee Charoenporn (thatsane@musashino-u.ac.jp, Musashino University, Japan)
Takafumi Nakanishi (tnakani@musashino-u.ac.jp, Musashino University, Japan)
Hitoshi Isahara (h-isahara@otemon.ac.jp, Otemon Gakuin University, Japan)
Kyoko Kanzaki (k-kanzaki@otemon.ac.jp, Otemon Gakuin University, Japan)
Kamfai Wong (kfwong@se.cuhk.edu.hk, The Chinese University of Hong Kong, China)
Pikul Vejjanugraha (pikul@tni.ac.th, Thai-Nichi Institute of Technology, Thailand)
Paskorn Apirukvorapinit (paskorn-a@tni.ac.th, Thai-Nichi Institute of Technology, Thailand)
Ferdin Joe John Joseph (ferdin@tni.ac.th, Thai-Nichi Institute of Technology, Thailand)
Deepali Ramachandra Nayak (deepali@tni.ac.th, Thai-Nichi Institute of Technology, Thailand)
Thepchai Supnithi (thepchai.supnithi@nectec.or.th, NECTEC, Thailand)
Prachya Boonkwan (prachya.boonkwan@nectec.or.th, NECTEC, Thailand)

If you have any questions please contact secretariat:
Email: icbir@tni.ac.th

Relevant discovery topics include, but are not limited to:

- Information extraction, Named entity recognition and Relation extraction
- Document classification, Question answering, Summarization, and Sentiment analysis
- Data mining, Data science and Big data
- Data clustering, Visualization and services
- Semantic computing
- Social media, Social networking, and Social data analysis
- AIoT, Sensors, Networks, and Devices
- Object detection, Object tracking, and Classification
- Face detection and identification
- Human activity recognition
- Handwritten character recognition
- Information solutions developed for the disabled and elderly
- Multidisciplinary applications, such as Healthcare, Medical imaging informatics, Clinical text mining, Human behavioral analysis, and Nonverbal communication
- Creative tasks, such as Storytelling, Caption generation, Media analytics, and Multilingualism

Important dates

| | |
|-------------------------------|---|
| Deadline of Paper Submission: | January 31, 2023 February 15, 2023 |
| Notification of Acceptance: | February 28, 2023 |
| Deadline of Camera Ready: | March 24, 2023 |
| Early Bird Registration: | January 27 - March 24, 2023 |
| Regular Registration: | March 25 - April 7, 2023 |
| Conference Date: | May 18-19, 2023 |

Call for Paper of Special Session - 2

"Computational Intelligence and Transportation Systems (CITS 2023)"

Joint with

2023 8th International Conference on Business and Industrial Research

ICBIR2023: <https://icbir.tni.ac.th/>

May 18-19, 2023, Bangkok, Thailand



Special Session Chair

**Prof. Dr. Somnuk
Phon-amnuaisuk**
Universiti Teknologi Brunei,
Brunei
somnuk.phonamnuaisuk@utb.edu.bn

This special session is co-organized by Media Informatics Special Interest Group, Universiti Teknologi Brunei, (<https://www.utb.edu.bn/>) and AI Special Interest Group, Thai-Nichi Institute of Technology (www.tni.ac.th).

Computational Intelligence and Transportation Systems: A transport system is designed to transport loads between locations and this can be abstracted as a graphical network. Abstraction of the domain into nodes and their relationships lends itself to various computational intelligence techniques to compute and simulate various properties of the system. This opens many research frontiers spanning from data sensing technology, data analysis, simulation, and visualization, to logistics and management of various aspects of the transportation systems. The purposes of this special session are for educators, researchers, and practitioners to share their thoughts and to publish state-of-the-art research on those activities.

Special Session Co-Chair

Dr. Warakorn Srichavengsup
Thai-Nichi Institute of
Technology, Thailand
Dr. Kuntpong Woraratpanya
King Mongkut's Institute of
Technology Ladkrabang,
Thailand and Vice Chair of IEEE
Computational Intelligence Society
(CIS) Thailand Chapter

Special Session Technical Program Committee:

Achmad Basuki, Universitas Brawijaya, Indonesia
Adhitya Bhawiyuga, Universitas Brawijaya, Indonesia
Chee-Kiat Seow, University of Glasgow Singapore, Singapore
Kok-Chin Khor, Universiti Tunku Abdul Rahman, Malaysia
Mau-Luen Tham, Universiti Tunku Abdul Rahman, Malaysia
Mohd Adib Bin Sarijari, Universiti Teknologi Malaysia, Malaysia
Mohd Najwadi Yusoff, Universiti Sains Malaysia, Malaysia
Mongkut Piantanakulchai, SIIT, Thammasat University, Thailand
Noor Farizah Binti Ibrahim, Universiti Sains Malaysia, Malaysia
Praphan Pavarangkoon, King Mongkut's Institute of
Technology Ladkrabang, Thailand
Sarayut Nonsiri, Thai-Nichi Institute of Technology, Thailand
Sharul Kamal Abdul Rahim, Universiti Teknologi Malaysia, Malaysia
Soon-Jiann Tan, Universiti Teknologi Brunei, Brunei
Sye-Loong Keoh, University of Glasgow Singapore, Singapore
Tee Connie, Multimedia University, Malaysia
Yung-Wey Chong, Universiti Sains Malaysia, Malaysia

The scope of this special section includes, but is not limited to, the following topics:

- ✓ Intelligent transportation systems
- ✓ Data analysis of transportation systems
- ✓ Traffic control and information technology
- ✓ Simulation and visualization of transportation systems
- ✓ GIS in transportation systems
- ✓ Assistive Technology for vehicles and transportation systems
- ✓ Logistics and management of transportation systems
- ✓ Security and monitoring systems
- ✓ Emergency response systems and information technologies

Papers submission: <https://icbir.tni.ac.th/submission/>

If you have any questions please contact secretariat:
Email: icbir@tni.ac.th

Important dates

| | |
|-------------------------------|--------------------------------------|
| Deadline of Paper Submission: | January 31, 2023 - February 15, 2023 |
| Notification of Acceptance: | February 28, 2023 |
| Deadline of Camera Ready: | March 24, 2023 |
| Early Bird Registration: | January 27 - March 24, 2023 |
| Regular Registration: | March 25 - April 7, 2023 |
| Conference Date: | May 18-19, 2023 |

Call for Paper of Special Session – 3

"Science and Technology for 5th Generation Human-centered Society"
Joint with

2023 8th International Conference on Business and Industrial Research

ICBIR2023: <https://icbir.tni.ac.th/> May 18-19, 2023, Bangkok, Thailand



Special Session Chair:

Prof. Dr. Hidetsugu Suto,
Faculty of Informatics,
Kindai University, Japan

Special Session Co-Chair:

Warakorn Srichavengsup
Thai-Nichi Institute of
Technology, Thailand

This special session is co-organized by Faculty of Informatics, Kindai University (<https://www.kindai.ac.jp/english/>) and Thai-Nichi Institute of Technology (www.tni.ac.th). A human-centered society is becoming to 5th generation (Society 5.0) that balances economic advancement with the resolution of social problems by implementing modern science and technology. Society 5.0 has to achieve a high degree of convergence between cyberspace (virtual space) and physical space (real space). Thanks to the recent remarkable advancements of information technologies, in which most everyday items are connected with the Internet have become more likely. To realize secure and comfortable life with Society 5.0, the importance of behind technologies, e.g. Intelligent Systems, Cyber Security, and Physical World Computing are increasing. In this session, the research, development and practical studies on modern science and technology which contribute to support Society 5.0 are discussed. Variety of related studies including, IoT, e-commerce, logistics, e-learning system, product/visual design, are also welcome.

Special Session Technical Program Committee:

Chompoonoot Kasemset (chompoonoot.kasemset@cmu.ac.th,
Chiang Mai University, Thailand)
Guo-Shiang Lin (gslin@ncut.edu.tw,
National Chin-Yi University of Technology, Taiwan)
Hisashi Handa (handa@info.kindai.ac.jp,
Kindai University, Japan)
Jiunn-Woei Lian (jwlian@nutc.edu.tw,
National Taichung University of Science and Technology, Taiwan)
Kentarou Kurashige (kentarou@ieee.org,
Muran Institute of Technology, Japan)
Kiyoharu Tagawa (tagawa@info.kindai.ac.jp,
Kindai University, Japan)
Kullapa Soratana (kullapas@nu.ac.th,
Naresuan University, Thailand)
Makiba Sakamoto (s.makiba@do-johodai.ac.jp,
Hokkaido Information University, Japan)
Matsunobu Nomura (nomura@akibi.ac.jp,
Akita University of Art, Japan)
Patchanee Patitad (patchaneep@nu.ac.th,
Naresuan University, Thailand)

The scope of this special section includes, but is not limited to, the following topics:

- AI-Based Recommendation Systems
- Automated manufacturing robots
- Collaborative Systems
- Cyber Security
- Human-Systems Interaction Scenarios
- Intelligent Information System
- IoT-Based Recommendation Systems
- Physical World Computing.
- Product/visual design
- Robot-supported Systems
- Sensor Data Analytics
- Super-smart Society
- Health Care Technology
- Telemedicine Technology

Important dates

| | |
|-------------------------------|---|
| Deadline of Paper Submission: | January 31, 2023 February 15, 2023 |
| Notification of Acceptance: | February 28, 2023 |
| Deadline of Camera Ready: | March 24, 2023 |
| Early Bird Registration: | January 27 - March 24, 2023 |
| Regular Registration: | March 25 - April 7, 2023 |
| Conference Date: | May 18-19, 2023 |

Papers submission: <https://icbir.tni.ac.th/submission/>

If you have any questions please contact secretariat:

Email: icbir@tni.ac.th

Call for Paper of Special Session - 4

“Intelligent Systems for Medical and Industrial Applications”

Joint with
2023 8th International Conference on Business and Industrial Research

ICBIR2023: <https://icbir.tni.ac.th/>

May 18-19, 2023, Bangkok, Thailand



Special Session Chair

Dr. Shanmugavadivu Pichai,

Dept. of Computer Science and Applications

The Gandhigram Rural Institute (Deemed to be University), India

psvadivu67@gmail.com

<https://orcid.org/0000-0003-2032-6115>

Special Session Co-Chair

Dr. Warakorn Srichavengsup,

Thai-Nichi Institute of Technology, Thailand

Special Session Technical Program Committee:

Dr.M.Mary Shanthi Rani, The Gandhigram Rural Institute (DTBU), India

Dr.T.Kalaiselvi, The Gandhigram Rural Institute (DTBU), India

Dr.Sachi Nandan Mohanty, College of Engineering, Pune, India

Dr.PL.Chithra, University of Madras, India

Dr.M.Sornam, University of Madras, India

Dr.V. Sivakumar, Asia Pacific University of Technology and Innovation, Malaysia

Dr.A. Saleem Raja, University of Technology and Applied

Science, Oman

Dr.Rajamohan Parthasarathy, SEGi University, Malaysia

In the recent years, artificial intelligent (AI) models have redefined the standards and scope of problem solving. The impact of AI in health care services and in industry has grown beyond our imagination. AI has opened up new transformative avenues in the field of medicine namely medical data & image analytics, disease detection / identification, disease classification, drug design, personalized drug prescription & delivery, prediction of treatment protocols, Robot-assisted surgery, Virtual medical assistants, chatbots, recommender systems, medical & health services management etc. The wake of Industry 4.0 & 5.0 has triggered the automation of the process, product and business of industry by harnessing the potentials of robotics, IoT, Bigdata coupled with AI models. The researchers working in these domains develop innovative and novel optimal solutions for medical and industrial applications. This session is designed to provide a forum for knowledge assimilation and dissemination on the advancements in artificial intelligence modeling that provides smart and viable computational solutions, specifically for medical, industrial and its allied domains.

Development of new AI-based solutions, for the real-time applications of Medicine and Industry, using the following, but not limited to:

- ★ Bigdata
- ★ Bioinformatics
- ★ Block Chain Management
- ★ Cloud Computing and Cyber Security
- ★ Deep Learning
- ★ Edge Computing
- ★ Fuzzy Systems
- ★ Geoinformatics
- ★ Grid Computing
- ★ High Performance Computing
- ★ Industry 4.0 / 5.0
- ★ Internet of Things
- ★ Machine Learning
- ★ Mathematical Modeling
- ★ Meta-Heuristic Methods
- ★ Nano technologies
- ★ Natural Language Processing
- ★ Neural Networks
- ★ Parallel Computing
- ★ Recommender systems
- ★ Remote Sensing
- ★ Robotics
- ★ Soft Computing
- ★ Virtual / Augmented Reality
- ★ Wearable Device

Important dates

Deadline of Paper Submission: ~~January 21, 2023~~ February 15, 2023
Notification of Acceptance: February 28, 2023
Deadline of Camera Ready: March 24, 2023
Early Bird Registration: January 27 - March 24, 2023
Regular Registration: March 25 - April 7, 2023
Conference Date: May 18-19, 2023

If you have any questions please contact secretariat:
Email: icbir@tni.ac.th

Papers submission: <https://icbir.tni.ac.th/submission/>