# **ANQ Congress Yokohama 2024**



Congress Website → <a href="https://pub.confit.atlas.jp/en/event/anq2024">https://pub.confit.atlas.jp/en/event/anq2024</a>



### Table of Contents

| Greeting from ANQ Chairperson (Dr. Yamada)i   |
|---|
| ANQ Honorary Chairperson Message 1 (Dr. Kano)ii   |
| ANQ Honorary Chairperson Message 2 (Mr. Janak Mehta)iii   |
| Program Overviewiv  |
| Campus Map & Floor Layoutiv   |
| Route To GALA Dinner (Hiyoshi Campus) from Congress Venue (Yagami Campus) v                             |
| Program on Wednesday, September 18, 2024 vi   |
| Program on Thursday, September 19, 2024vii  |
| Keynote Address 1 - 2S is an Origin of the Management Cycle (Dr. Nishina) viii                          |
| Keynote Address 2 - Quality Innovation Based on Digital Platform (Dr. Park) ix                          |
| Keynote Address 3 - Quality of Health Care Assured by the Organization - QMS Approach - (Dr. Munechika) |
| Keynote Address 4 - Becoming World Class-Lessons from Made-in Japan (Dr. Motowani)xi                    |
| Conference Venue Map (Yagami Campus)xii   |
| Program Detailsxiii   |

#### **Greeting from ANQ Chairperson (Dr. Yamada)**

#### Welcome to ANQ Congress Yokohama 2024!

The Asian Network for Quality (ANQ) congress will be held from 16 to 20 September 2024, hosted by the Japanese Society for Quality Control (JSQC). This is a very significant congress, and you are cordially invited to attend. In addition to around 200 research presentations, this will include the presentation of the Ishikawa Kano Award - gold and silver medals, the announcement of the Asian Recognition for Excellence for Quality Practice award-winning activities, and the presentation of the Asian Service Award. The ANQ's inaugural meeting was held in 2002 in Tokyo.



After the ANQ inaugural meeting in 2002 and the first congress in 2003, this year's congress is the 22nd congress of the Asian Network for Quality. A network of quality-related organizations in the Asian region, with 20 member organizations including JSQC. For more information, please visit the ANQ website at the following:

ANQ website (https://anforq.org/organization/member-organizations/index.php)

The ANQ's activities are introduced at ANQ congress 2024 Yokohama, where excellent research results, activities, etc. are shared. This has helped to improve the competitiveness of the Asian region, with quality at its core.

The theme of the Congress is Prosperity through Quality - Returning to Origins, Leaping into the Future. Prosperity through Quality means aiming for prosperity through product and service quality, process quality and organization quality, which is exactly what ANQ is aiming for. This is why the theme of the 2009 congress, hosted by the JSQC, was Prosperity through Quality - the ANQ way. Fifteen years have passed since this congress and the ANQ has achieved many successes. In addition, the measures of realizing Prosperity through Quality have undergone various changes, including data science and AI, and the application of these has also produced significant results. We have chosen this title in order to organize the current situation, to return to the starting point once more with a purposeful mindset, and to make a leap forward into the future.

The beauty of the congress is that it brings together a diverse group of people from different backgrounds with different interests in quality, and allows them to exchange opinions and enhance each other's work, while respecting each other's individuality. This is a great opportunity to create new value through quality. By participating in the congress, you can present your achievements and experiences to the participants. You can also gain a variety of new insights from other presentations. We look forward to seeing you at ANQ Congress 2024 Yokohama.

Dr. Shu Yamada

ANQ Chairperson (Jan. 2023-Dec. 2024)
Professor, Faculty of Science ante Technology, Keio University

#### **ANQ Honorary Chairperson Message 1 (Dr. Kano)**

Dr. Noriaki Kano
ANQ Honorary Chairperson
Professor Emeritus, Tokyo University of Science, Ph.D.
(University of Tokyo)



- 2008-14 Board Director, Komatsu Ltd
- 2003-09 Corporate Auditor, Sekisui Chemical Ltd.
- 2002-04 Chairperson, Asian Network for Quality (ANQ)
- 2000-02 President, 1971- Member, Japanese Society for Quality Control (JSQC)
- -1964- Lecturer, 2000-2022 Board Member, The Union of Japanese Scientists and Engineers (JUSE)
- -1982-2006 Professor, Tokyo University of Sciences (TUS) by way of 1975-82 Associate Professor and 1970-75 Lecturer, The University of Electro-Communications: -1964 Bachelor of Engineering, -1966 Master of Engineering, -1970 PhD, The University of Tokyo

**Publications:** Over 300 papers and books including "Attractive Quality" (Kano Method I Kano Model)", "Guide to TQM in Service Industries" (in English), Asian Productivity Organization, and "Way to Breakthrough and Creation" (in Japanese), "Task Achieving QC Story for QC Circles" (in Japanese), JUSE Press

#### **Major Honorary Positions and Major Awards Received:**

- 2021 Quality Laureate Award, the First Recipient, International Academy for Quality (IAQ)
- -2014 Honorary Member, International Academy for Quality (IAQ)
- -2014 Honorary Member, American Society for Quality (ASQ)
- -2010 Established Ishikawa-Kano Award (IKA) Gold Medal and Silver Medal, Asian Network for Quality (ANQ)
- -2009 Distinguished Service Medal, American Society for Quality (ASQ)
- -2005 Honorary Chairperson, Asian Network for Quality (ANQ)
- -1997 Deming Prize for Individuals by Deming Prize Committee (JUSE) many others

#### **ANQ Honorary Chairperson Message 2 (Mr. Janak Mehta)**

Mr. Janak Mehta

ANQ Honorary Chairperson



Chairman & Managing Director TQM International Pvt. Ltd. (TQMI) – 1992 onwards

Honorary Chairperson and Past Chairperson Asian Network for Quality (ANQ)

Honorary Member and Past President International Academy for Quality (IAQ)

Founding President Indian Society for Quality (ISQ)

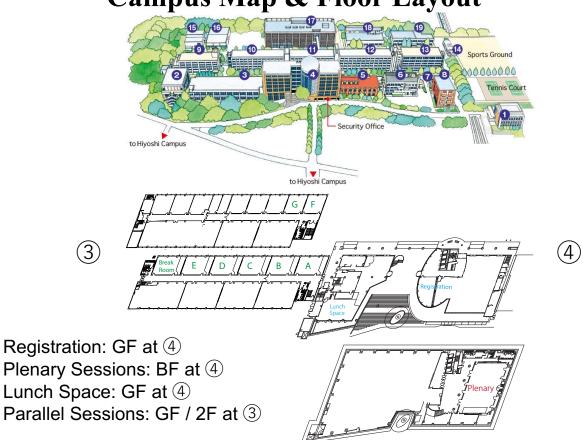
Experience: 25 years in industry becoming Chief Executive and 36 years in consulting on TQM.

Contributed to formation of five not for profit organizations in the field of Quality Management in Inda and one organization for Profit.

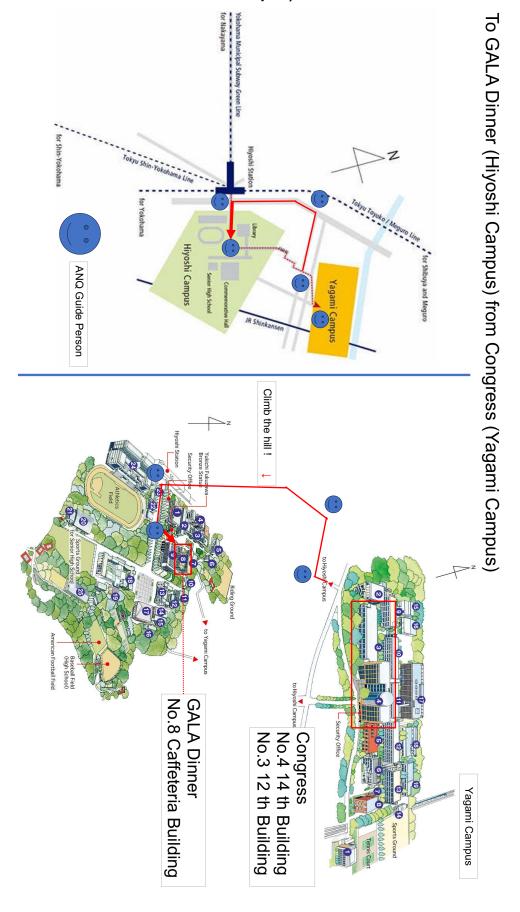
**Program Overview** 

| Time         | Wednesday<br>Sep 18, 2024                                     | Time         | Tursday<br>Sep 19, 2024                   | Time       | Friday<br>Sep 20, 2024 |  |
|--------------|---|--------------|---|------------|------------------------|--|
| 8:30-(10:30) | Registration  | 8:30-(10:30) | Registration                              |            |                        |  |
|              | Opening Plenary Part 1 -Welcome Addresses -Opening Addresses  | 9:30-10:30   | Parallel Sessions 4                       |            |                        |  |
|              | -Opening Addresses  | 10:30-10:50  | Break                                     |            |                        |  |
| 9:30-12:30   | Opening Plenary Part 2 -Keynote Addresses -Awards Prizegiving | 10:50-11:50  | Parallel Sessions 5                       |            |                        |  |
|              | -Program Overview   | 11:50-13:00  | Lunch                                     |            |                        |  |
| 12:30-13:30  | Lunch   | 13:00-14:00  | Parallel Sessions 6                       | 8:00-18:00 | Technical Vist         |  |
| 13:30-14:50  | Parallel Sessions 1   | 14:00-14:30  | Coffee Break                              | 0.00 10.00 | & Tour                 |  |
|              |   |              | Closing Plenary                           |            |                        |  |
| 14:50-15:20  | Coffee Break  | 14:30-16:30  | -Keinote Addresses -Best Paper Awards     |            |                        |  |
| 15:20-16:20  | Parallel Sessions 2   | 14.00 10.00  | Prizegiving -Annoucement on Next Congress |            |                        |  |
| 16:20-16:40  | Break   | 16:30-17:00  | Break                                     |            |                        |  |
| 16:40-17:40  | Parallel Sessions 3   | 10.00 17.00  | Dream                                     |            |                        |  |
|              |   |              |   |            |                        |  |
|              |   | 18:00-21:00  | Gala Dinner                               |            |                        |  |

Campus Map & Floor Layout



Route To GALA Dinner (Hiyoshi Campus) from Congress Venue (Yagami Campus)



## Program on Wednesday, September 18, 2024

|               | Wednesday: September 18,2024 |   |              |                               |   |  |  |  |   |  |                |
|---------------|------------------------------|---|--------------|-------------------------------|---|--|--|--|---|--|----------------|
| Time          | 14 th Building               |   |              | 14 th Building 12 th Building |   |  |  |  |   |  |                |
|               | Lobby (GF)                   | MMR (B2F)   | Lounge (W2F) | corridor                      | A   | В  | C  | D  | E   | F  | G              |
| 8:30 - 9:30   |                              |   |              |                               |   |  |  |  |   |  |                |
| 9:30 - 12:30  |                              | Opening Plenary  Part 1  -Welcome Addresses -Opening Addresses  Break  Part 2  -Keynote Addresses -Awards Prizegiving -Program Overview |              |                               |   |  |  |  |   |  |                |
| 12:30 - 13:30 | Registration                 |   | Lunch        |                               |   |  |  |  |   |  |                |
| 13:30 - 14:50 |                              |   |              |                               | A1-1<br>(KR-1)<br>A1-2<br>(IN-8)<br>A1-3<br>(IN-20)<br>A1-4<br>(CN-1) | B1-1<br>(JP-2)<br>B1-2<br>(JP-3)<br>B1-3<br>(JP-4)<br>B1-4<br>(JP-8) | C1-1<br>(BD-1)<br>C1-2<br>(BD-2)<br>C1-3<br>(VN-2)<br>C1-4<br>(VN-3) | D1-1<br>(IN-31)<br>D1-2<br>(JP-12)<br>D1-3<br>JP-16<br>D1-4<br>(JP-17) | E1-1<br>(VN-1)<br>E1-2<br>(VN-5)<br>E1-3<br>(IN-15)<br>E1-4<br>(KR-4) | F1-1<br>(IN-2)<br>F1-2<br>(BD-3)<br>F1-3<br>(IN-4)<br>F1-4<br>(IN-5) | ARE-AP<br>/ASA |
| 14:50 - 15:20 |                              |   |              | Coffee<br>Break               | (67/1)  | (61 0)   | (1113)   | (01 17)  | (IIIC I)  | (11, 5)  |                |
| 15:20 - 16:20 |                              |   |              |                               | A2-1<br>(IN-27)<br>A2-2<br>(JP-7)<br>A2-3<br>(JP-6)                   | B2-1<br>(JP-24)<br>B2-2<br>(JP-32)<br>B2-3<br>(JP-42)                | C2-1<br>(RU-1)<br>C2-2<br>(JP-36)<br>C2-3<br>(JP-40)                 | D2-1<br>(IN-3)<br>D2-2<br>(IN-6)<br>D2-3<br>(KR-6)                     | E2-1<br>(JP-5)<br>E2-2<br>(JP-9)<br>E2-3<br>(JP-13)                   | G2-1<br>(TW-1)<br>F2-2<br>(TW-2)<br>F2-3<br>(TW-3)                   | ARE-AP<br>/ASA |
| 16:40 - 16:40 |                              |   |              | Break                         | ,,  | . , ,  |  | )  |   |  | •              |
| 16:40 - 17:40 |                              |   |              |                               | A3-1<br>(JP-14)<br>A3-2<br>(JP-10)<br>A3-3<br>(JP-15)                 | B3-1<br>(KR-2)<br>B3-2<br>(AU-1)<br>B3-3<br>(HK-1)                   | C3-1<br>(JP-33)<br>C3-2<br>(JP-34)<br>C3-3<br>(JP-45)                | D3-1<br>(KR-7)<br>D3-2<br>(IN-21)<br>D3-3<br>(IN-22)                   | E3-1<br>(JP-26)<br>E3-2<br>(JP-31)<br>E3-3<br>(JP-37)                 | F3-1<br>(TW-4)<br>F3-2<br>(TW-5)<br>F3-3<br>(IN-7)                   | ARE-AP<br>/ASA |

# Program on Thursday, September 19, 2024

|               |              |  | Thursd        | ay: Septe                      | mber 19,2   | 2024  |   |   |   |  |   |
|---------------|--------------|--|---------------|--------------------------------|---|---|---|---|---|--|---|
| Time          | Lobby (GF)   | 14 th Building MMR (B2F)   | Lounge (W2F)  | corridor                       | A   | В   | 12 th I   | Building<br>D   | Е   | F  | G   |
| 8:30 - 9:30   | Lobby (Gr /  | MMK (B21)  | Louinge (W21) | COTTAGO                        | A4-1  | B4-1  | C4-1  | D4-1  | E4-1  | F4-1   | G4-1  |
| 9:30 - 10:30  |              |  |               |                                | (JP-1)<br>A4-2<br>(JP-11)<br>A4-3<br>(JP-18)          | B4-1<br>(IN-10)<br>B4-2<br>(BD-4)<br>B4-3<br>(TW-7) | (IN-1)<br>C4-2<br>(IN-9)<br>C4-3<br>(IN-11)         | D4-1<br>(KR-8)<br>D4-2<br>(IN-23)<br>D4-3<br>(CN-2)   | E4-1<br>(KR-3)<br>E4-2<br>(KR-5)<br>E4-3<br>(NP-1)    | F4-1<br>(TW-6)<br>F4-2<br>(IN-13)<br>F4-3<br>(IN-16) | (SG-1)<br>G4-2<br>(SG-2)<br>G4-3<br>(MY-1)            |
| 10:30-10:50   |              |  |               | Break                          | (22 24)   | (2 /)   | (   | (-22)   | (2.2.2)   | (4.14)   | (0.000)   |
| 10:50 - 11:50 |              |  |               |                                | A5-1<br>(JP-22)<br>A5-2<br>(JP-28)<br>A5-3<br>(JP-29) | B5-1<br>(TW-8)<br>B5-2<br>(TW-9)<br>B5-3<br>(IN-19) | C5-1<br>(IN-14)<br>C5-2<br>(TH-1)<br>C5-3<br>(CN-4) | D5-2  | E5-1<br>(JP-20)<br>E5-2<br>(JP-21)<br>E5-3<br>(JP-27) | F5-1<br>(IN-17)<br>F5-2<br>(IN-18)<br>F5-3<br>(VN-4) | G5-1<br>(IN-12)<br>G5-2<br>(JP-25)                    |
| 11:50-13:00   |              |  | Lunch         |                                | (61 22)   |   |   |   | (62 27)   | ((2)   |   |
| 13:00 - 14:00 | Registration |  |               |                                | A6-1<br>(JP-30)<br>A6-2<br>(JP-35)<br>A6-3<br>(JP-38) | B6-1<br>(KR-9)<br>B6-2<br>(SG-3)<br>B6-3<br>(IN-24) | C6-1<br>(CN-5)<br>C6-2<br>(CN-6)<br>C6-3<br>(KR-10) | D6-1<br>(JP-41)<br>D6-2<br>(JP-44)<br>D6-3<br>(JP-23) | E6-1<br>(JP-43)<br>E6-2<br>(JP-46)<br>E6-3<br>(JP-19) | F6-1<br>(CN-3)<br>F6-2<br>(IN-25)<br>F6-3<br>(IN-26) | G6-1<br>(IN-28)<br>G6-2<br>(IN-30)<br>G6-3<br>(JP-39) |
| 14:00 - 14:30 |              | Coffee Break<br>(corridor)   |               |                                |   |   |   |   |   |  |   |
| 14:30-16:30   |              | Closing Plenary -Keinote Addresses -Best Paper Awards Prizegiving -Annoucement on Next Congress -Closing remarks |               |                                |   |   |   |   |   |  |   |
| 16:30 - 17:00 |              | Break  |               |                                |   |   |   |   |   |  |   |
| 17:00-18:00   |              |  | Mov           | re to Hiyos                    | hi Campa  | 15  |   |   |   |  |   |
| 18:00-21:00   |              |  | (Hiyosh       | <b>Gala Di</b> i<br>i Campas G |   | arche)  |   |   |   |  |   |

#### **Keynote Address 1 - 2S is an Origin of the Management Cycle (Dr. Nishina)**

#### Dr. Ken Nishina

Professor Emeritus, Nagoya Institute of Technology Professor, Aichi Institute of Technology

#### **Biography:**

1977 Assistant Professor, Nagoya Institute of Technology 1990 PhD in Engineering, Tokyo Institute of Technology 2003 Professor, Nagoya Institute of Technology 2018 Professor, Aichi Institute of Technology 2018 Professor Emeritus, Nagoya Institute of Technology



#### **Abstract:**

The contents of my speech are what I learned in a factory manager training workshop. A topic of the workshop is 2S. It is very fundamental and maybe obvious, but it is also easy to forget it.

2S stands for "Sorting" and "Setting in order". In Japanese, it is called SEIRI and SEITON. "Sorting" means classifying what we need and what we don't need, and throwing away what we don't need. "Setting in order" means putting what we need in a designated position for easy use. The main effects of 2S are more safety, more ease, and more visualization. Each of these effects supports the SDCA cycle, which is the daily management cycle.

"Sorting" encourages "Setting in order" and then "setting in order" encourages "sorting" in next stage because it creates awareness each other. We can regard "Sorting" as improvement and "Setting in order" as a rule setting (standardization). In other words, the 2S activity means a cycle of improvement and maintenance, and it can be said integrating the SDCA cycle into the PDCA cycle. This integration produces continuous improvement. Considering in this way, 2S can be considered an origin of the management cycle.

#### **Keynote Address 2 - Quality Innovation Based on Digital Platform (Dr. Park)**

Dr. Heejun Park

President of KSQM

Professor, Dept. of Industrial Eng., Yonsei Univ.



Heejun Park is currently president of KSQM and professor in Dept. of Industrial Eng. at Yonsei Univ., Korea. Before he joined Yonsei Univ., he was appointed to professor at Dept. of Business Mgt., Marymount Univ., US after acquiring Ph.D. in Eng. Mgt. at George Washington Univ., US. He has been teaching and doing research in the field of Innovation Mgt. and Quality of Mgt. for 24 years with publishing about 100 research papers and books. He has acted as advisor and lecturer to various national governments, and many public and private sector organizations to improve their strategic competitiveness. He has contributed columns in major daily Korean newspapers and has been a radio and television program host in major Koran broadcasting station.

#### **Abstract:**

In order to secure a continuous competitive advantage, companies should modularize products and services they produce and corporate resources, and operate them based on digital platforms to meet the needs of various customers at a low cost. In the process, the boundaries of areas defined in order to efficiently increase production from the perspective of suppliers in industrial society will be broken. And new markets will constantly emerge through convergence from the perspective of users satisfying their needs. Corporate competitiveness in the era of digital platforms is the ability to constantly deliver new values to the market by defining core competencies and connecting them to various areas, and solving customer problems that were previously recognized but could not be resolved due to physical constraints and costs. In the process, it is necessary to have the ability to conceptually understand technologies introduced to the recent market, such as artificial intelligence, big data, digital twins, block chain, and quantum computing, and incorporate them into the company's business models and resource management methods. It is also necessary to have the ability to manage quality problems arising from an unstructured environment that manages companies while managing resources based on a platform and procuring them from external platforms.

# Keynote Address 3 - Quality of Health Care Assured by the Organization - QMS Approach - (Dr. Munechika)

Dr. Masahiko Munechika

Professor, Faculty of Science and Engineering, Waseda
University



Dr. Masahiko Munechika is a professor at Faculty of Science and Engineering, Waseda University. He received a doctor of engineering degree from the university of Tokyo in 1987. His research has focused on quality management and statistical analysis. He is engaged in research on quality management of healthcare as well as quality management of manufacturing industry. He is the former president of Japanese Society of Quality Control. He is also a member of Deming Application Prize Committee and Japanese delegate of ISO/TC176, who creates ISO 9000 series standards.

#### **Abstract:**

The author's research group has been operating the QMS-H (Quality Centered Management System for Healthcare) research group for about 20 years to research the QMS model in healthcare. This research group consists of science and engineering academic researchers specializing in quality management and 10 hospitals, and has been developing and demonstrating the elements of the QMS-H model. In this presentation, I will give an overview of the activities of the research group. As one of the results of these activities, Aso Iizuka Hospital, a member of the study group, was awarded the Deming Prize for the first time in the medical industry in 2022. I will also introduce its activities. I will also discuss the differences in QMS between the medical and industrial fields.

# Keynote Address 4 - Becoming World Class-Lessons from Made-in Japan (Dr. Motowani)

#### Dr. Prem Motowani

Professor, Center for Japanese Studies, Jawaharlal Nehru University since 1980 (Superannuated in September 2019)



#### **Academic Qualifications:**

B.A. (Economics) Delhi University, 1973.

B.A. Japanese Hons, J.N.U., 1976.

M.A. Japanese Studies, J.N.U., 1978.

M.Phil School of International Studies 1982 JNU Ph.D School of International Studies JNU

#### **Study Abroad:**

1981-1982 Japan Foundation Dissertation Fellowship (Visiting Scholar at the Institute of Social Studies, Tokyo University).

1988-89 Conducted Research at the National Language Research Institute.

1999, 2000 Attended courses on TQM & Japanese Management at JUSE, Tokyo Japan.

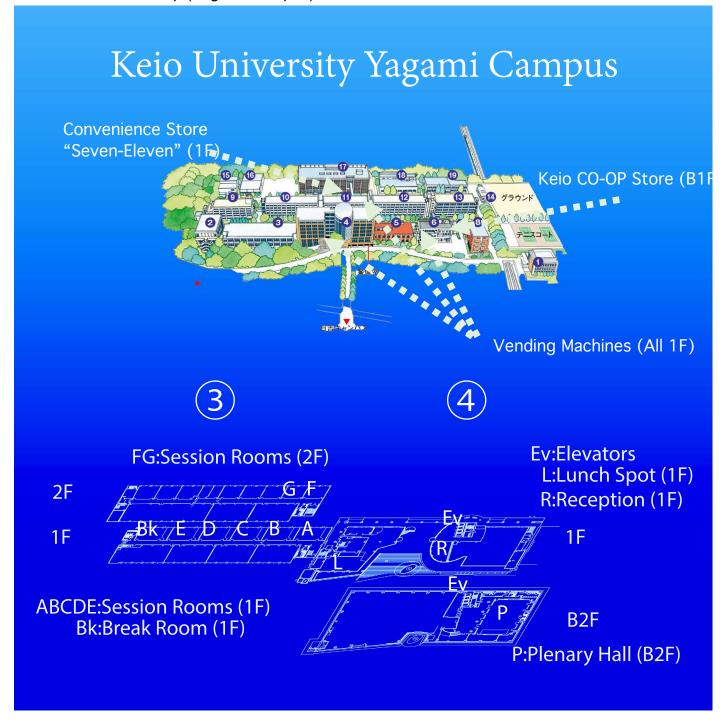
#### Lectures in Japan:

Visited Japan over 90 times in the last 30 years primarily for lectures on Indo-Japanese relations and Issues facing Japanese companies in India at universities and Industry Associations such as Keidanren, Kansai Economic Federation, Japan Institute of Industrial Engineering, Japan Productivity Center, Nikkei BP, and so on.

Regular faculty at Nikkei Business Course held twice a year between 2011-2014

#### Abstract:

Japan's operational management practices (TQM, TPM, TPS/Lean) have been behind Japan's phenomenal economic success over 50 years after World War II and have played the key role in establishing Japan's sustainable competitive advantage in manufacturing. Hence, these practices have been popular in the last 3 decades in over 50 countries across the globe initially in America and Europe and later in Asian countries. However, there has been a distinct difference in the approach to these methodologies by the Japanese companies and elsewhere.



Services included in conference registration fee:

Water Bottles (Water Break, 18th and 19th Morning)

Lunch Boxes (Lunch Time, Lunch Break, 18th and 19th)

Coffee Services (Coffee Break, 18th and 19th Afternoon)

Gala Dinner (19th Evening)

Wi-Fi Connection at Conference Venue

Conference Bag

Etc.

### Program Details

### Plenary Hall 2024/09/18 Morning

| Fieldly Hall 2024/03/1 |  |
|------------------------|--|
| Opening Plenary (      | Moderator: Watalu Yamamoto)  |
| 9:30 AM - 9:35 AM      | Opening  |
| 9:35 AM - 9:50 AM      | Welcome and Introduction   |
|                        | Prof. Shu Yamada (Keio University (Japan), ANQ Chairperson)                                |
| 9:50 AM - 10:00 AM     | Greeting from Keio University  |
|                        | Prof. Toshiyuki Murakami (Dean, Faculty of Science and Engineering, Keio University)       |
| 10:00 AM - 10:10 AM    | Message from ANQ Congress 2024 Yokohama Organizing Committee                               |
|                        | Mr. Hiroyuki Wakabayashi (President, Japanese Society for Quality Control (Japan))         |
| 10:10 AM - 10:25 AM    | Message from ANQ Honorary Chairperson  |
|                        | Prof. Noriaki Kano (Honorary Chairperson, Asian Network for Quality)                       |
| 10:25 AM - 10:40 AM    | Message from ANQ Honorary Chairperson  |
|                        | Mr. Janak Mehta (Honorary Chairperson, Asian Network for Quality)                          |
| Water Break (In fr     | ront of Plenary Hall)  |
| 11:00 AM - 11:25 AM    | Keynote Address 1 - 2S is an Origin of the Management Cycle                                |
|                        | Prof. Ken Nishina (Aichi Institute of Technology (Japan))                                  |
| 11:25 AM - 11:50 AM    | Keynote Address 2 - Q. Platfornovation: Quality Innovation Based on Digital Platform       |
|                        | Prof. Heejun Park (Yonsei University (Korea))  |
| 11:50 AM - 12:00 PM    | Ishikawa-Kano Award (IKA)  |
|                        | Mr. Janak Mehta (Chair, Ishikawa-Kano Awards Committee)                                    |
|                        | Winners: Mr. Ashok Sharma, Dr. Paritud Bhandhubanyong                                      |
| 12:00 PM - 12:15 PM    | ANQ Recognition for Excellence in Quality Practice (ARE-QP), and Asian Service Award (ASA) |
|                        | Mr. Gheng Een Tan (Chair, ARE-QP and ASA)  |
| 12:15 PM - 12:20 PM    | Brief Introduction of the Program  |
|                        | Prof. Watalu Yamamoto (Keio University (Japan))  |
| 12:20 PM - 12:25 PM    | Closing  |
| Lunch Time (Meals Se   | erved at Lunch Spot)   |

#### Room A 2024/09/18 Afternoon

| Room A 2024/09/18 A    |  |
|------------------------|--|
| A1 Statistical Met     | thods/ Reliability and Safety (Chair: Lu Jin)  |
| 1:30 PM - 1:50 PM      | Design Evaluation Measures and Recommended Designs When Considering Noise Variables in the Response Model Approach *Jinho Oh1 (1. Hanbat National University (Korea))  |
| 1:50 PM - 2:10 PM      | Wheel Nut Loosening Resolution in Tata Motors Electric Buses *Devendra Sharma <sup>1</sup> , Akershit Agarwal <sup>1</sup> (1. Tata Motors Limited (India))  |
| 2:10 PM - 2:30 PM      | Optimization of Starting System in Vehicle Through a Statistical Approach of Taguchi's DOE *Aruna Devi P <sup>1</sup> , Jeyaganesh N <sup>1</sup> , Yugendhar Singh N <sup>1</sup> , Dinesh Kumar D <sup>1</sup> , Kumaran V <sup>1</sup> (1. TVS Motor Company (India))                   |
| 2:30 PM - 2:50 PM      | Quality Management Tools and Techniques *Xu Lin <sup>1</sup> (1. Dalian Haier Air Conditioner Co., Ltd. (China))   |
| Coffee Break (First Fl | loor Corridor of Parallel Sessions)  |
| A2 Statistical Met     | thods/ Reliability and Safety (Chair: Manabu Kuroki)   |
| 3:20 PM - 3:40 PM      | Reduction in cost of Ladles/Converter working lining through market intelligence and effective contract management *Ashis Jain <sup>1</sup> , Siddharth Chowdhury <sup>1</sup> , Rajiv <sup>1</sup> , Ranjan Kumar Sinha <sup>1</sup> , Peeyush Gupta <sup>1</sup> (1. Tata Steel (India)) |
| 3:40 PM - 4:00 PM      | Hyper Design Basics and Applications *Takahashi Takenori <sup>1</sup> (1. The Institute of Statistical Mathematics (Japan))  |
| 4:00 PM - 4:20 PM      | Comparison of evaluation methods based on case studies of virtual experiments *Kawasaki Sho <sup>1</sup> , Takahashi Takenori <sup>2</sup> (1. J. F. Oberlin University (Japan), 2. The Institute of Statistical Mathematics (Japan))  |
| Short Break            |  |
| A3 Statistical Met     | thods/ Reliability and Safety (Chair: Lien Thi Hong Nguyen)  |
| 4:40 PM - 5:00 PM      | A Study for Parameter-Free Automated Pattern Extraction and Computational Efficiency in Time Series Chains *Ageishi Maiko <sup>1</sup> , Tianxiang Yang <sup>1</sup> , Suzuki Hideo <sup>1</sup> (1. Keio University (Japan))  |
| 5:00 PM - 5:20 PM      | Construction of Multilevel Composite Design *Ishibashi Tastuki <sup>1</sup> , Furuchi Shunya <sup>1</sup> , Enomoto Shota <sup>2</sup> , Yamada Shu <sup>1</sup> (1. Keio University (Japan), 2. Okayama University (Japan))   |
| 5:20 PM - 5:40 PM      | Consideration on extended Density Peaks Clustering for datasets with multiple shapes and varying densities *Sekiguchi Kenta <sup>1</sup> , Yang Tianxiang <sup>1</sup> , Suzuki Hideo <sup>1</sup> (1. Keio University (Japan))  |

#### Room A 2024/09/19

| Room A 2024/09/19      |  |
|------------------------|--|
| A4 Statistical Met     | thods/ Reliability and Safety (Chair: Tung Thanh Nguyen)   |
| 9:30 AM - 9:50 AM      | Research on Non-stationarity and Outliers in Extreme Weather Data Across Japan *Iwasaki Anri <sup>1</sup> , Iwamoto Hiroki <sup>1</sup> , Nagata Yasushi <sup>1</sup> (1. Waseda University (Japan))   |
| 9:50 AM - 10:10 AM     | Prediction model for bus arrival time using GTFS data and comparison of accuracy *Fukushima Yuta <sup>1</sup> , Iwamoto Hiroki <sup>1</sup> , Nagata Yasushi <sup>1</sup> (1. Waseda University (Japan))   |
| 10:10 AM - 10:30 AM    | Analyzing Abnormal Data in Item Response Theory for Performance Evaluation *Sugisaki Yusuke <sup>1</sup> , Iwamoto Hiroki <sup>1</sup> , Nagata Yasushi <sup>1</sup> (1. Waseda University (Japan))  |
| Water Break (First Flo | oor of Parallel Sessions)  |
| A5 Statistical Met     | thods/ Reliability and Safety (Chair: Yasushi Nagata)  |
| 10:50 AM - 11:10 AM    | A Proposal for Data Augmentation on Imbalanced Data Using Weighted Kernel Density Estimation *Kuzuhara Hajime <sup>1</sup> , Yang Tianxiang <sup>1</sup> , Suzuki Hideo <sup>1</sup> (1. Keio University (Japan))  |
| 11:10 AM - 11:30 AM    | Prediction of Product Quality and Conditional Optimization in Compression Molding of Clay Bowl *Futamura Kenshin <sup>1</sup> , Kawamura Hironobu <sup>1</sup> (1. Nagoya Institute of Technology (Japan))   |
| 11:30 AM - 11:50 AM    | Real-time Prediction of Raw Material Dissolution in Metal Reduction Process *Ruito Itou <sup>1</sup> , Hironobu Kwamura <sup>1</sup> , Yuudai Suzuki <sup>1</sup> (1. Nagoya Institute of Technology (Japan))  |
| Lunch Break (Meals S   | erved at Lunch Spot)   |
| A6 Statistical Met     | thods/ Reliability and Safety (Chair: Narayanan Ramanathan)  |
| 1:00 PM - 1:20 PM      | Evaluation of the Usefulness of Supersaturated Experimentin Development of Polyethylene Films *Mituki Kousaka <sup>1</sup> , Kawamura Hironobu <sup>1</sup> , Kitagawa Akisuke <sup>1</sup> (1. Nagoya Institute of Technology (Japan))  |
| 1:20 PM - 1:40 PM      | Joint optimization of task sequencing and aborting policy for deterioration systems executing multi-task missions *Ogino Kohei <sup>1</sup> , Jin Lu <sup>1</sup> (1. The University of Electro-Communications (Japan))  |
| 1:40 PM - 2:00 PM      | Measurement Precision Evaluation Considering Dose-response Relationship *Ikeuchi Yuto <sup>1</sup> , Takeshita Junichi <sup>2</sup> , Itaka Shizu <sup>1</sup> , Suzuki Tomomichi <sup>1</sup> (1. Tokyo University of Science (Japan), 2. National Institute of Advanced Industrial Science and Technology (Japan)) |
| Coffee Break (in fron  | t of Plenary Hall)   |

#### Room B 2024/09/18 Afternoon

| B1 Business Strat        | tegy and TQM (Chair: Seungbeom Kim)  |
|--------------------------|--|
| 1:30 PM - 1:50 PM        | A multi-system approach to quality assurance based on biological   |
|                          | metabolic systems  |
|                          | *Nishi Toshiaki <sup>1</sup> (1. Okayama Shoka University (Japan))   |
| 1:50 PM - 2:10 PM        | Hitting analysis using records and images of professional baseball players *Nakayama Kie <sup>1</sup> , Iwamoto Hiroki <sup>1</sup> , Nagata Yasushi <sup>1</sup> (1. Waseda University (Japan))   |
| 2:10 PM - 2:30 PM        | Analysis of the characteristics of each team in assessing the annual salary of Nippon Professional Baseball players *Furuya Takahiro <sup>1</sup> , Iwamoto Hiroki <sup>1</sup> , Nagata Yasushi <sup>1</sup> (1. Waseda University (Japan)) |
| 2:30 PM - 2:50 PM        | Exploratory Factor Analysis of the Impact Indicators of Japanese Manufacturing DX Based on the TOE Framework *Xu Tong <sup>1</sup> , Suzuki Hideo <sup>1</sup> (1. Keio University (Japan))  |
| Coffee Break (First F    | loor Corridor of Parallel Sessions)  |
| <b>B2 Business Strat</b> | tegy and TQM (Chair: Sunari Sharmalee Dias)  |
| 3:20 PM - 3:40 PM        | A Study for the brand association measurement model in college baseball *Matsunaga Yukiya <sup>1</sup> , Yang Tianxiang <sup>1</sup> , Suzuki Hideo <sup>1</sup> (1. Keio University (Japan))  |
| 3:40 PM - 4:00 PM        | Analysis of the awesomeness of Japanese professional baseball players using pairwise comparisons *Yamagiwa Ayako <sup>1</sup> , Goto Masayuki <sup>1</sup> (1. Waseda University (Japan))  |
| 4:00 PM - 4:20 PM        | Leveraging Event Data Analysis for Optimizing Shooting Strategies in Handball *Sato Shunsuke <sup>1</sup> , Itaka Shizu <sup>1</sup> , Ichimura Shiro <sup>1</sup> , Suzuki Tomomichi <sup>1</sup> (1. Tokyo University of Science (Japan))  |
| Short Break              |  |
| B3 Al issues (Cha        | ir: Chandra Mouli S)   |
| 4:40 PM - 5:00 PM        | Al Roles for Service Quality Innovations *Gye Soo Kim1 (1. Semyung University (Korea))   |
| 5:00 PM - 5:20 PM        | Al Integration in Education: Ethical Considerations, Continuous Learning Strategies, and Industry Partnerships *Nahima Sultana <sup>1</sup> (1. BSTQM (Bangladesh))  |
| 5:20 PM - 5:40 PM        | Preliminary Study of the Integration Approach on Al Ethics and Al Management System *Kim Hung Lotto LAI <sup>1,2</sup> (1. Hong Kong Polytechnic University (Hong Kong), 2. City University of Hong Kong (Hong Kong))                        |

#### Room B 2024/09/19

| Pattern Matching Using Machine Learning and Vision Based Inspection *Devendra Sharma¹, Akershit Agarwal¹, Shubham Gugale¹ (1. Tata Motors Limited (India))  7:50 AM - 10:10 AM Transformation of Quality Management in the Workplace by Adhering to the General Principles of Quality 4.0 Through Unveiling the Impending Potentialities of Al: A General Perspective *Syed Alimuzzaman¹ (1. Paragon Group Ltd. (Bangladesh))  10:10 AM - 10:30 AM Exploring Factors to Attract Players Based on a Clustering Analysis of Positive Reviews of Indie Games on Steam Jrjung Lyu¹, *Chen-Ning Fan¹ (1. National Cheng Kung University (Taiwan))  Water Break (First Floor of Parallel Sessions)  85 Al issues (Chair: Gye Soo Kim)  10:50 AM - 11:10 AM Uses of Text Mining and XGBoost Classifier to Analyze the Electronic Word-of-Mouth of the Protein Powder Market *Jrjung Lyu¹, Chuan-I Hung¹ (1. National Cheng Kung University (Taiwan))  11:10 AM - 11:30 AM Prediction of CO₂ Emission in Taiwan Using a CNN-LSTM Deep Learning Model Hsiao-Ni Chang¹, Pei-Wen Chen¹, *Chuen-Sheng Cheng¹ (1. Yuan Ze University (Taiwan))  11:30 AM - 11:50 AM Electrification of the Automobile Industry - Last Mile Electric Mobility *Rupa Patnaik Pradhan¹ (1. ISQ (India))  Lunch Break (Meals Served at Lunch Spot)  86 Al issues (Chair: Kim Hung Lotto Lai)  Effective Estimating the Patent Quality based on CNN *Won Sang Lee¹ (1. Gangneung Wonju National University (Korea))  Prosperity through Precision: Using Predictive Analytics to Shape Singapore's Housing Policy *Jlanyu Tu¹ (1. Singapore Quality Institute (Singapore))  | Room B 2024/09/19      |   |
|---|------------------------|---|
| Pattern Matching Using Machine Learning and Vision Based Inspection *Devendra Sharma¹, Akershit Agarwal¹, Shubham Gugale¹ (1. Tata Motors Limited (India))  2:50 AM - 10:10 AM  Transformation of Quality Management in the Workplace by Adhering to the General Principles of Quality 4.0 Through Unveiling the Impending Potentialities of Al: A General Perspective *Syed Alimuzzaman¹ (1. Paragon Group Ltd. (Bangladesh))  Exploring Factors to Attract Players Based on a Clustering Analysis of Positive Reviews of Indie Games on Steam Jrjung Lyu¹, *Chen-Ning Fan¹ (1. National Cheng Kung University (Taiwan))  Water Break (First Floor of Parallel Sessions)  B5 Al issues (Chair: Gye Soo Kim)  10:50 AM - 11:10 AM  Uses of Text Mining and XGBoost Classifier to Analyze the Electronic Word-of-Mouth of the Protein Powder Market *Jrjung Lyu¹, Chuan-I Hung¹ (1. National Cheng Kung University (Taiwan))  11:10 AM - 11:30 AM  Prediction of CO₂ Emission in Taiwan Using a CNN-LSTM Deep Learning Model Hsiao-Ni Chang¹, Pei-Wen Chen¹, *Chuen-Sheng Cheng¹ (1. Yuan Ze University (Taiwan))  11:30 AM - 11:50 AM  Electrification of the Automobile Industry - Last Mile Electric Mobility *Mupa Patnaik Pradhan¹ (1. ISQ (India))  Lunch Break (Meals Served at Lunch Spot)  B6 Al issues (Chair: Kim Hung Lotto Lai)  Effective Estimating the Patent Quality based on CNN *Won Sang Lee¹ (1. Gangneung Wonju National University (Korea))  Prosperity through Precision: Using Predictive Analytics to Shape Singapore's Housing Policy *Jianyu Tu¹ (1. Singapore Quality Institute (Singapore))  From Foundations to Frontiers: Enhancing Quality Management with Al/ML Integration for Effective Failure Mode Avoidance Kishorkumar Hanmant Patil¹, *Asmita Ghate¹, Amol Jagtap¹ (1. Tata Motors Limited (India)) | B4 Al issues (Cha      | ir: Shengqi Wang)   |
| to the General Principles of Quality 4.0 Through Unveiling the Impending Potentialities of Al: A General Perspective *Syed Alimuzzaman¹ (1. Paragon Group Ltd. (Bangladesh))  Exploring Factors to Attract Players Based on a Clustering Analysis of Positive Reviews of Indie Games on Steam Jrjung Lyu¹, *Chen-Ning Fan¹ (1. National Cheng Kung University (Taiwan))  Water Break (First Floor of Parallel Sessions)  B5 Al issues (Chair: Gye Soo Kim)  Uses of Text Mining and XGBoost Classifier to Analyze the Electronic Word-of-Mouth of the Protein Powder Market *Jrjung Lyu¹, Chuan-I Hung¹ (1. National Cheng Kung University (Taiwan))  Prediction of CO₂ Emission in Taiwan Using a CNN-LSTM Deep Learning Model Hsiao-Ni Chang¹, Pei-Wen Chen¹, *Chuen-Sheng Cheng¹ (1. Yuan Ze University (Taiwan))  11:30 AM - 11:50 AM Electrification of the Automobile Industry - Last Mile Electric Mobility *Rupa Patnaik Pradhan¹ (1. ISQ (India))  Lunch Break (Meals Served at Lunch Spot)  B6 Al issues (Chair: Kim Hung Lotto Lai)  Effective Estimating the Patent Quality based on CNN *Won Sang Lee¹ (1. Gangneung Wonju National University (Korea))  Prosperity through Precision: Using Predictive Analytics to Shape Singapore¹s Housing Policy *Jianyu Tu¹ (1. Singapore Quality Institute (Singapore))  From Foundations to Frontiers: Enhancing Quality Management with AI/ML Integration for Effective Failure Mode Avoidance Kishorkumar Hanmant Patil¹, *Asmita Ghate¹, Amol Jagtap¹ (1. Tata Motors Limited (India))  | 9:30 AM - 9:50 AM      | Pattern Matching Using Machine Learning and Vision Based Inspection *Devendra Sharma <sup>1</sup> , Akershit Agarwal <sup>1</sup> , Shubham Gugale <sup>1</sup> (1. Tata Motors Limited |
| Positive Reviews of Indie Games on Steam Jrjung Lyu¹, *Chen-Ning Fan¹ (1. National Cheng Kung University (Taiwan))  Water Break (First Floor of Parallel Sessions)  B5 Al issues (Chair: Gye Soo Kim)  10:50 AM - 11:10 AM Uses of Text Mining and XGBoost Classifier to Analyze the Electronic Word-of-Mouth of the Protein Powder Market *Jrjung Lyu¹, Chuan-I Hung¹ (1. National Cheng Kung University (Taiwan))  11:10 AM - 11:30 AM Prediction of CO₂ Emission in Taiwan Using a CNN-LSTM Deep Learning Model Hsiao-Ni Chang¹, Pei-Wen Chen¹, *Chuen-Sheng Cheng¹ (1. Yuan Ze University (Taiwan))  11:30 AM - 11:50 AM Electrification of the Automobile Industry - Last Mile Electric Mobility *Rupa Patnaik Pradhan¹ (1. ISQ (India))  Lunch Break (Meals Served at Lunch Spot)  B6 Al issues (Chair: Kim Hung Lotto Lai)  1:00 PM - 1:20 PM Effective Estimating the Patent Quality based on CNN *Won Sang Lee¹ (1. Gangneung Wonju National University (Korea))  Prosperity through Precision: Using Predictive Analytics to Shape Singapore's Housing Policy *Jianyu Tu¹ (1. Singapore Quality Institute (Singapore))  From Foundations to Frontiers: Enhancing Quality Management with Al/ML Integration for Effective Failure Mode Avoidance Kishorkumar Hanmant Patil¹, *Asmita Ghate¹, Amol Jagtap¹ (1. Tata Motors Limited (India))   | 9:50 AM - 10:10 AM     | to the General Principles of Quality 4.0 Through Unveiling the Impending Potentialities of AI: A General Perspective  |
| B5 Al issues (Chair: Gye Soo Kim)  10:50 AM - 11:10 AM  Uses of Text Mining and XGBoost Classifier to Analyze the Electronic Word-of-Mouth of the Protein Powder Market  *Jrjung Lyu¹, Chuan-I Hung¹ (1. National Cheng Kung University (Taiwan))  11:10 AM - 11:30 AM  Prediction of CO₂ Emission in Taiwan Using a CNN-LSTM Deep Learning Model  Hsiao-Ni Chang¹, Pei-Wen Chen¹, *Chuen-Sheng Cheng¹ (1. Yuan Ze University (Taiwan))  11:30 AM - 11:50 AM  Electrification of the Automobile Industry - Last Mile Electric Mobility  *Rupa Patnaik Pradhan¹ (1. ISQ (India))  Lunch Break (Meals Served at Lunch Spot)  B6 Al issues (Chair: Kim Hung Lotto Lai)  Effective Estimating the Patent Quality based on CNN  *Won Sang Lee¹ (1. Gangneung Wonju National University (Korea))  1:20 PM - 1:40 PM  Prosperity through Precision: Using Predictive Analytics to Shape Singapore's Housing Policy  *Jianyu Tu¹ (1. Singapore Quality Institute (Singapore))  From Foundations to Frontiers: Enhancing Quality Management with Al/ML Integration for Effective Failure Mode Avoidance  Kishorkumar Hanmant Patil¹, *Asmita Ghate¹, Amol Jagtap¹ (1. Tata Motors Limited (India))   | 10:10 AM - 10:30 AM    | Positive Reviews of Indie Games on Steam  |
| Uses of Text Mining and XGBoost Classifier to Analyze the Electronic Word-of-Mouth of the Protein Powder Market  *Jrjung Lyu¹, Chuan-I Hung¹ (1. National Cheng Kung University (Taiwan))  Prediction of CO₂ Emission in Taiwan Using a CNN-LSTM Deep Learning Model  Hsiao-Ni Chang¹, Pei-Wen Chen¹, *Chuen-Sheng Cheng¹ (1. Yuan Ze University (Taiwan))  Electrification of the Automobile Industry - Last Mile Electric Mobility  *Rupa Patnaik Pradhan¹ (1. ISQ (India))  Lunch Break (Meals Served at Lunch Spot)  B6 Al issues (Chair: Kim Hung Lotto Lai)  1:00 PM - 1:20 PM  Effective Estimating the Patent Quality based on CNN  *Won Sang Lee¹ (1. Gangneung Wonju National University (Korea))  Prosperity through Precision: Using Predictive Analytics to Shape Singapore¹s Housing Policy  *Jianyu Tu¹ (1. Singapore Quality Institute (Singapore))  From Foundations to Frontiers: Enhancing Quality Management with AI/ML Integration for Effective Failure Mode Avoidance  Kishorkumar Hanmant Patil¹, *Asmita Ghate¹, Amol Jagtap¹ (1. Tata Motors Limited (India))   | Water Break (First Flo | oor of Parallel Sessions)   |
| Word-of-Mouth of the Protein Powder Market *Jrjung Lyu¹, Chuan-I Hung¹ (1. National Cheng Kung University (Taiwan))  11:10 AM - 11:30 AM Prediction of CO₂ Emission in Taiwan Using a CNN-LSTM Deep Learning Model Hsiao-Ni Chang¹, Pei-Wen Chen¹, *Chuen-Sheng Cheng¹ (1. Yuan Ze University (Taiwan))  11:30 AM - 11:50 AM Electrification of the Automobile Industry - Last Mile Electric Mobility *Rupa Patnaik Pradhan¹ (1. ISQ (India))  Lunch Break (Meals Served at Lunch Spot)  B6 AI issues (Chair: Kim Hung Lotto Lai)  1:00 PM - 1:20 PM Effective Estimating the Patent Quality based on CNN *Won Sang Lee¹ (1. Gangneung Wonju National University (Korea))  1:20 PM - 1:40 PM Prosperity through Precision: Using Predictive Analytics to Shape Singapore's Housing Policy *Jianyu Tu¹ (1. Singapore Quality Institute (Singapore))  From Foundations to Frontiers: Enhancing Quality Management with AI/ML Integration for Effective Failure Mode Avoidance Kishorkumar Hanmant Patil¹, *Asmita Ghate¹, Amol Jagtap¹ (1. Tata Motors Limited (India))   | B5 Al issues (Cha      | ir: Gye Soo Kim)  |
| Model Hsiao-Ni Chang <sup>1</sup> , Pei-Wen Chen <sup>1</sup> , *Chuen-Sheng Cheng <sup>1</sup> (1. Yuan Ze University (Taiwan))  11:30 AM - 11:50 AM Electrification of the Automobile Industry - Last Mile Electric Mobility *Rupa Patnaik Pradhan <sup>1</sup> (1. ISQ (India))  Lunch Break (Meals Served at Lunch Spot)  B6 AI issues (Chair: Kim Hung Lotto Lai)  1:00 PM - 1:20 PM Effective Estimating the Patent Quality based on CNN *Won Sang Lee <sup>1</sup> (1. Gangneung Wonju National University (Korea))  1:20 PM - 1:40 PM Prosperity through Precision: Using Predictive Analytics to Shape Singapore's Housing Policy *Jianyu Tu <sup>1</sup> (1. Singapore Quality Institute (Singapore))  1:40 PM - 2:00 PM From Foundations to Frontiers: Enhancing Quality Management with AI/ML Integration for Effective Failure Mode Avoidance Kishorkumar Hanmant Patil <sup>1</sup> , *Asmita Ghate <sup>1</sup> , Amol Jagtap <sup>1</sup> (1. Tata Motors Limited (India))  | 10:50 AM - 11:10 AM    | Word-of-Mouth of the Protein Powder Market  |
| *Rupa Patnaik Pradhan¹ (1. ISQ (India))  Lunch Break (Meals Served at Lunch Spot)  B6 Al issues (Chair: Kim Hung Lotto Lai)  1:00 PM - 1:20 PM  Effective Estimating the Patent Quality based on CNN  *Won Sang Lee¹ (1. Gangneung Wonju National University (Korea))  Prosperity through Precision: Using Predictive Analytics to Shape Singapore's Housing Policy  *Jianyu Tu¹ (1. Singapore Quality Institute (Singapore))  1:40 PM - 2:00 PM  From Foundations to Frontiers: Enhancing Quality Management with Al/ML Integration for Effective Failure Mode Avoidance  Kishorkumar Hanmant Patil¹, *Asmita Ghate¹, Amol Jagtap¹ (1. Tata Motors Limited (India))  | 11:10 AM - 11:30 AM    | Model Hsiao-Ni Chang <sup>1</sup> , Pei-Wen Chen <sup>1</sup> , *Chuen-Sheng Cheng <sup>1</sup> (1. Yuan Ze University  |
| Effective Estimating the Patent Quality based on CNN *Won Sang Lee¹ (1. Gangneung Wonju National University (Korea))  Prosperity through Precision: Using Predictive Analytics to Shape Singapore's Housing Policy *Jianyu Tu¹ (1. Singapore Quality Institute (Singapore))  From Foundations to Frontiers: Enhancing Quality Management with AI/ML Integration for Effective Failure Mode Avoidance Kishorkumar Hanmant Patil¹, *Asmita Ghate¹, Amol Jagtap¹ (1. Tata Motors Limited (India))  | 11:30 AM - 11:50 AM    | - I   |
| Effective Estimating the Patent Quality based on CNN *Won Sang Lee¹ (1. Gangneung Wonju National University (Korea))  Prosperity through Precision: Using Predictive Analytics to Shape Singapore's Housing Policy *Jianyu Tu¹ (1. Singapore Quality Institute (Singapore))  From Foundations to Frontiers: Enhancing Quality Management with AI/ML Integration for Effective Failure Mode Avoidance Kishorkumar Hanmant Patil¹, *Asmita Ghate¹, Amol Jagtap¹ (1. Tata Motors Limited (India))  | Lunch Break (Meals S   | Gerved at Lunch Spot)   |
| *Won Sang Lee <sup>1</sup> (1. Gangneung Wonju National University (Korea))  1:20 PM - 1:40 PM  Prosperity through Precision: Using Predictive Analytics to Shape Singapore's Housing Policy  *Jianyu Tu <sup>1</sup> (1. Singapore Quality Institute (Singapore))  From Foundations to Frontiers: Enhancing Quality Management with AI/ML Integration for Effective Failure Mode Avoidance  Kishorkumar Hanmant Patil <sup>1</sup> , *Asmita Ghate <sup>1</sup> , Amol Jagtap <sup>1</sup> (1. Tata Motors Limited (India))  | B6 Al issues (Cha      | ir: Kim Hung Lotto Lai)   |
| Singapore's Housing Policy *Jianyu Tu <sup>1</sup> (1. Singapore Quality Institute (Singapore))  From Foundations to Frontiers: Enhancing Quality Management with AI/ML Integration for Effective Failure Mode Avoidance  Kishorkumar Hanmant Patil <sup>1</sup> , *Asmita Ghate <sup>1</sup> , Amol Jagtap <sup>1</sup> (1. Tata Motors Limited (India))   | 1:00 PM - 1:20 PM      |   |
| Al/ML Integration for Effective Failure Mode Avoidance Kishorkumar Hanmant Patil <sup>1</sup> , *Asmita Ghate <sup>1</sup> , Amol Jagtap <sup>1</sup> (1. Tata Motors Limited (India))  | 1:20 PM - 1:40 PM      | Singapore's Housing Policy  |
| Coffee Break (in front of Plenary Hall)   | 1:40 PM - 2:00 PM      | Al/ML Integration for Effective Failure Mode Avoidance<br>Kishorkumar Hanmant Patil <sup>1</sup> , *Asmita Ghate <sup>1</sup> , Amol Jagtap <sup>1</sup> (1. Tata Motors                |
| <u>-                                      </u>  | Coffee Break (in fron  | t of Plenary Hall)  |

#### Room C 2024/09/18 Afternoon

| Room C 2024/09/18 A   | Arternoon   |
|-----------------------|---|
| C1 Education (Ch      | nair: Chisato Kajihara)   |
| 1:30 PM - 1:50 PM     | Impact of Training Course on TQM at Apex Holdings Limited *A. M. M. Khairul Bashar <sup>1</sup> (1. BSTQM (Bangladesh))   |
| 1:50 PM - 2:10 PM     | Does Knowledge Management Moderate the Relationship between Critical Factors of TQM and Perceived Institutional Performance in Higher Education *Nafiza Islam <sup>1</sup> (1. Jahangirnagar University (Bangladesh))   |
| 2:10 PM - 2:30 PM     | Happiness at Work: Factors Affecting Employees' Happiness at Work *Tung Thanh Nguyen <sup>1</sup> , Tuyen Thanh Nguyen <sup>2</sup> (1. Vabis International College (Viet Nam), 2. Knowledge Management Institute (Viet Nam))   |
| 2:30 PM - 2:50 PM     | The Influence of Attitude toward Entrepreneurship, Entrepreneurial Self-efficacy, and Perceived Behavioral Control on Vietnamese Students' Entrepreneurial Intentions *Hai Tran Xuan Hoang <sup>1</sup> (1. Dr. Nguyen Thanh Tung (Viet Nam))   |
| Coffee Break (First F | loor Corridor of Parallel Sessions)   |
| C2 Education (Ch      | air: Ryoko Shimono)   |
| 3:20 PM - 3:40 PM     | Model of Sustainable Development at the University: "MPEI - Green University" *Ilia Rusakov <sup>1</sup> , Nikolay Rogalev <sup>1</sup> , Olga Kondratyeva <sup>1</sup> , Anatoly Safonov <sup>1</sup> (1. National Research University "Moscow Power Engineering Institute" (Russia))  |
| 3:40 PM - 4:00 PM     | Data science education using real teaching materials *Ogawa Akira <sup>1</sup> , Takahashi Takenori <sup>2</sup> (1. Mejiro University (Japan)), 2. The Institute of Statistical Mathematics (Japan)))  |
| 4:00 PM - 4:20 PM     | An Analysis of Behavioral Factors and Performance Based on Personnel Evaluation Data *Asano Masakazu <sup>1</sup> , Yamagiwa Ayako <sup>1</sup> , Goto Masayuki <sup>1</sup> (1. Waseda University (Japan))   |
| Short Break           |   |
| C3 Quality in Hea     | Ithcare (Chair: Roy Rimington)  |
| 4:40 PM - 5:00 PM     | Analysis of the Working Conditions of Full-Time Doctors at Saiseikai Hospitals for the Work Style Reform of Physicians *Shiho Samura <sup>1</sup> , Yamauchi Keita <sup>2</sup> , Yamaguchi Naohito <sup>3</sup> , Takahashi Takenori <sup>4</sup> (1. Urasoe General Hospital (Japan), 2. Keio University (Japan), 3. Saiseikai Imperial Gift Foundation (Japan), 4. The Institute of Statistical Mathematics (Japan)) |
| 5:00 PM - 5:20 PM     | Analysis of Influenza Epidemics in a Mixed Season of Multiple Epidemics Using Pharmacy Sales data *Sugita Ryusei <sup>1</sup> , Itaka Shizu <sup>1</sup> , Suzuki Tomomichi <sup>1</sup> (1. Tokyo University of Science (Japan))   |
| 5:20 PM - 5:40 PM     | Study on intervention methods adapted to patient conditions in swallowing rehabilitation after stroke-feedback method focusing on   |
|                       |   |

the difference between standard and actual clinical practice \*Ichikawa Renya<sup>1</sup>, Nakashima Eiko<sup>2</sup>, Ide Makoto<sup>2</sup>, Tsuru Satoko<sup>3</sup>, Kato Shogo<sup>1</sup> (1.
The University of Electro-Communications (Japan), 2. St Mary's Hospital (Japan),
3. The University of Tokyo (Japan))

#### Room C 2024/09/19

| Room C 2024/09/19      |   |
|------------------------|---|
| C4 Uncertain and       | Change Management (Chair: Kim Hung Lotto Lai)   |
| 9:30 AM - 9:50 AM      | Crying Out for a Quality Economics *Narayanan Ramanathan <sup>1</sup> (1. Independent counsellor (India))   |
| 9:50 AM - 10:10 AM     | New Product Development as a 5 <sup>th</sup> TQM Vehicle<br>*Laxmikant Diwakar Natu <sup>1</sup> (1. ISQ (India))   |
| 10:10 AM - 10:30 AM    | Improving KPI through Conceptualizing "Community of Interest (COI)" with Plant O&M Experience, Benchmarking KPI, Use of Existing Models from APM & APR and Use of Digital Platform *Parshuram Mishra <sup>1</sup> , K Rohit <sup>1</sup> (1. Tata Power (India))  |
| Water Break (First Flo | por of Parallel Sessions)   |
| C5 Uncertain and       | Change Management (Chair: Was Seon Shin)  |
| 10:50 AM - 11:10 AM    | Application of TQM Approach for Business Transformation in a Power Distribution Company *Kunal Pareek <sup>1</sup> , Anil Sachdev <sup>2</sup> , Pankaj Kumar <sup>3</sup> (1. Tata Power Delhi Distribution Limited (India), 2. TQM International Private Limited (India), 3. Tata Autocomp Systems Limited (India)) |
| 11:10 AM - 11:30 AM    | (Re)defining Quality and Quality Management in Terms of Value, Risk and Cost: A Conceptual Model *Nigel Peter Grigg <sup>1</sup> (1. New Zealand Organisation for Quality (New Zealand))  |
| 11:30 AM - 11:50 AM    | New Product Full Life Cycle Management Innovation - Take Hefei Home Machine Base as an Example *Jinpeng Zhang <sup>1</sup> , Jialong Shen <sup>1</sup> (1. Hefei Haier Air Conditioning Electronics Co., Ltd. (China))  |
| Lunch Break (Meals S   | Served at Lunch Spot)   |
| C6 Uncertain and       | Change Management (Chair: Meng Ken Too)   |
| 1:00 PM - 1:20 PM      | Promoting Industrial Transformation and Upgrading Based on Ecosystem Innovation - Taking Zhengzhou Haier Base as an Example *Hailong Su <sup>1</sup> , Ketao Guo <sup>1</sup> (1. Zhengzhou Haier Air Conditioner Co., LTD. (China))  |
| 1:20 PM - 1:40 PM      | OEM Quality Comprehensive Management in the Home Air Conditioning Industry Exploration and Practice *Shengchen Gao <sup>1</sup> , Haiyuan Su <sup>1</sup> (1. Qingdao Haier (Jiaozhou) Air Conditioner Co. Ltd. (China))  |
| 1:40 PM - 2:00 PM      | The Influence of Menu Appeal on Consumer Responses toward Ethnic Foods: The Moderating Role of Familiarity *Wanyan Cheng <sup>1</sup> , Changsok Yoo <sup>1</sup> , Johye Hwang <sup>1</sup> (1. Kyung Hee University (Korea))  |
| Coffee Break (in fron  | t of Plenary Hall)  |
|                        |   |

#### Room D 2024/09/18 Afternoon

| Room D 2024/09/18 A   | Afternoon  |
|-----------------------|--|
| D1 Quality in Hea     | Ithcare (Chair: Anil Sachdev)  |
| 1:30 PM - 1:50 PM     | Optimizing Use of Methotrexate for Medical Management of Unruptured Tubal Ectopic Pregnancy in Tata Main Hospital *Alokananda Ray <sup>1</sup> , Sarita Kumari <sup>1</sup> , Archana Barik <sup>1</sup> (1. Tata Main Hospital (India))   |
| 1:50 PM - 2:10 PM     | Investigation of the mechanism of occurrence in inpatient falls (serious injuries) -Identification of risk factors for serious injury falls- *Kashiwabara Hideaki <sup>1</sup> , Fukumura Fumio <sup>2</sup> , Kato Shogo <sup>1</sup> (1. The University of Electro-Communications (Japan), 2. Aso lizuka Hospital (Japan))                       |
| 2:10 PM - 2:30 PM     | A study on promoting utilization based on evaluating nurses' competence in specific tasks *Nakano Yuri <sup>1</sup> , Shimono Ryoko <sup>1</sup> , Natori Yoshihiro <sup>2</sup> , Oda Hiroyuki <sup>2</sup> , Momose Emiko <sup>2</sup> , Munechika Masahiko <sup>1</sup> (1. Waseda University (Japan), 2. Aso lizuka Hospital (Japan))          |
| 2:30 PM - 2:50 PM     | Issues and responses on the part of service providers in ACP implementation *Yamatani Kio <sup>1</sup> , Shimono Ryoko <sup>1</sup> , Shindo Akira <sup>2</sup> , Munechika Masahiko <sup>1</sup> (1. Waseda University (Japan), 2. Oguno Hospital (Japan))  |
| Coffee Break (First F | loor Corridor of Parallel Sessions)  |
| D2 Digitalization/    | loT (Chair: Masamitsu Kiuchi)  |
| 3:20 PM - 3:40 PM     | Empirical Study of Drivers and Challenges in Digital Transformation Adoption: Insights from Indian Manufacturing Industries *Sarika Vivek Joshi <sup>1</sup> , Rangaraja P Sundarraj <sup>2</sup> (1. Invalue Analytics (India), 2. Indian Institute of Technology Madras (India))   |
| 3:40 PM - 4:00 PM     | Proactive Quality Through Digitalised Process, Product, Equipment, Raw Material Change Management *Pradeep Bhalachandra Gargote <sup>1</sup> , Jignesh Sharda <sup>1</sup> (1. CEAT Ltd. (India))  |
| 4:00 PM - 4:20 PM     | Research on Developing Digital Quality Management Model for Manufacturing Industry *Hojun Song <sup>1</sup> , Jaeeon Cho <sup>1</sup> , Wan Seon Shin <sup>2</sup> (1. Sungkyunkwan University (Korea))  |
| Short Break           |  |
| D3 Digitalization/    | / IoT (Chair: Masamitsu Kiuchi)  |
| 4:40 PM - 5:00 PM     | A Study on the Impact of Service Quality and Digitalization on Customer Experience: A Comparative Analysis Across Industry Groups in South Korea and Vietnam  Donghyun Choi <sup>1</sup> , *Seungbeom Kim <sup>2</sup> , Pyoungsoo Lee <sup>3</sup> (1. Chung-Ang University (Korea), 2. Hongik University (Korea), 3. Kyonggi University (Korea)) |
| 5:00 PM - 5:20 PM     | Digital Transformation in Scheduled Maintenance Process in Power Distribution Company - Tata Power Delhi Distribution Limited *Vinod Kumar <sup>1</sup> , Vinod Kumar <sup>1</sup> (1. Tata Power Distribution Delhi Limited (India))  |
| 5:20 PM - 5:40 PM     | Digital Foundations for Reliability Assurance: An Integrated Approach  |
| L                     | <u> </u>   |

\*Debabrata Giri<sup>1</sup>, Kanchan Mondal<sup>1</sup>, Asmita Ghate<sup>1</sup> (1. Tata Motors Limited (India))

#### Room D 2024/09/19

| Room D 2024/09/19                       |   |
|---|---|
| D4 Digitalization/                      | IoT (Chair: Chisato Kajihara)   |
| 9:30 AM - 9:50 AM                       | Proposition of Design for Quality, Adaptability, and Performance Prediction (DAP) Framework: A New Machine Learning-based Quality Management Approach for Open Quality *Malikah <sup>1</sup> , Wan Seon Shin <sup>1</sup> (1. Sungkyunkwan University (Korea))                |
| 9:50 AM - 10:10 AM                      | Optimizing Utility Performance: ADMS and Smart Meter Integration for Quality Assurance *Vishal Dixit <sup>1</sup> , Vishal Dixit <sup>1</sup> (1. Tata Power Delhi Distribution Limited (India))  |
| 10:10 AM - 10:30 AM                     | Quality Control of Digital Process Based on Drum Washing Machine Production *Xingjun Hao <sup>1</sup> , Yubiao Sun <sup>1</sup> , Pan Zhao <sup>1</sup> (1. Tianjin Haier Washing Electric Appliance Co., Ltd. (China))   |
| Water Break (First Flo                  | oor of Parallel Sessions)   |
| D5 Digitalization/                      | IoT (Chair: Masahiro Yokoyama)  |
| 10:50 AM - 11:10 AM                     | Research on Digital Assembly Process Simulation of Air Conditioner Manufacturing Process *Jiawei Sun <sup>1</sup> , Xiaolei Zhang <sup>1</sup> , Hongshan Ma <sup>1</sup> , Weixiao Li <sup>1</sup> , Feng Wang <sup>1</sup> (1. Qingdao Haier A/c Elec. Ltd., Corp. (China)) |
| 11:10 AM - 11:30 AM                     | Application of Digitized Daily Work Management in a Large Automotive Company Vishal Badshah <sup>1</sup> , *Parag Gajanan Auty <sup>1</sup> , Anil Sachdev <sup>2</sup> (1. Tata Motors Limited (India), 2. TQM International Pvt. Ltd. (India))                              |
| Lunch Break (Meals S                    | Served at Lunch Spot)   |
| D6 Statistical Met                      | thods/ Reliability and Safety (Chair: Chatchanee Pakavatsoontorn)   |
| 1:00 PM - 1:20 PM                       | Optimal Maintenance Policy for a k-out-of-n System Considering Interdependence Between Deterioration and Impact of External Shocks *Kasuya Mizuki <sup>1</sup> , Jin Lu <sup>1</sup> (1. The University of Electro-Communications (Japan))                                    |
| 1:20 PM - 1:40 PM                       | High-dimensional Supervised Embedding and Visualization Method using von Mises Distribution *Sakai Yuta <sup>1</sup> , Mikawa Kenta <sup>2</sup> , Goto Masayuki <sup>1</sup> (1. Waseda University (Japan), 2. Tokyo City University (Japan))                                |
| 1:40 PM - 2:00 PM                       | A Proposal for a Multi-Input Capable Knowledge Tracing Model Utilizing the Embedding Layer *Iwamoto Riku <sup>1</sup> , Suzuki Hideo <sup>1</sup> , Yang Tianxiang <sup>1</sup> (1. Keio University (Japan))  |
| Coffee Break (in front of Plenary Hall) |   |
|   |   |

#### Room E 2024/09/18 Afternoon

| ROOM E 2024/09/18 A                   | Arternoon   |
|---------------------------------------|---|
| E1 Occupation ar                      | nd Health Safety (Chair: Prabhakara Moodanidambur Shettigar)  |
| 1:30 PM - 1:50 PM                     | Safety, Health and Environment Management at Tan Cang Cat Lai Belonging to Saigon Newport Corporation of Vietnam *Thu Xuan Pham <sup>1</sup> , Tan Phuoc Vo <sup>2</sup> , Phuong Thi Lan Tran <sup>3</sup> (1. Ho Chi Minh City University of Technology and Education (Viet Nam), 2. Mekong University (Viet Nam), 3. Saigon Newport Corporation) |
| 1:50 PM - 2:10 PM                     | Integrating Management Systems and Lean Manufaturing Tools to Upgrade Quality and Performance of Entrepreneurs *Tai Dao Duy Nguyen <sup>1</sup> , Tai Nguyen <sup>1</sup> (1. Chitan Knowledge Transfer (Viet Nam))   |
| 2:10 PM - 2:30 PM                     | Beyond Heights - Pioneering Ladder Advancement<br>*Bhupesh Bhandari <sup>1</sup> , Rohit Sethi, Deepak Kumar Chugh (1. Tata Power<br>Distribution Delhi Limited (India))  |
| 2:30 PM - 2:50 PM                     | Prioritizing the Importance of Nuclear Safety Culture' Principles and Guidelines Impacting Maturity of Nuclear Safety Culture: Application of KANO Model *Young Jun Hyun <sup>1</sup> , Hangsung Kim <sup>1</sup> , Byunghoon Yoon <sup>1</sup> (1. Korea Institute of Fusion Energy (Korea))   |
| Coffee Break (First F                 | loor Corridor of Parallel Sessions)   |
| E2 Taguchi Metho                      | od/ Quality Engineering (Chair: Tung Thanh Nguyen)  |
| 3:20 PM - 3:40 PM                     | Studies on Features of Improved T-methods and the New Normalization Methods *Matsuo Tomoki <sup>1</sup> , Iwamoto Hiroki <sup>1</sup> , Nagata Yasushi <sup>1</sup> (1. Waseda University (Japan))  |
| 3:40 PM - 4:00 PM                     | Improving the accuracy of robust parameter design by utilizing explanatory factors for phenomena *Mori Nayuta <sup>1</sup> , Iwamoto Hiroki <sup>1</sup> , Nagata Yasushi <sup>1</sup> (1. Waseda University (Japan))   |
| 4:00 PM - 4:20 PM                     | Proposal of MT method using SMOTE for small sample data and multiple unit spaces *Nakamura Shogo <sup>1</sup> , Iwamoto Hiroki <sup>1</sup> , Nagata Yasushi <sup>1</sup> (1. Waseda University (Japan))  |
| Short Break                           |   |
| E3 Taguchi Metho                      | od/ Quality Engineering (Chair: Masayuki Goto)  |
| 4:40 PM - 5:00 PM                     | Proposal for designing a Kalman filter method using MT system *Inoue Yuki <sup>1</sup> , Iwamoto Hiroki <sup>1</sup> , Nagata Yasushi <sup>1</sup> (1. Waseda University (Japan))   |
| 5:00 PM - 5:20 PM                     | Application study of RT-PC method with boosting applied *Masaaki Amano <sup>1</sup> , Hiroki Iwamoto <sup>1</sup> , Yasushi Nagata <sup>1</sup> (1. Waseda University (Japan))  |
| 5:20 PM - 5:40 PM                     | Impact of matchup combinations on competition rankings *Takao Yuga <sup>1</sup> , Iwamoto Hiroki <sup>1</sup> , Nagata Yasushi <sup>1</sup> (1. Waseda University (Japan))  |
| · · · · · · · · · · · · · · · · · · · |   |

#### Room E 2024/09/19

| Room E 2024/09/19                       | Room E 2024/09/19  |  |
|---|--|--|
| E4 Customer Sati                        | sfaction/ Brand Management (Chair: Jay San Chen)   |  |
| 9:30 AM - 9:50 AM                       | Method of Selecting a Financial Offline Base Branch for the Digital Financially Alienated Class *Boyoung Lee <sup>1</sup> , Yonghan Ju <sup>1</sup> (1. Sun Moon University (Korea))   |  |
| 9:50 AM - 10:10 AM                      | Understanding Consumer Resistance and Adoption of Al-Enabled Smart Home Appliances *Hyebin Jeong <sup>1</sup> , Ronald Sukwadi <sup>2</sup> , Saebom Lee <sup>1</sup> (1. Sahmyook University (Korea), 2. Atma Jaya Catholic University of Indonesia (Indonesia))  |  |
| 10:10 AM - 10:30 AM                     | Managing the Final Leg: Addressing Challenges and Solutions in Last Mile Quality Management for Online Services *Hare Ram Bhattarai <sup>1</sup> , Hareram Bhattarai <sup>1</sup> , (1. NQPCN (Nepal))   |  |
| Water Break (First Flo                  | oor of Parallel Sessions)  |  |
| E5 Customer Sati                        | sfaction/ Brand Management (Chair: Yen-Ling Lin)   |  |
| 10:50 AM - 11:10 AM                     | Consideration of Differences in Kansei Quality Evaluation of Personal Watercraft by Experimental Environment and User Attributes *Takatsu Makoto <sup>1</sup> , Kajihara Chisato <sup>1</sup> , Inoue Kaori <sup>2</sup> (1. Shizuoka University (Japan), 2. Yamaha Motor Co., Ltd. (Japan))   |  |
| 11:10 AM - 11:30 AM                     | A study for the role of environmental corporate social responsibility in building customer loyalty intentions in the airline service industry: a bilateral comparison *Takeuchi Kumi <sup>1</sup> , Yang Tianxiang <sup>1</sup> , Suzuki Hideo <sup>1</sup> (1. Keio University (Japan))   |  |
| 11:30 AM - 11:50 AM                     | Improving Usability through the Lead User Method: A Case Study of Innerwear *Yamamoto Yuta <sup>1</sup> , Yang Tianxiang <sup>1</sup> , Suzuki Hideo <sup>1</sup> (1. Keio University (Japan))   |  |
| Lunch Break (Meals S                    | Served at Lunch Spot)  |  |
| E6 Customer Sati                        | sfaction/ Brand Management (Chair: Laxmikant Diwakar Natu)   |  |
| 1:00 PM - 1:20 PM                       | Country of Product Origin and Its Effects on Customer-perceived Quality, Customer Satisfaction, and Brand Loyalty for Mobile Phones Wakao Alfredo <sup>1</sup> , Frank Bjoern <sup>2</sup> , *Schvaneveldt Shane <sup>3</sup> (1. Tokyo Institute of Technology (Japan), 2. Waseda University (Japan), 3. Weber State University (United States of America)) |  |
| 1:20 PM - 1:40 PM                       | Clarification of food purchasing criteria on e-commerce sites in China *Zhu Zhanyan <sup>1</sup> , Kaneko Masaaki <sup>1</sup> (1. Tokai University (Japan))   |  |
| 1:40 PM - 2:00 PM                       | Development of a Method for Reducing Design Time by Reusing Empirical Knowledge: Reconfiguring the design process due to technological advances *Kurihara Keita <sup>1</sup> , Kumagai Satoru <sup>1</sup> , Moriguchi Kazutoyo <sup>1</sup> , Kato Shogo <sup>2</sup> (1. DMG Mori Co., Ltd. (Japan), 2. The University of Electro-Communications (Japan))  |  |
| Coffee Break (In front of Plenary Hall) |  |  |
|   |  |  |

#### Room F 2024/09/18 Afternoon

| Room F 2024/09/18 A   | Room F 2024/09/18 Afternoon  |  |
|-----------------------|--|--|
| F1 Manufacturing      | (Chair: Yukihiro Ando)   |  |
| 1:30 PM - 1:50 PM     | A Touch Point Mapping Methodology Approach to Establish First Time Right Material Handling System in Manufacturing to Improve Appeal Quality *Siva Kumar Kollipara <sup>1</sup> , M. Santosh Kumar <sup>1</sup> (1. TVS Motor Company Limited (India))   |  |
| 1:50 PM - 2:10 PM     | TQM in SMEs: A Case Study from Bangladesh *Abu Saleh Md. Sohel-Uz-Zaman <sup>1</sup> , Ahmed Imran Kabir <sup>1</sup> (1. United International University (Bangladesh))  |  |
| 2:10 PM - 2:30 PM     | Structured Problem-Solving Made Easy: Approach and Tool Selection Using Unique Flow Diagrams *Mahesh Hegde <sup>1</sup> (1. LearnEx Consulting Pvt. Ltd. (India))  |  |
| 2:30 PM - 2:50 PM     | Prosperity through Quality: Leaping into the Future through Lean Transformation *Kulbhushan Gupta <sup>1</sup> (1. Dr.Reddy's Laboratories Ltd. (India))   |  |
| Coffee Break (First F | loor Corridor of Parallel Sessions)  |  |
| F2 Manufacturing      | (Chair: Azat Abdrakhmanov)   |  |
| 3:20 PM - 3:40 PM     | A Study of Process Parameter Recommendation Based on Machine Learning Optimization Techniques for IC Tray Manufacturing Chien-Chih Wang <sup>1</sup> , *Chi-Ying Pao <sup>1</sup> , Chia-Hui Yang <sup>1</sup> (1. Ming Chi University of Technology (Taiwan))   |  |
| 3:40 PM - 4:00 PM     | Applying DOE to Reduce the Placement Defectives in EBD Process *Shih-An Ma <sup>1</sup> , Zi-hyao Lan <sup>1</sup> , Miso Wei <sup>1</sup> , Chuen-Sheng Cheng <sup>2</sup> (1. Unimicron Technology Corp. (Taiwan), 2. Yuan-Ze University (Taiwan))   |  |
| 4:00 PM - 4:20 PM     | Improving The Appearance Defects of The Solder Protected Process *Closer Lai <sup>1</sup> , Shuh-Chih Chang <sup>1</sup> , Chang-Fang Wang <sup>1</sup> , Chuen-Sheng Cheng <sup>2</sup> (1. Unimicron Technology Corp. (Taiwan), 2. Yuan-Ze University (Taiwan))  |  |
| Short Break           |  |  |
| F3 Manufacturing      | (Chair: Anand Somabhai Patel)  |  |
| 4:40 PM - 5:00 PM     | Implementing LEAN Management to Reduce Maintenance Costs and Scraped Products of Electroplating Equipment *Yu-Cheng Lin <sup>1</sup> , Shao-Chia Hsia <sup>1</sup> , Tian-Yi Hsu <sup>1</sup> , Chuen-Sheng Cheng <sup>2</sup> , Yu-Cheng Lin <sup>1</sup> (1. Unimicron Technology Corporation (Taiwan), 2. Department of Industrial Engineering and Management, Yuan-Ze University (Taiwan)) |  |
| 5:00 PM - 5:20 PM     | Optimizing the Bump Process by Response Surface Methodology *Sean Wang <sup>1</sup> , Sean Guo <sup>1</sup> , Chien-Yi Wang <sup>1</sup> , Vincent Huang <sup>1</sup> , Chuen-Sheng Cheng <sup>2</sup> (1. Unimicron Technology Corp. (Taiwan), 2. Yuan Ze University (Taiwan))  |  |
| 5:20 PM - 5:40 PM     | Reduction in Warranty Claims With Proactive Product Audit - Cut Tyre & Compound Rating   |  |
|                       |  |  |

Pradeep Bhalachandra Gargote<sup>1</sup>, \*Jignesh Sharda<sup>1</sup> (1. CEAT Ltd. (India))

#### Room F 2024/09/19

| Room F 2024/09/19                        |  |  |
|--|--|--|
| F4 Manufacturing (Chair: Hideo Suzuki)   |  |  |
| 9:30 AM - 9:50 AM                        | A Case Study on Integrating Customer Features for a Precise Product Development Process  Jrjung Lyu <sup>1</sup> , *Ying-Ying Lyu Lin <sup>1</sup> , Chia-Wen Chen <sup>1</sup> (1. National Cheng Kung University (Taiwan))   |  |
| 9:50 AM - 10:10 AM                       | Engineering World Class Quality (EWCQ): Redefining Origins to Leap into the Future of Product and Technology Development Mohit Modi <sup>1</sup> , *Kaushik Biswas <sup>1</sup> , Amol Wagh <sup>1</sup> (1. Tata Motors Limited (India))  |  |
| 10:10 AM - 10:30 AM                      | New Approach of Using ISIS Not Analysis in Problem Solving *Prasad Moreshwar Shende <sup>1</sup> (1. LearnEx Consulting Pvt Ltd (India))   |  |
| Water Break (First Flo                   | oor of Parallel Sessions)  |  |
| F5 Manufacturing                         | (Chair: Yukihiro Ando)   |  |
| 10:50 AM - 11:10 AM                      | Thermal Runaway in a Battery - An Approach Towards Mitigation *Isha Pathak <sup>1</sup> , Bhushan Kothari <sup>1</sup> (1. Tata Motors (India))  |  |
| 11:10 AM - 11:30 AM                      | The Significance of 'Just Do It' in Problem Solving *Prabhakara Moodanidambur Shettigar <sup>1</sup> (1. ISQ (India))  |  |
| 11:30 AM - 11:50 AM                      | Strengthening the Implementation of Cleaner Production in Vietnam's Handicraft Industry *Linh Ngoc Dao <sup>1</sup> , Ngoc Thi Do <sup>1</sup> , Thanh Nguyet Thi Dao <sup>2</sup> (1. Thuongmai University (Viet Nam), 2. Department of Industry and Trade of Quang Binh Province (Viet Nam)) |  |
| Lunch Break (Meals Served at Lunch Spot) |  |  |
| F6 Manufacturing                         | (Chair: Lien Thi Hoang Nguyen)   |  |
| 1:00 PM - 1:20 PM                        | Based on the Improvement of PVC Material Performance, the External Damage Rate of Wave Wheel is Reduced *Chenhao Qiu <sup>1</sup> , Xingjun Hao <sup>1</sup> , Yubiao Sun <sup>1</sup> (1. Tianjin Haier Washing Electric Appliance Co., Ltd. (China))   |  |
| 1:20 PM - 1:40 PM                        | A Conceptual Framework for Lean Six Sigma Deployment with a Focus on Indian SMEs *Anand Somabhai Patel <sup>1</sup> , Kaushik M. Patel <sup>1</sup> (1. Nirma University (India))  |  |
| 1:40 PM - 2:00 PM                        | Prosperity Through Quality - Returning to Origins, Leaping into the Future *Jyoti Nirala <sup>1</sup> (1. Hero MotoCorp Ltd (India))   |  |
| Coffee Break (in front of Plenary Hall)  |  |  |

### Room G 2024/09/18 Afternoon

| G1 ARE-QP/ASA Session (Chair: G. E. Tan)                 |  |
|--|--|
| 1:30 PM - 2:50 PM  |  |
| Coffee Break (First Floor Corridor of Parallel Sessions) |  |
| G2 ARE-QP/ASA Session (Chair: G. E. Tan)                 |  |
| 3:20 PM - 4:20 PM  |  |
| Short Break  |  |
| G3 ARE-QP/ASA Session (Chair: G. E. Tan)                 |  |
| 4:40 PM - 5:40 PM  |  |

#### Room G 2024/09/19

| Room G 2024/09/19 G4 Risk management/ Biotechnology/ Sustainability (Chair: Toshiaki Nishi) |   |  |
|---|---|--|
| 9:30 AM - 9:50 AM   | Identifying and Managing Emerging Risks -To Enable Quality and Resilience *Roy Rimington <sup>1</sup> (1. Singapore Quality Institute (Singapore))  |  |
| 9:50 AM - 10:10 AM  | Disease Pressure Improvement in Agriculture Through Six Sigma Methodology *Meng Ken Too <sup>1</sup> , Matthew Tan <sup>2</sup> (1. Too Meng Ken Consultancy (Singapore), 2. Syngenta Asia Pacific Pte. Ltd. (Singapore))   |  |
| 10:10 AM - 10:30 AM   | Sustainable the Quality in Operation & Maintenance of Railway System *Ts. Mohd Faisal Mohd Anuar <sup>1</sup> , Wei Khiang Wong <sup>1</sup> (1. IQM (Malaysia))  |  |
| Water Break (First Flo  | oor of Parallel Sessions)   |  |
| G5 Risk managem   | ent/ Biotechnology/ Sustainability (Chair: Meng Ken Too)  |  |
| 10:50 AM - 11:10 AM   | Innovative Economical Evaluation of Fuel Ethanol % *Suresh B Gudekar <sup>1</sup> , Saket Ranjan <sup>1</sup> , Rutuja Dalvi <sup>1</sup> (1. Tata Motors Ltd. (India))   |  |
| 11:10 AM - 11:30 AM   | Visualizing information for energy assessment considering local demand *Nakamura Yuta <sup>1</sup> , Sakamoto Ayuto <sup>1</sup> , Shimono Ryoko <sup>1</sup> , Fujii Shoma <sup>2</sup> , Munechika Masahiko <sup>4</sup> (1. Waseda University (Japan), 2. The University of Tokyo (Japan))   |  |
| 11:30 AM - 11:50 AM   |   |  |
| G6 Manufacturing (Chair: Ryoko Shimono)   |   |  |
| 1:00 PM - 1:20 PM   | Enhancing Steel Quality: Mitigating Iron Oxide-Related Sliver Defects in Steel for Automotive Applications *Avinash Kumar <sup>1</sup> , Soumen Das <sup>1</sup> , Prasenjit Chanda <sup>1</sup> , Samagra Kumar <sup>1</sup> , Avtar Singh Saini <sup>1</sup> , Hitesh Hasmukhrai Shah <sup>1</sup> , Amit Kumar <sup>1</sup> , V. R. Krishna <sup>1</sup> , Ani Kumari Pujari <sup>1</sup> , Chaitanya Bhanu <sup>1</sup> (1. Tata Steel (India)) |  |
| 1:20 PM - 1:40 PM   | Championing Quality in Developing Nations: The Next Three Decades of Excellence in Design, Manufacturing, Services of Automotive and Industrial Equipment *Chandra Mouli S <sup>1</sup> (1. SEG Automotive India Private Limited (India))   |  |
| 1:40 PM - 2:00 PM   | Anomaly Detection for Automotive Components Using Standard Deviation of Luminance Value and Deep Learning *Matsui Chizuru <sup>1</sup> , Yokocho Chika <sup>1</sup> , Kawamura Hironobu <sup>1</sup> (1. Nagoya Institute of Technology (Japan))  |  |
| Coffee Break (In fron   | Coffee Break (In front of Plenary Hall)   |  |

#### Plenary Hall 2024/09/19 Afternoon

| Closing Plenary (  | Closing Plenary (Moderator: Masataka Sano)   |  |
|--|--|--|
| 2:30 PM - 2:35 PM  | Opening  |  |
| 2:35 PM - 3:00 PM  | Keynote Address 3 - Quality of Health Care Assured by the Organization - QMS Approach - Prof. Masahiko Munechika (Waseda University (Japan)) |  |
| 3:00 PM - 3:25 PM  | Keynote Address 4 - Becoming World Class-Lessons from Made-in Japan  |  |
|  | Prof. Prem K. Motwani (Jawaharlal Nehru University (India))  |  |
| 3:25 PM - 3:40 PM  | Best Paper Awards  |  |
|  | Prof. Shu Yamada (ANQ Chairperson)   |  |
| 3:40 PM - 3:50 PM  | Summary of ANQ Congress 2024   |  |
|  | Prof. Tomomichi Suzuki (ANQ Congress 2024 Steering Committee)  |  |
| 3:50 PM - 4:00 PM  | Greeting from the Next ANQ Chairperson   |  |
|  | Dr. Yonggang Duan (China Association for Quality)  |  |
| 4:00 PM - 4:10 PM  | Announcement of the Next ANQ Congress  |  |
| 4:10 PM - 4:15 PM  | Closing Remarks  |  |
|  | Prof. Shu Yamada (ANQ Chairperson)   |  |
| 4:15 PM - 4:20 PM  | Adjourn, and Invitation to Gala Dinner   |  |
| Walk to Keio University Hiyoshi Campus (10 to 15 minutes)<br>Note: Gala Dinner begins at 6:00pm. |  |  |

### ANQ Congress 2024 Yokoyama

Hosted by Japanese Society for Quality Control Date: 16-20 September 2024 Venue: Keio University Yagami Campus

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