Dr S Supramaniam, MARGMA

**Title: State of the Rubber Glove Industry** 

Dr S. Supramaniam is the Managing Director of Bonric Group and the current President of Malaysian Rubber Gloves Manufacturers Association (MARGMA). He is the global pioneer of the cleanroom gloves manufacturing industry and has been at it for the past 30 years. He is a Fellow of the Royal Society of Chemistry, UK, a Registered Chemist and Senior Member of the Malaysian Institute of Chemistry. He sits on the Board of Director of Lembaga Getah Malaysia, Board of Trustees of Malaysian Rubber Council and Board of Director, Tun Abdul Razak Research Centre, UK. He is also the Chairman of the Steering Committee 4 of the ISO/TC 45. He has rendered close to 30 years of service on a voluntary basis to the Malaysian glove industry in particular and to the Rubber Industry in general.



Dato' Dr Zairossani Mohd Nor, Malaysian Rubber Board, Malaysia

Title: Sustainability of NR Latex and NR Gloves

Dato' Dr. Zairossani bin Mohd Nor is the Director General of Malaysian Rubber Board. He holds a Bachelor of Biological Engineering with Honours from the University of Guelph, Canada. He obtained his Masters and PhD in Applied Science (Biochemical Engineering) from the University of Waterloo, Ontario, Canada. He also holds a certificate in Executive Business Management from the Asian Institute of Management. He has more than 80 publications as well as 12 patents and trademarks credited to him to date. Dr Zairossani has received various awards throughout his career, among the key awards include The World Intellectual Property Organization (WIPO) Gold Medal Award for the Overall Best Invention at the International Invention, Innovation, Industrial Design and Technology Exhibition (ITEX 2005), the Tan Sri BC Sekhar Gold Medal for Contribution and Leadership in Rubber Industry (2015) and National Standards Award 2021.



Updated: 22 July 2022

Prof Dr Kim Jung-Hyun, Yonsei University, Seoul, South Korea

Title: Highly Stretchable Conducting Polymers and Composites for Antistatic Clean-room Applications

Jung-Hyun Kim obtained his Doctorate in Chemical Engineering from Lehigh University in 1986. He has more than 30 years of experience in the conjugated polymer research. He served as 2nd Vice Minister of Education, Science and Technology of Government of South Korea. Currently, he is an Emeritus Professor of Chemical and Biomolecular Engineering, Yonsei University and member of National Academy of Engineering of Korea.



Dato' Prof Dr Adeeba Kamarulzaman, Universiti Malaya, Malaysia

**Title: Infection Control and Prevention in Healthcare Sector** 

Adeeba Kamarulzaman is a Professor of Medicine and Infectious Diseases at Universiti Malaya and Adjunct Associate Professor Yale University. She is presently a member of the WHO Science Council and President of the International AIDS Society.



Datuk Dr Abdul Aziz bin S.A. Kadir,

International Rubber Research and Development Board (IRRDB), Malaysia

Title: Research Directions for Natural Rubber in the Ecosystem of Rising Global Competition and Changing Consumer Expectations

Datuk Dr. Abdul Aziz has been associated with the Natural Rubber (NR) industry for more than 50 years. He served the Rubber Research Institute of Malaysia (RRIM) in different capacities and he was the last Director of RRIM. He became the first Director General of Malaysian Rubber Board (MRB) in 1999 after a reorganization of the Rubber Research Organisations in Malaysia.

He is currently the Secretary General of the International Rubber Research Development Board (IRRDB), which has a membership of 22 NR-producing countries. The secretariat of IRRDB is located in Kuala Lumpur. He has been active in scientific organisations in Malaysia and he is a Senior Fellow of the Academy of Sciences Malaysia (ASM).



Dr. Wava Truscott, Truscott MediSci Associates, USA

Title: New Global Threats Will Expand Need for Gloves and Innovation

Wava Truscott obtained her Doctorate in Comparative Pathology with an emphasis in Microbiology & Immunology from the University of California, 1989; and her Master's in Business Administration from University of La Verne, CA. 1992. She has 30 years of experience in medical device safety, clinical education, laboratory testing, and infection prevention with most of those years devoted to medical gloves, and other PPE. She now has her own company: Truscott MedSci Associates, LLC., consulting, educating, regulatory submissions.



Mr Martin Heels and Ms Emma Norris, Satra Technology, UK

Title: Testing and Certification Requirements for Protective Gloves In EU

Martin Heels obtained his BSc in Applied Chemistry from Nottingham Trent University in 2004. He is the Business Area Manager of the Chemistry team at SATRA and has over 20 years' experience of chemical testing. Martin is also an active member of several CEN standards committees, notably CEN/TC 162 WG 13 who developed the chemical permeation method for gloves EN 16523-1:2015+A1:2018

**Emma Norris** obtained her MChem in Chemistry with Forensic Science from the University of Leicester in 2012. Emma joined SATRA in 2013 and is currently the Senior Team Leader in the Chemistry team; responsible for overseeing technical customer enquiries, laboratory workflow and technical reports for the wide range of chemical tests undertaken at SATRA.





Sakthivel Narayanasamy, Quantum Computing, Malaysia

Title: Smart Factory, Automation, IOT and IR4.0. How Ready is the Glove Industry?

Sakthivel is the founder of Galactic Engineering and Quantum Computing, two firms which are focused on providing hardware and software development for industrial automation. He has over 30 years of experience in the engineering field focused on manufacturing capabilities. Over the years he had designed, developed, built, commissioned, tested and implemented numerous comprehensive solutions for manufacturers on a global scale. Sakthivel also holds the ISA/IEC 62443 Standard to Secure Your Control Systems certification from the International Society of Automation. He graduated from the University of Sunderland with a Bachelor's Degree in Electrical and Electronics Engineering with Management.



Lim Chen Han, Intel, Malaysia

Title: Development of Multi-camera Glove Defect Detection System Using Deep Learning Approach

Lim Chen Han, currently working as Senior Al Solutions Engineer at Intel, focusing on end-to-end solutions enabling and scaling in the area of IOT/Big Data/ML/DL. Graduated from University Science Malaysia with Master's degree in Data Sciences & Analytics.



Pretibaa S, Malaysian Rubber Board, Malaysia

Title: Performance Evaluation of WWRS Module -WasteWater Recycling System in Glove Manufacturing Industry

Pretibaa Subhramaniyun is research officer in the Technology and Engineering Division of Malaysian Rubber Board (MRB). She holds a B. Eng. (Hons) in Chemical Engineering from University Technology of Malaysia (UTM). She has more than 15 years of experience in the environmental management research in rubber industry. Her R&D work at MRB led to the environmental management in rubber industry focusing on wastewater treatment technology for rubber industry using membrane separation. She is also a member of working group on Green House Gas (GHG) Inventory (waste sector) for Malaysian National Communication Report and Malaysian GHG Biennial Update Report.



Dr Azira AA, Malaysian Rubber Board, Malaysia

Title: Adoption of Nanomaterial Technology in Cleanroom Gloves for Electronic-Semiconductor Industries

Azira Abd Aziz obtained her Doctorate in Nanoscience and Nanotechnology in 2010. She had published more than 40 technical articles in many international peer-reviewed journals. Currently, she is a senior researcher in Malaysian Rubber Board. Apart from that, she is the representative of Malaysian Rubber Board for Standard and Industrial Research Institute of Malaysia, standard communities and permanent representative for Development of Malaysian Standards for Nanotechnology, National Nanotechnology Centre (Ministry of Science and Technology Malaysia), NANO Malaysia and Malaysian Innovation Agency (AIM) working on nanomaterials for rubber material application.



Dr Zhenli Wei, Synthomer, Malaysia

Title: Novel NBR Latex Technology for Better Sustainability of Nitrile Gloves

Dr. Zhenli WEI is the Vice President of Innovation for Performance Elastomer Division of Synthomer PLC, where he is leading the Division's global innovation teams in Germany, France, USA, China and Malaysia to develop new SBR and NBR latex based products for Healthcare, Foam, Paper, Carpet and Elastomer Modification applications. Zhenli completed his undergraduate and Master degree studies at Zhejiang University in China, and then obtained his Ph. D. in Chemical Engineering at the University of Waterloo in Canada.



Norihide Enomoto, Midori Anzen, Japan

Title: Development of Accelerator-Free Crosslinking Technology with Carbodiimide Compounds (Part 1)

Norihide Enomoto received his Master Degree of Engineering in 1984 from Osaka University (JAPAN) with a specialty in Petroleum Chemistry. Since then, Mr. Enomoto has accumulated over three decades of R&D experience at JFE Steel Co. (formerly Kawasaki Steel Co.), General Electric (GE) and Midori Anzen Co. with special focus in such areas as Oxidation Catalyst of Aromatic Hydrocarbons, Polymerization of Indene-Maleic Anhydride, Engineering Plastic Compounds and Accelerator-Free crosslinking of X-NBR. Currently, he is a R&D Director and Senior Fellow of Personal Protective Equipment (PPE) and its related technologies at Midori Anzen.



Norihide Enomoto, Midori Anzen, Japan

Title: Development of Crosslinking Technology without using Vulcanization Accelerators with Polyvalent Epoxy Compounds (Part 2)

Norihide Enomoto received his Master Degree of Engineering in 1984 from Osaka University (JAPAN) with a specialty in Petroleum Chemistry. Since then, Mr. Enomoto has accumulated over three decades of R&D experience at JFE Steel Co. (formerly Kawasaki Steel Co.), General Electric (GE) and Midori Anzen Co. with special focus in such areas as oxidation catalyst of aromatic hydrocarbons, Polymerization of Indene-Maleic Anhydride, Engineering Plastic Compounds and Accelerator-Free crosslinking of X-NBR. Currently, he is a R&D Director and Senior Fellow of Personal Protective Equipment (PPE) and its related technologies at Midori Anzen.



Dr. Wava Truscott, Truscott MediSci Associates, USA

Title: How and Why Surgical Gloves Need to Improve Someday: Is It Time for Surgical Specialty Gloves

Wava Truscott obtained her Doctorate in Comparative Pathology with an emphasis in Microbiology & Immunology from the University of California, 1989; and her Master's in Business Administration from University of La Verne, CA. 1992. She has 30 years of experience in medical device safety, clinical education, laboratory testing, and infection prevention with most of those years devoted to medical gloves, and other PPE. She now has her own company: Truscott MedSci Associates, LLC., consulting, educating, regulatory submissions.



Dr R Groves, University of Cambridge, UK

Title: Former Movement and Coagulant Leakage (Wash-off) in Coagulant Dipping

Bob Groves obtained an honours degree in Chemistry from Liverpool University in 1968. He completed his PhD in polymer physics at the same university in 1971. He then joined Revertex Ltd, which eventually became Synthomer plc, where he was part of the R&D group developing polymers for a variety of applications. In his last 10 years of work, he concentrated on the science and technology of nitrile latex for dipping. Bob has many publications on polymer related topics. These have included papers at the IRGCE in 2004, 2006, 2010 and 2016. After retirement, he became a visiting researcher at the BP Institute in Cambridge University, carrying out practical and theoretical studies of the dipping process with Prof. Routh.



Dr. Chan Yin Thai, Budget Champ, Malaysia

Title: Investigating Different Accelerator-Free Approaches to the Production of Nitrile Latex Dipped Gloves

Chan Yin Thai obtained his Bachelor's degree in Chemistry from the University of California, Berkeley in 2001 and his Ph.D. in Physical Chemistry from the Massachusetts Institute of Technology in 2006. While new to rubber science and technology, he has over 20 years of experience in nanoparticle science, with more than 50 publications in high impact factor journals and over 40 invited talks at international conferences/workshops in the field. He currently serves as the Scientific Director of Budget Champ Sdn Bhd, Cosmic Discovery Sdn Bhd and Cosmic Polymer Sdn Bhd.



Dr. Lee Siang Yin, Malaysian Rubber Board, Malaysia

Title: New Preservation System for Latex Concentrate Production using Palm-based Polymeric Surfactants

Siang Yin LEE obtained her Doctorate in Polymer Chemistry from University of Malaya (UM) in 2009. She started her career as a lecturer in the Department of Pharmaceutical Chemistry, School of Pharmacy at International Medical University (IMU). She joined Malaysian Rubber Board (MRB) as a Research Officer since 2016 till the present. She has published 32 papers and 4 patents.



Dr Zhenli Wei, Synthomer, Malaysia

Title: Novel NBR Latex Technology for Better Sustainability of Nitrile Gloves

Dr. Zhenli WEI is the Vice President of Innovation for Performance Elastomer Division of Synthomer PLC, where he is leading the Division's global innovation teams in Germany, France, USA, China and Malaysia to develop new SBR and NBR latex based products for Healthcare, Foam, Paper, Carpet and Elastomer Modification applications. Zhenli completed his undergraduate and Master degree studies at Zhejiang University in China, and then obtained his Ph. D. in Chemical Engineering at the University of Waterloo in Canada.



Ranvir S Virdi, Robinson Brothers, UK

Title: Advances in Safer Chemical Usage for Glove Dipping: Effects of Rubber Accelerator Particle Size on Prevulcanization of NR Latex

Ranvir has over 40 years of experience in R&D of organic sulphur chemicals, including their use in the chemistry and technology of rubber vulcanisation. He is qualified to BSc (Hons), MSc, CChem, CSci and has taken out patents and presented papers at international conferences. His current role as the manager of the polymer additives laboratory team includes practical formulation development based on sustainable accelerators and providing technical service associated with the introduction of new materials and technology to the polymer and latex industries worldwide.



Dr Eng Aik Hwee, K & W Training and Consulting, Malaysia

**Title: Some Unique Properties of Polyisoprene Latex** 

Eng Aik Hwee obtained his engineering doctorate in Functional Materials from Tokyo University of Agriculture & Technology in 1994. With more than 30 years of experience in the latex and rubber glove research, he has conducted more than 500 hours of technical training to many companies and associations since 2015, focusing on rubber glove manufacturing related subjects. In addition, he has also given several educational talks on medical gloves in relation to infection control to the healthcare workers in China, India, Myanmar, Vietnam, and Japan. He is a fellow of Malaysian Institute of Chemistry.



Shabinah Filza, Malaysian Rubber Board, Malaysia

Title: Optimizing Energy Efficiency in Glove Product Manufacturing

Shabinah Filza Mohd. Sharib is a research officer under the Latex Science and Technology Unit, Malaysian Rubber Board (MRB). She earned her Bachelor of Science with Honours in Applied Chemistry from the Universiti Teknologi MARA (UiTM) and joined MRB in 2008. Her areas of expertise are latex technology and application of non-rubber materials in latex medium, renewable energy and energy efficiency in latex product industries. In 2013, she was offered to continue her Master Degree on Energy Studies with the University of Queensland under Glencore Xstra (International Energy Center) and MRB scholarships. She graduated from the university in August 2015 with Master in Energy Studies focussing on Industrial Ecology, Industrial Symbiosis and Energy Efficiency in latex product industries. She has contributed to several publications and conference papers related to natural rubber latex technology in various national and international conferences.



Roberto Benetello, Business Council for Sustainable Development, Malaysia

Title: Board Directors' and Senior Mangers' Duties and ESG Consideration in Decision-making

Roberto is the Executive Director of the Business Council for Sustainable Development Malaysia, the Malaysian chapter of the World Business Council for Sustainable Development (WBCSD). With over twenty-five years' experience, Roberto's career includes several senior general management positions with both fortune-500 companies and start-ups, in countries such as Italy, UK, Spain and currently in Malaysia. His main skills include corporate sustainability, international relations and business facilitation, strategic business planning and general management. Roberto holds an MBA from SDA Bocconi in Italy and an MA from Lincoln University in the UK.



Dr. Karma Tashi Choedron, Nottingham University Malaysia Campus, Malaysia

Title: ESG and Compliance to ILO indicators of Forced Labor by the Glove Industry

Before joining the University of Nottingham Malaysia in 2019, Dr. Karma Tashi Choedron worked as an environmental sociologist with almost two decade's experience in social audits, participatory rural appraisal and social-environmental impact assessments for sustainable forest and oil palm management; specialising in migrant workers and marginalized communities, gender, religion and development. A civil engineer by training, Dr. Karma @ Savinder graduated with a doctorate degree in Environment and Resource Studies from Mahidol University, Thailand in 2008.



Inam Al Rahman, AGC Far East Sdn. Bhd. Selangor, Malaysia

Title: Ethical Recruitment Practices And Their Significance For The Malaysian Industry

To Recruit Foreign Workers

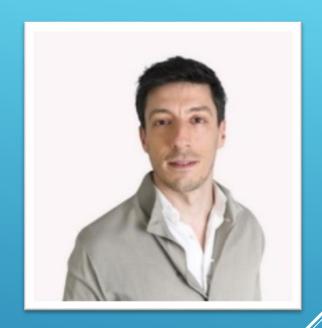
Inam Al Rahman, an Auditor, Consultant, Advisor & Trainer for more than 20 years. APSCA registered auditor by profession qualified Lead Auditor for SMETA, WRAP, RBA & ISO 9001, performed more than 800 Social compliance audits in the region. Trainer, subject matter expert for Social Compliance, Fair Recruitment, Foreign Worker Engagements, Recruitment Fee Estimations and Verification, Recruitment Agency Development, Supply Chain Security and Human Resource Management Systems. Practical exposure to design and conduct surveys and studies for Estimations of Recruitment Fee and its Verification, Foreign Workers Interviews and Fair Recruitment Due Diligence systems. HRDF TTT Malaysia qualified Trainer, A-PROCS USA & HABC-UK Approved trainer to conduct accredited and professional training courses.



Dr. Stefano Savi, GPSNR, Malaysia

Title: A Multi-stakeholder Approach to Natural Rubber Sustainability

Stefano Savi is the Director of the Global Platform for Sustainable Natural Rubber (GPSNR), a multi-stakeholder initiative aiming to build a fair, equitable and environmentally sound natural rubber value chain. Before this, Stefano was the Global Outreach and Engagement Director for the Roundtable on Sustainable Palm Oil, overseeing the design and implementation of RSPO Global Outreach and Engagement strategy.



Dr. Lekshmi Nair, International Rubber Study Group, Singapore

Title: Sustainable Rubber Industry: Way Forward to the Next Normal

Lekshmi Nair holds a PhD in Economics and alumnus of the University of London and the Cambridge University. Currently She is head of Economics and Statistics at IRSG and spearheading data analytics and forecasting, projects, and publications of IRSG. She has extensive experience in commodity research and in the rubber industry. She represents IRSG in multistakeholder commodity dialogues, ISO/TC 45 meetings, and discussions on sustainability standard and trade at the national and global levels. She is member of EU's expert group on CRM assessment.

