



ENGINEERING A SMARTER INDUSTRY

Industry 4.0

28th Annual Engineering Conference

Friday, 05th November 2021
Villa Bighi, Kalkara

Organised by



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Conference Programme

08:30 **Registration**

09:00 **Opening Address**

Ing. Malcolm Zammit
President | Chamber of Engineers

09:15 **Hyper-Efficient Buildings in the Industry 4.0 Era**

Ing. Simone Muscat
Technical Manager & Solutions Architect | Harbour Solutions Ltd.

Ing. Ruben Curmi
Managing Director | Harbour Solutions Ltd.

09:45 **From Digital Twins to Digital Triplets**

Prof. Alexiei Dingli
Associate Professor | Faculty of ICT, University of Malta

10:15 **Investing in Technological Innovations**

Mr Glen Mifsud, CFA
Portfolio Manager | Bank of Valletta

10:30 **Coffee Break**

11:00 **Transforming the Traditional Manufacturing Process through Digitization and Digital Technologies**

Dr Laurent Filipozzi
Site General Manager | STMicroelectronics Malta

11:30 **MCST FUSION Funding**

Dr Melchior Cini
Senior Executive - R&I Programmes Manager |
Malta Council for Science and Technology

Ing. Roger Galea
Switches Product Line R&D Manager | Carlo Gavazzi Ltd.

- 11:45** **IoT - The Technology at the Centre of Industry Transformation**
Mr Kenneth Spiteri
Director of Business Innovation | Melita Ltd.
Ms Mireille Muscat
Head of Marketing | Melita Ltd.
- 12:15** **AgriTech: Automating Agriculture
- Some Challenges and Solutions**
Dr Joshua Ellul
Senior Lecturer | Faculty of ICT, University of Malta
- 12:45** **Impacting the Circular Economy**
Ms Dana Farrugia
CEO | Tech.mt
- 13:00** Lunch
- 14:15** **A Holistic Approach to Cybersecurity:
Protection of Critical Infrastructure from Current
and Future Cyberattacks**
Dr Umberto Cattaneo
EURA Cybersecurity Business Consultant Lead | Schneider Electric
- 14:45** **AIR SAVE: A Smart and Sustainable Solution
for Compressed Air Systems**
Dr Inġ. Paul Refalo
Senior Lecturer | Faculty of Engineering, University of Malta
- 15:15** **Infrastructure to Evolve to Industry 4.0**
Mr Juan Carlos Sanchez Alvarez
Sales Representative for Spain East and Malta | IBM Systems
- 15:45** **Education for Industry 4.0 - Icarus Project**
Dr Inġ. Emmanuel Francalanza
Head of Department & Senior Lecturer | Faculty of Engineering, University of Malta
- 16:15** Closing Remarks

Conference Speakers

Ing. Malcolm Zammit

President | Chamber of Engineers

Ing. Malcolm Zammit has been elected President of the Chamber of Engineers in March 2021. He is a warranted Mechanical Engineer who graduated from the University of Malta in 2013. Since then, he has been employed with a local medical device manufacturing company in the Research & Development (R&D) function. He presently holds the position of Senior Principal R&D Engineer where he is a product design owner of several product families and is responsible to execute design and development projects meant to sustain products during their lifecycle.



Malcolm was elected to the Executive Council in 2019 as Secretary General and has since then embraced the Chamber's mission to advance the engineering profession. He firmly believes that the profession is critical within the fabric of society and therefore seeks to showcase the various positive aspects of the profession to increase awareness and respect for the engineer and engineering.

Ing. Simone Muscat

Technical Manager & Solutions Architect | Harbour Solutions Ltd.

Ing. Simone Muscat is chief technical officer at Harbour Solutions, she is responsible for the design and delivery of modern Building Management Systems using latest technology, software integration, IOT technology and the extensive use of data analytics.



Before joining Harbour Solutions in 2015, she worked for 10 years in the telecommunications industry at GO plc where she managed many mission-critical projects involving the integration of engineering and IT systems and the handling of large volumes of sensitive data. Simone furthered her experience as a Software Development Manager heading a highly qualified team which delivered Windows products in a highly competitive market.

She graduated from the University of Malta in Electrical Engineering in 2003 and subsequently read for a Masters in Photonics from the University of Essex, U.K. delivering her dissertation at QinetiQ. She recently completed a post-graduate certificate in Big Data and Artificial Intelligence at the University of Malta.

Ing. Ruben Curmi

Managing Director | Harbour Solutions Ltd.

Ing. Ruben Curmi, father of three and entrepreneur is the director at Harbour Solutions – a company that designs and delivers Building Management System solutions. From its establishment in 2013, he has led the company which grew from a start-up to the well-established and reputable BMS supplier of today.



Before joining Harbour Solutions, he spent two years as Chief Information Officer at Yellow Pages which he joined after a 16-year spell at GO plc. At Go he was responsible for the management systems that are used to monitor and control telecommunications equipment.

He graduated in electrical engineering from the University of Malta in 1994 and went on to obtain his warrant in 1998. He subsequently read for a Masters in Entrepreneurship from the University of Malta in 2014. He is a visiting lecturer on Building Management Systems at the University of Malta and the Chairperson of the National Accreditation Board.

Prof. Alexiei Dingli

Associate Professor | Faculty of ICT, University of Malta

Prof Alexiei Dingli is a Professor of Artificial Intelligence (AI) at the University of Malta. He has been conducting research and working in the field of AI for more than two decades, assisting different companies to implement AI solutions. His work has been rated World Class by international experts and he won several local and international awards (such as those by the European Space Agency, the World Intellectual Property Organization and the United Nations to name a few).



He has published several peer-reviewed publications and formed part of the Malta.AI task force, which was set up by the Maltese government, aimed at making Malta one of the top AI countries in the world.

Mr Glen Mifsud, CFA

Portfolio Manager | Bank of Valletta



Glen Mifsud is a portfolio manager at BOV Asset Management, the asset management arm of BOV Group. The company manages both local and international retail funds as well as institutional portfolios. Glen graduated from the University of Malta with an Honours Degree in Banking and Finance. He furthered his studies by reading for the CFA certification, the charter has one of the highest levels of global legal, regulatory and academic recognition of finance-related qualifications. Having held positions in both the advisory and portfolio management sides of the industry, Glen has gained vast insight into the way the investment profession can be utilised for the ultimate benefit of the society. Glen is a staunch public advocate of market integrity, long-termism, diversity, human dignity and education standards, as necessary ingredients to building a sustainable and healthy profession. Away from finance, Glen believes that physical activity is the most effective way to ensure a healthy personal development both mentally and physically.

Dr Laurent Filipozzi

Site General Manager | STMicroelectronics Malta



Dr. Filipozzi graduated in 1994 with a PhD of Science in Chemistry-Physics on the magneto-electrical properties of nano-structures, from Bordeaux Science University, France. With more than 23 years of experiences in Semiconductor Industry, Dr. Filipozzi has held senior management roles in France, Singapore, and Malta. As Plant Head at Soitec, he set up the 300mm Plant & Operations in Singapore. As VP of Site Singapore with Infineon Technologies Asia Pacific, Dr. Filipozzi led numerous projects to drive Singapore Plant as a “Centre of Excellence for Test Engineering and Operations” within the Infineon network of factories globally. He played a critical key role in transforming the Singapore Plant into a fast and agile Smart Factory (Industry 4.0). In 2020, Dr. Filipozzi was appointed Site General Manager at STMicroelectronics Malta, and is now driving the plant’s transformation to Advance Manufacturing through Industry 4.0 standards.

Dr Melchior Cini

Senior Executive - R&I Programmes Manager

Malta Council for Science and Technology



Dr. Melchior Cini is currently employed by the Malta Council for Science and Technology as Senior Executive - R&I Programmes Manager. He oversees the overall management of MCST national R&D&I calls. He is currently the Maltese alternate contact point for Cooperation for Science and Technology (COST) and served as the Maltese Joint Research Council (JRC) Contact Point.

He obtained his PhD in synthetic chemistry / anti-cancer pharmacology at the University of Nottingham, United Kingdom. He published novel research articles in science (chemistry and oncology) as primary and corresponding author in several peer-reviewed high impact factor journals.

Ing. Roger Galea

Switches Product Line R&D Manager | Carlo Gavazzi Ltd.



Roger Galea is a warranted engineer with almost 30 years experience in industry. He spent the first 10 years in Test and Process Engineering in the manufacturing of power electronic devices. This was followed with a career in the product development area, setting up a new Research and Development department. In this role, Roger built a new team of talented engineers to deploy innovation into product solutions, starting from concept and developing to industrialisation. Focusing on a wide range of activities related to New Product Development,

Roger has contributed to several patents granted in the area of motor control. Over these years, Roger has also been working on Innovation Management within the Chamber of Commerce and has engaged, in collaboration with the UM, in research projects for new potential developments. Recently he furthered his studies through a Masters in Knowledge-Based Entrepreneurship, to strengthen his education in achieving business success through innovation.

Mr Kenneth Spiteri

Director of Business Innovation | Melita Ltd.

Kenneth Spiteri is the Director of Business Innovation within Melita, where his current focus is the Internet of Things. Kenneth's professional background is in the Financial Services sector, having held senior positions with international banks and financial services providers. After 15 years in Financial Services, he ventured into the Telecommunications and Technology sector, becoming CEO of PTL International.



As a company director and in an executive capacity Kenneth has been involved in, and spearheaded, a number of mergers and acquisitions in Financial Services, Telecommunications, and Technology, Retail & e-commerce sectors at both a local and international level. Kenneth's approach to business revolves around customer delight as a key component to scale businesses beyond the Maltese shores. Kenneth is married and has two boys; in his free time his passion is enjoying the great outdoors with his family, whatever the season and the weather.

Ms Mireille Muscat

Head of Marketing | Melita Ltd.

Having graduated from the University of Malta with a BSc in Engineering, Mireille gained her MSc in Engineering from RWTH Aachen University in Germany. After engineering roles in Germany and Malta, Mireille joined the Telecommunications industry where she applied her engineering, project management and analytical skills to the field of product management. In 2011 Mireille obtained a Chartered Postgraduate Diploma in Marketing and Strategic Leadership from the Oxford College of Marketing, a qualification which provided an invaluable theoretical framework for her current role as Head of Marketing. Today Mireille leads a diverse team of Product Managers, Data Analysts, Digital Marketers, and communications specialists, she places particular emphasis on digitalisation across all aspects of the customer journey.



Mireille is a board member of CTAM Europe and The Melita Foundation. In her spare time, she enjoys running with her dog, Momo, and travelling to far flung destinations - or more recently, planning travel to far flung destinations.

Dr Joshua Ellul

Senior Lecturer | Faculty of ICT, University of Malta

Dr Joshua Ellul is a Senior Lecturer in the Department of Computer Science within the Faculty of ICT. His research activities are focused around the Internet of Things and Blockchain domains including aspects of virtual machine design, programming frameworks, applications and regulation.



Ms Dana Farrugia

CEO | Tech.mt

Dana Farrugia is the CEO of Tech.mt, a Foundation established in partnership between the Government of Malta and The Malta Chamber of Commerce, Enterprise and Industry to promote the National strategy for Technology & Innovation. She is engaged in ensuring sector growth for technology and innovation, primarily focusing on AI, blockchain, IOT, cloud services, data analytics, software development, robotics, cyber security and research on innovative solutions. Dana Farrugia has worked in the telecoms industry for fourteen years, mainly shaping the mobile, fixed, internet, tv, fibre and IP networks in Malta.



She has also worked at the Ministry for the Economy, Investment and Small Businesses for six years where she has developed an in-depth understanding of the needs of different local industries and also gained a sound exposure on the potential of various international markets. Dana Farrugia is also a Director at Malta Enterprise and at the Malta Start-up Foundation.

Dr Umberto Cattaneo

EURA Cybersecurity Business Consultant Lead
Schneider Electric.



Dr. Cattaneo graduated in physics cybernetics at Milano University with experience of more than 30 years in high tech multinational companies in several roles. He worked on mathematical modeling, avionics, defense solutions, command and control systems, GIS, SCADA, ITS (Intelligent Traffic Systems), GMDSS networks, VTS (Vessel Traffic System) systems, secure communications, and OT cybersecurity in Italy and abroad. At Schneider Electric, I'm responsible for EURA OT cybersecurity solutions for industrial systems and critical infrastructures. PMP (Project Management Professional), CompTIA Security+, and ISA99/IEC62443 certified specialist. He is a member of: ISA, IEC (WG3/TC65), Clusit, PMI and ANIE. Professor at Bologna Business School, Roma3 University on OT cybersecurity.

Dr Inġ. Paul Refalo

Senior Lecturer

Faculty of Engineering, University of Malta



Dr Inġ. Paul Refalo graduated with first class honours in Mechanical Engineering from the University of Malta in 2007. After working for a building services consultancy firm, in 2009 he was appointed Research Engineer at the University of Malta on a project financed by the Malta Council for Science and Technology. He obtained his PhD in mechanical engineering in 2015 with a thesis on Solar Desalination of Seawater. Dr Inġ. Refalo joined the DIME as an academic in 2012 and is currently a Senior Lecturer. His main research interests include sustainable manufacturing and resource efficiency in industry.

He has supervised several engineering projects, at BEng, MSc, and PhD levels and has published and presented several papers in international journals and conferences related to the sustainability of compressed air consumption and injection moulding, energy and resource efficiency in manufacturing and sustainable water treatment. Dr Refalo is registered as an Energy Performance of Buildings Assessor and as an Energy Auditor.

Mr Juan Carlos Sanchez Alvarez

Sales Representative

IBM Systems



Juan Carlos Sanchez Alvarez is a Computer Engineer who graduated from Universitat Politecnica de Catalunya – Spain. He has been working for more than 25 years in the IT sector in different areas (22 years in IBM Spain) in the following roles:

- IT Architect for Software development projects (1998 - 2005)
- Project Manager for Complex Projects on Infrastructure (2005 - 2010)
- Delivery Project Executive for IBM GTS (2010 - 2020)
- IBM Systems Technology Group Sales Representative

Juan Carlos was the responsible of IBM GTS business and services (Infrastructure Managed Services) for Malta since 2011 till 2020. On 2020 he moved to the IBM Systems Group to manage the Infrastructure Hardware offering on Spain East and Malta (deeply convinced that IBM Servers and Storage products are the best products on the market).

Dr Inġ. Emmanuel Francalanza

Head of Department & Senior Lecturer

Faculty of Engineering, University of Malta



Dr Inġ Emmanuel Francalanza is the Head of Department of Industrial and Manufacturing Engineering (DIME). He is an experienced researcher and in the past years has worked on a number of funded projects (including MCST R&I, ERDF and KA2 Erasmus+ projects). Before joining the University of Malta, he was employed by Methode Electronics Malta Ltd, where he worked in the fields of both design and manufacturing. His doctoral research involved the investigation of complex issues relating to developing AI based support for factory planners during the design of factories and their underlying manufacturing systems.

Dr Inġ Francalanza currently carries out research in the field of digital manufacturing focusing on developing methods and tools to support industry in implementing “Industry 4.0” technologies. This involves the design and implementation of digital technologies within industrial automation systems and transforming traditional manufacturing machines into cyber physical systems and collaborative workspaces.



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We are hiring Engineers and Technicians!

STMicroelectronics began its operations in Kirkop, Malta in 1981. This plant, one of STMicroelectronics' Back-End plants, quickly became an industrial leader in Malta, helping to drive the country's industry and to diversify its economy.

Production

STMicroelectronics Malta is an Advanced Manufacturing Plant, focusing its operations on high-value worldwide standard products. Among the over 300 different products manufactured in STMicroelectronics Malta, are some of the most advanced products in the microelectronics industry, including: Microcontrollers, Microprocessors, System-in-Package (SiP), and Micro-Electro-Mechanical Systems (MEMs).

Vision

At STMicroelectronics Malta we strive for continuous improvement, ensuring we reach our customers' requirements and strengthening our business strategy. In this new manufacturing era, the Plant's vision is to transform into an Industry 4.0 Plant, through the implementation of Digitization, Data Analytics, Artificial Intelligence, Automation and Robotization.

Our technology starts with you

The selected candidates shall be provided with the opportunity to learn about our manufacturing processes, such as plasma cleaning, moulding, wire bonding, AOI (Automated Optical Inspection), X-Ray inspection and other advanced manufacturing processes.

Contact:

recruitment.malta@st.com

Vacancies

Do you have a passion for Innovation and Technology? We are looking for qualified individuals who have an aptitude for technology and engineering, and who have the drive and ambition to work in one of the leading Semiconductor Manufacturing plants. STMicroelectronics Malta is currently recruiting and we would like to hear from you!

If you are interested in a career with us, you may search our vacancies in our website

<https://stcareers.talent-soft.com/> and select Malta as location. You may apply directly through the website or contact our Recruitment team on recruitment.malta@st.com or call us on **2368 2214**.



Digitization and IoT



Big Data and Artificial Intelligence



Automation and Robotization
24hr support excellence