



## Reliability and Prognostics Health Management of Microelectronics Forum

# 微電子的可靠性與故障預測健康管理論壇

Date 日期 : 16 / 10 / 2023 (Monday 星期一)

Time 時間 : 10:30am – 12:30pm

Venue 地點 : the STAGE, Halls 5BC, Hong Kong Convention & Exhibition Centre

香港會議展覽中心展覽廳 5BC the STAGE

Language 語言 : English with Simultaneous Interpretation in Putonghua

英語 ( 附設普通話即時傳譯服務 )

Remarks 備註 : Free Admission (Please Click <u>HERE</u> or Scan the QR Code to register)

免費入座(請「按此」或掃描二維碼登記)



Time 時間	Programme 程序表		
10:15am – 10:30am	Registration 登記		
10:30am – 10:35am	Welcome Remarks 歡迎辭		
	Ir Professor Winco Yung, Centre for Advances in Reliability and Safety 產品可靠性暨系統安全研發中心 <b>容錦泉教授工程師</b>		
10:40am – 11:10am	Reliability Assurance Based on Digital Twins in Microelectronics: Do		
	We Have Sufficiently Accurate Material Models?  A. JAMES CLARK SCHOOL OF ENGINEERING		
	基於微電子數位孿生的可靠性保證:我們有足夠準確的材料模型嗎?		
	Speaker 演講嘉賓:		
	Professor Abhijit Dasgupta, ASME Fellow/Jeong H. Kim Professor, Mechanical Engineering Department, Center		
	for Advanced Life Cycle Engineering (CALCE), University of Maryland, College Park		
	ASME 院士/馬里蘭大學帕克分校 Center for Advanced Life Cycle Engineering (CALCE) 機械工程系 Jeong H.		
	Kim 教授 Abhijit Dasgupta 教授		

## Organisers 主辦機構:

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Time 時間	Programme 程序表	
11:15am – 11:35am	Reliability & Performance Monitoring of Thermal Imaging Sensors 熱成像傳感器的可靠性和效能監控	MERIDIAN Innovation
	Speaker 演講嘉賓: Dr Stanislav Markov, Director, Meridian Innovation Limited 邁瑞迪創新 董事 Stanislav Markov 博士	
11:40am – 12:00noon	How SEMI Standards Can Help Enhance Safety and Quality of Semiconductor Manufacturing 如何善用《半導體標準》以優化半導體設備之品質安全	intertek Total Quality. Assured.
	Speaker 演講嘉賓: Mr Jason Ho, Vice President, Electrical, Intertek Hong Kong 天祥公證行有限公司 電器及無線產品 副總裁 何彥名先生	
12:05pm – 12:20pm	Panel Discussion and Q&A Session 討論及問答環節  Moderator 主持: Dr Gary Wong, Assistant General Manager, Centre for Advances in Reliabilit 產品可靠性暨系統安全研發中心 副總經理 王澤南博士	y and Safety

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Last Update: 10 October 2023





## Speaker Profile 講者簡介

**Professor Abhijit Dasgupta**, ASME Fellow/Jeong H. Kim Professor, Mechanical Engineering Department, Center for Advanced Life Cycle Engineering (CALCE), University of Maryland, College Park

ASME 院士/馬里蘭大學帕克分校 Center for Advanced Life Cycle Engineering (CALCE)機械工程系 Jeong H. Kim 教授 **Abhijit Dasgupta 教授** 

Professor Abhijit Dasgupta is Jeong H. Kim Professor of Mechanical Engineering at the University of Maryland (UMD), with research experience in the microscale and nanoscale mechanics and reliability physics of engineered materials used in conventionally and additively manufactured heterogeneous flexible electronic systems and intelligent microsystems. He holds a Ph.D. in Theoretical and Applied Mechanics from the University of Illinois at Urbana-Champaign (UIUC), and has been a principal investigator at the Center for Advanced Life Cycle Engineering (CALCE) at UMD for over 30 years, conducting research in reliability physics, design for reliability, accelerated stress testing, and real-time health management. He has published over 300 articles and conference papers; served on editorial boards of three international archival journals; presented



over 50 workshops and short courses; helped form research and educational roadmaps for the electronics industry, and provided consulting services to numerous industry leaders. He has presented numerous keynote talks at international conferences, received 6 best-paper awards and received 8 major awards in recognition of his research and educational contributions. He is an ASME Fellow, past Chair of the ASME Electronic and Photonic Packaging Division (EPPD), past member of the ASME Design, Manufacturing and Materials Segment Leadership Team (DMM-SLT) and Current Chair of Reliability Technology Working Group in the Heterogeneous Integration Roadmap (HIR) Team sponsored by IEEE/ASME/SEMI/IEPS/EDS.

Abhijit Dasgupta 教授是馬里蘭大學(UMD)機械工程系 Jeong H. Kim 教授,在微尺度和納米尺度力學以及用於傳統和增材製造的異構柔性電子系統和智能微系統的工程材料可靠性物理學方面擁有研究經驗。他擁有伊利諾大學厄巴納-香檳分校(UIUC)理論與應用力學博士學位,並在 馬里蘭大學 CALCE 擔任首席研究員 30 多年,在可靠性、加速壓力測試和實時健康管理從事可靠性物理、設計等方面的研究。他發表了 300 多篇文章和會議論文;曾擔任三個國際檔案期刊的編輯委員會成員;舉辦了 50 多個研討會和短期課程;幫助制定電子行業的研究和教育路線圖,並為眾多行業領導者提供諮詢服務。他在國際會議上發表過多次主題演講,獲得 6 項最佳論文獎,並獲得 8 項主要獎項,以表彰他的研究和教育貢獻。他是 ASME 院士、ASME 電子與光子封裝分會(EPPD)前任主席、ASME 設計、製造和材料分部領導團隊(DMM-SLT)前任成員,及由 IEEE/ASME/SEMI/IEPS/EDS 贊助的異質整合藍圖(HIR)團隊可靠性技術工作組的現任主席。

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## Dr Stanislav Markov, Director, Meridian Innovation Limited

### 邁瑞迪創新 董事 Stanislav Markov 博士

Dr Stanislav Markov is a director and scientist of Meridian Innovation Ltd, Hong Kong where he oversees R&D, aspects of mass production, and customer support. His career in semiconductor industry spans over 25 years, including ASIC design at Cadence Design Systems, and 13 years in academia, at the forefront of nano-scale CMOS transistor modelling and simulation. He completed his Ph.D. from the University of Glasgow, UK, with distinction, and is a winner of the IEEE Ed Nicolian award in 2007. Before joining Meridian Innovation in 2019, Dr Markov was a research assistant professor at The University of Hong Kong.



Markov 博士是香港邁瑞迪創新的董事兼科學家·負責研發、大規模生產和客戶支援方面的工作。

他在半導體行業的職業生涯超過 25 年,包括在 Cadence Design Systems 進行 ASIC 設計,並在學術界工作了 13 年,走在納米級 CMOS 晶體管建模與模擬的最前沿。他以優異的成績在英國格拉斯哥大學獲得博士學位,並於 2007 年獲得 IEEE Ed Nicolian 獎。Markov 博士在 2019 年加入邁瑞迪創新之前是香港大學的研究助理教授。

## Mr Jason Ho, Vice President, Electrical, Intertek Hong Kong 天祥公證行有限公司 電器及無線產品 副總裁 何彥名先生

Mr Jason Ho has over 20 years' experience in the assurance, testing, inspection and certification industry and has been instrumental in developing a range of quality assurance for the electronic, textile, apparel and green building sectors. He provides professional consultancy service for customers

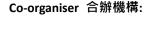
and industry stakeholders with Total Quality Assurance solutions, adding value to their R&D process and supply chains. Mr Ho is actively contributing to the society and industry by serving as the Executive Committee Member of The HK Electronic Industries Association Limited (HKEIA), the Executive Board

Member of the HK Medical and Healthcare Device Industries Association (HKMHDIA) and the Advisory Committee for Electronics/Electrical Appliances Industries of HK Trade Development Council (HKTDC)



and Technology Validation Initiative of HK Science and Technology Parks Corporation (HKSTP). Mr Ho received his MBA from the Chinese University of Hong Kong and Bachelor of Science Applied Chemistry (major in environmental study) from the City University of Hong Kong. Besides, he attended an executive training program Management of Technology Program in Haas School of Business, University of California Berkeley, USA.

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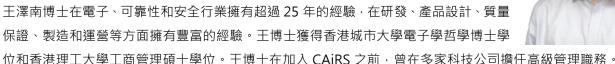


何彥名先生現為天祥公證行電器及無線產品副總裁·擁有逾20年之檢測認證行業經驗·帶領團隊為各行各業提供品質認證服務·涵蓋電子無線、紡織品和綠色建築等行業。何先生富有項目管理經驗,為客戶並各品牌提供專業諮詢服務·優化研發流程並攜手締造商機。何先生熱心參與業界活動,為業界提供專業意見,擔任香港電子業商會(HKEIA)、香港醫療及保健器材行業協會(HKMHDIA)之執行委員,亦為香港貿易發展局(HKTDC)電子/電器行業和香港科技園(HKSTP)技術驗證計劃之諮詢委員。何先生具備豐富專業知識,持有香港中文大學MBA學位和香港城市大學應用化學榮譽理學士學位(主修環境研究)並完成美國加州大學哈斯商學院(Haas School of Business)高級技術管理人員培訓計劃。

## Moderator Profile 主持簡介

Dr Gary Wong, Assistant General Manager, Centre for Advances in Reliability and Safety 產品可靠性暨系統安全研發中心 副總經理 王澤南博士

Dr Gary Wong has over 25 years of experience in the electronics, reliability and safety industry. He has seasoned experience in variety of capacities including R&D, product design, quality assurance, manufacturing and operation. Dr Wong received his Ph.D. in electronic from the City University of Hong Kong and MBA from The Hong Kong Polytechnic University. Prior to joining CAiRS, he held senior management positions in various technology companies.





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