Introduction of S. Joe Qin, President and Wai Kee Kau Chair Professor of Data Science at Lingnan University

Professor S. Joe Qin has a distinguished and inspiring career record, marked by outstanding achievements in both the world of academia and the field of industry.

He has won international recognition for his pioneering research work in areas ranging from automation and engineering to technology and data science, all the while maintaining a sharp focus on the importance of finding solutions to the type of real-world problems faced by major names in the high-tech and manufacturing sectors.

The ability to adapt, a willingness to seek out new challenges, and a talent for organisation and leadership have seen him hold a series of senior positions at highly respected institutions in the United States and Hong Kong.

And, each step of the way, he has made clear his dedication to advancing all-round education through a commitment to creating and capitalising on opportunities and ensuring that graduates have the skills and positive outlook needed to succeed in an ever-changing workplace.

A native of Shandong province where he showed an early aptitude for mathematics and physics, Professor Qin was admitted to Beijing's prestigious Tsinghua University at the age of 16 to study automation.

He obtained his B.S. and M.S. degrees there before moving to the United States in 1989 to take up a full scholarship to pursue a PhD in chemical engineering at the University of Maryland, College Park.

On completing this qualification in June 1992, he followed through on a long-held plan to gain practical experience in the world of industry by working as a principal engineer at Emerson Process Management for the next three years.

Based in Texas, he had to understand and resolve engineering problems in an environment where textbook answers didn't necessarily work. That general approach was something he went on to apply with notable success in future projects which required research discipline and on-the-spot insights.

From 1995, appointed initially as an Assistant Professor in chemical engineering at the University of Texas at Austin, but later promoted to endowed Professor, he took the chance to combine academic responsibilities with breakthrough research and regular assignments in industry.

A specific example of this was a project with Advanced Micro Devices (AMD) to develop optimisation and monitoring technology for next-generation wafer fabrication.

Realising that manufacturing conditions usually change over time, the aim was to use data from the manufacturing system to reduce defects and investigate "model predictive control", a practice known to industry before academia could fully explain it.

The resulting paper, co-authored by Professor Qin and Dr Thomas Badgwell, was the first to provide a unified framework to reveal the principles of industrial practice.

The paper now has over 6,000 citations on Google Scholar and is considered a milestone in its domain. It is credited with playing an influential role in the automation of chemicals and semiconductor manufacturing, the diagnosis of faults and possible defects, and the development of better monitoring systems.

From 2007 to 2019, Professor Qin was the Fluor Professor of Process Engineering at the Viterbi School of Engineering of the University of Southern California. During that period, he took three years' leave to serve as Vice President and Presidential Chair Professor at The Chinese University of Hong Kong, Shenzhen.

The goal there was to establish the campus, set standards, and build an up-to-date education system geared to the needs of global citizens.

Once that was done, he moved to Hong Kong to become the inaugural Dean of the School of Data Science and Chair Professor of Data Science at the City University of Hong Kong. This allowed him to lead in a different and new discipline, one that provided the scope to work on leading-edge projects and explore the exciting new possibilities of the digital era.

To date, Professor Qin has published more 470 international journal articles, book chapters, conference papers and presentations. He is an inventor who holds 12 U.S. patents. And he is a much-in-demand speaker at seminars, short courses, industry workshops, and technical conferences around the world.

Over the years, he has advised more than 40 PhD students, and his own research interests now range from data science and analytics to smart manufacturing, machine learning, smart cities, and predictive health maintenance.

Reflecting his high standing in the academic community and beyond, Professor Qin is a Fellow of the U.S. National Academy of Inventors, of the International Federation of Automatic Control (IFAC), of the American Institute of Chemical Engineers, and of the Institute of Electrical and Electronics Engineers (IEEE), among other honours.

Most recently, he received the 2022 CAST Computing in Chemical Engineering Award, presented by the American Institute of Chemical Engineers, and the 2022 IEEE Control Systems Society Transition to Practice Award. In each case, he was the first and, so far, the only recipient of both awards to be working currently at a university in Hong Kong or Greater China.

In other respects, Professor Qin has served as Senior Editor of the *Journal of Process Control*, Editor of *Control Engineering Practice*, and as Associate Editor for several more international journals.

In assuming his new role as the President of Lingnan University, he brings a clear vision and a forward-looking agenda. His stated aim is to build on traditional strengths in liberal arts education, extend the university's research and learning by furthering international networks, and ensure faculty and students are fully conversant with use of the latest digital tools.

Mr Chairman, in view of Professor S. Joe Qin's distinguished academic leadership, pioneering contributions in technology and data science, and commitment to integrating liberal arts education with digital innovation, I am honoured to present Professor S. Joe Qin for official installation as the President of Lingnan University.

Introduction delivered by Professor Joshua Mok Ka-ho

嶺南大學校長暨韋基球數據科學講座教授秦泗釗教授簡介

秦泗釗教授功成業就，在學術界和產業界都出類拔萃，傲視同儕。

他在自動化、工程、技術和數據科學等領域的開創性研究工作備受國際推崇，亦同時致力於為高科技和製造業界別的大企業所面臨的現實問題尋找解決方案。

強大的適應能力、敢於接受新挑戰的膽識、以及在組織和領導方面的天賦才能，使他能夠先後在美國和香港多家重要機構中擔任要職。

每走一步，秦教授都明確展示他對推動全人教育的決心，他致力於創造和利用各種機會，確保畢業生能夠具備在瞬息萬變的環境中致勝所需的技能和積極的人生態度。

秦教授是山東人，自幼喜歡數學和物理，16歲時便考入著名的北京清華大學主修自動化系統。

他於清華大學取得本科和碩士學位，1989年，他獲得全額獎學金前往美國馬里蘭大學（College Park）攻讀化學工程博士學位。

1992年6月，秦教授完成了博士學位課程，往後三年，他在艾默生製程管理公司擔任首席工程師，實現了他一直以來期望在工業領域獲得實踐經驗的計劃。

在德克薩斯州工作的時候，他面對的工程問題不一定能從教科書上找到答案，他必須學習去理解和應對。他其後將這種方法成功地應用在需要學術知識和現場分析的項目中。

1995年，秦教授被德克薩斯大學 (Austin) 任命為化學工程助理教授，後來晉升為冠名教授，期間他致力將學術責任、開創性研究和業界委托的任務結合起來。

這方面的一個具體例子是與超微半導體公司（AMD）開展的合作研究，為下一代晶圓製造開發優化和監控技術。

由於生產條件通常會隨著時間的推移而發生變化，該研究的目的是利用製造系統的數據來減少次品和研究「模型預測控制」，這是一種在學術界能夠充分解釋之前就為工業界所熟知的做法。

秦教授和Thomas Badgwell 博士合著的這篇論文首次為揭示工業實踐原則提供一個統一框架。

目前，該論文在谷歌學術搜尋上的引用次數已超過 6,000 次，被視為該領域的里程碑。它在化工和半導體製造自動化、故障和可能缺陷的診斷以及開發更好的監控系統方面發揮了具影響力的作用。

2007年至2019 年，秦教授擔任南加州大學Viterbi工程學院的Fluor過程工程學講座教授。在此期間，他休假三年，在深圳香港中文大學擔任副校長和校長講座教授。

在那裡，他的目標是建設校園、制定標準，並建立一個培育全球視野的最新教育體系。

完成這些工作後，他於2019年底辭去美國南加州大學教職來到香港，出任香港城市大學數據科學學院首任院長和數據科學講座教授。這讓他能夠專注建立另一個新學科，並有機會參與前沿項目，探索數位時代令人興奮的新可能性。

迄今為止，秦教授已發表了 470 多篇國際期刊論文、書籍章節、會議論文和演講文稿。他是一位發明家，擁有 12 項美國專利。他深受歡迎，是世界各地的研討會、短期課程、行業工作坊和技術會議爭相邀請的講者。

多年來，他指導了40多名博士生，而他自己的研究興趣範圍相當廣泛，包括數據科學及分析、智慧製造、機器學習、智慧城市和預測性健康維護。

秦教授是美國國家發明家學院、美國化工學會、國際自動控制聯合會和電機電子工程師學會（IEEE）的院士，充分反映了他在學術界以及其他界別的崇高地位。

最近，他獲得了由美國化學工程師學會頒發的2022 年 CAST 化學工程計算獎，並於同年獲IEEE頒發控制系統學會技術轉化獎。他是第一位、也是至今唯一一位目前在香港或大中華區大學工作而獲得有關獎項的學者。

在其他方面，秦教授還擔任過《程序控制學報》的高級編輯、《控制工程實踐》的編輯以及其他一些國際期刊的副主編。

秦教授在履任嶺南大學校長一職時，帶來了清晰的願景，並計劃領導嶺南大學開展極具前瞻性的工作。他的目標是強化博雅教育的傳統優勢，通過加強國際聯繫擴大大學的研究影響力和學術聲譽，並確保師生們充分掌握最新數位科技工具的應用。

主席先生，鑑於秦教授傑出的學術領導力、在技術和數據科學領域的非凡貢獻以及將博雅教育與數字創新相結合的努力，我很榮幸恭請 閣下，正式授權秦泗釗教授就職為嶺南大學校長。

簡介由莫家豪教授宣讀