

# Professor Tao Tang

## Doctor of Science *honoris causa*

### Citation

Prof Tao Tang studied at one of the finest universities in China, Peking University, as an undergraduate. Mathematics has a long tradition of excellence at Peking University, and benefitted and influenced Prof Tang's later career. He then went to another leading institution, the University of Leeds, where he obtained his PhD in Applied Mathematics in 1989.

In his long and distinguished academic career, Prof Tang has primarily engaged in computational mathematics research, with significant contributions to the error analysis of numerical methods for hyperbolic equations, the theory of spectral methods, adaptive algorithms for differential equations, high-precision algorithms for phase-field models, and computational fluid dynamics. He is a pre-eminent authority in computational mathematics, and has won numerous international awards for his outstanding research work, including the 1988 Leslie Fox Prize for Numerical Analysis, the 2003 Feng Kang Prize for Scientific Computing, the Ministry of Education's 2007 First Prize of Natural Science Awards, the 2016 Second Prize of National Natural Science Awards, and he was an 2018 Invited Speaker at the International Congress of Mathematicians (ICM). He was elected a Fellow of the Society for Industrial and Applied Mathematics (SIAM) in 2012, a Fellow of the American Mathematical Society (AMS), and an Academician of the Chinese Academy of Sciences in 2017, a Fellow of the European Academy of Sciences in 2022, and a Fellow of The World Academy of Sciences (TWAS) in 2024.

Prof Tang is an exceptionally charismatic academic leader with vision and spirit, who has held major leadership roles both internationally, and nationally in China, including as Vice President of the Chinese Mathematical Society and President of the Hong Kong Mathematical Society. He was a member of the Gauss Prize Committee of the 2022 International Congress of Mathematicians, of the Scientific Program Committee of the 2023 International Congress for Industrial and Applied Mathematics, and of the State Natural Science Award of China, and has contributed generously to his professional communities and to society as a whole.

The professor has a deep love and great passion for education, demonstrated during his years as Dean of the Graduate School and Dean of Science at the Hong Kong Baptist University (HKBU), Provost and Vice President (Academic) of the Southern University of Science and Technology (SUSTech), President of Beijing Normal-Hong Kong Baptist University (BNBU), and President of Nanfang College, Guangzhou. He was instrumental in laying a solid foundation for SUSTech as a research powerhouse, and BNBU, now a rising star on China's liberal arts education scene, and has

focused on the reform of higher education in China, spearheading a series of new ideas to stimulate and encourage original research and first-class education in China.

When the professor was Vice President of SUSTech in Shenzhen, he was also the founding Dean of the Graduate School, which launched an innovative series of joint PhD programmes with leading universities all over the world. He was a driving force in persuading the Ministry of Education to grant SUSTech PhD courses only seven years after it was set up, a record for fast approval in China. While Prof Tang was at SUSTech, the university grew rapidly in size, sophistication, and status, becoming one of the leading research universities in China, and an incubator for the scientific talents that the country urgently needs. When he was President of BNU, he took the initiative and integrated research into the liberal arts institution seamlessly, injecting new blood and life into the curriculum, and constantly upgrading tuition. He is a shining example of what an outstanding academic leader should be and do.

Prof Tang is extremely enthusiastic about mathematical education. He taught undergraduates calculus even after he became the Dean of Science at the HKBU, the Vice President of SUSTech, and the President of BNU. In 2010, he co-founded a popular, very influential mathematics magazine called Mathematical Culture, which is inspiring generations of students. He has also given talks to a wide audience on the beauty of mathematics, and its foundational nature in science and engineering.

Prof Tang is a tremendously kind, warm, and accomplished scholar and academic leader, who is considerate to everyone, always courteous, conscientious, and willing to help, treating everyone fairly and equally, whether they are fellow academics, administrative staff, students, or the population at large. His positive attitude towards life and energy make him an excellent example of what a liberal arts education can achieve - a well-educated, well-balanced person of integrity, who serves society faithfully.

Mr Chairman, in recognition of his significant contributions to science and education, I hereby present Prof Tao Tang to you for the conferment of the degree of Doctor of Science *honoris causa*.

*Citation written and delivered by Professor Xin Yao*

# 湯濤教授

## 榮譽理學博士

### 贊辭

湯濤教授本科就讀於中國頂尖學府北京大學。北大數學系素有卓越的學術傳統，其深厚的學術底蘊深刻影響並滋養了湯教授的學術發展。其後他負笈英國，於另一所頂尖學府利茲大學深造，於1989年獲授應用數學博士學位。

在漫長而卓越的學術生涯中，湯濤教授在偏微分方程的高階數值方法及計算流體力學的自適應網格方法方面作出了重大貢獻。身為計算數學領域權威的他，憑藉卓越的研究工作榮獲眾多國際獎項，包括1988年萊斯利·福克斯數值分析獎（Leslie Fox Prize）、2003年馮康科學計算獎、2007年國家教育部頒發的高等學校科學研究優秀成果獎（科學技術）自然科學獎一等獎、2016年國家自然科學獎二等獎，並於2018年受邀擔任國際數學家大會的講者。湯教授於2012年當選為工業與應用數學學會會士，2017年被任命為美國數學會院士，同年當選中國科學院院士，2022年當選為歐洲科學院院士，並於2024年當選為世界科學院院士。

湯教授是一位極具魅力的學術領袖，兼具遠見卓識與高尚精神。他在國際和國內均曾擔任重要的領導職位，包括中國數學會副理事長和香港數學學會會長。他曾是2022年國際數學家大會高斯獎評審委員會成員、2023年國際工業與應用數學大會科學項目委員會成員，以及中國國家自然科學獎評審委員，對其專業領域及社會貢獻良多。

湯教授對教育的熱忱，充分表現於他的履歷：他曾出任香港浸會大學研究院院長和理學院院長、南方科技大學副校長（學術）、北師香港浸會大學校長，及現在的廣州南方學院校長。他為南方科技大學奠定研究型大學的堅實基礎，助力北師香港浸會大學成為中國博雅教育領域的新興標竿。湯教授一直致力於推動中國高等教育改革，率先提出一系列創新理念，大大激發了中國學術界的原創研究活力與一流教育實踐。

湯教授在深圳擔任南方科技大學副校長期間，同時兼任研究院創院院長，與全球頂尖高校開創了一系列聯合博士培養項目。在他的大力推動下，南方科技大學於建校僅七年便獲得教育部批准頒授博士學位資格，創下中國高等教育史上最快審批紀錄。在他任職期間，南方科技大學在規模、科研水平與學術聲譽上實現跨越式發展，迅速成長為中國頂尖研究型大學之一，成為國家急需科研人才的重要培育基地。其後執掌北師香港浸會大學期間，他率先將科研體系無縫融入博雅教育框架，為課程體系注入創新活力與學

術厚度，持續推動教學品質升級，其卓越的學術領導力與實踐，堪稱高等教育領域的典範。

湯教授對數學教育充滿熱忱，即使在其擔任香港浸會大學理學院院長、南方科技大學副校長及北師香港浸會大學校長期間，仍堅持親自為本科生教授微積分課程。2010年，他創辦了極具影響力的《數學文化》期刊，這本廣受歡迎的雜誌持續啟迪著一代代學子。湯教授更經常舉辦講座，向公眾深入淺出地闡釋數學之美，以及數學在科學與工程領域的基礎性作用。

湯教授是一位卓越的學者與學術領袖，為人謙沖溫厚、能體恤和照護別人。無論對待學術同仁、行政人員、學生還是社會大眾，他始終保持彬彬有禮的態度。湯教授樂於助人，處事亦公正持平，因而深受大家的尊重與愛戴。他積極的人生態度與飽滿的能量，完美詮釋了博雅教育的精髓——培養德才兼備、服務社會的健全人格，堪稱人文與科學素養兼修的典範。

主席先生，為表彰其於科學與教育領域的重大貢獻，本人謹恭請 閣下頒授榮譽理學博士學位予湯濤教授。

贊辭由姚新教授撰寫及宣讀