

Brief Newsletter from World Scientific April 2018

World Scientific Pays Tribute to Our Author, Professor Stephen Hawking



Stephen W. Hawking, a giant in the scientific community, died on 14 March 2018, at the age of 76. A world-renowned physicist and cosmologist, Professor Hawking made tremendous contributions to the scientific progress. Many people think that Hawking is one of the most influential scientists and popular science writers after Einstein.

Prof Hawking is best known for his work on black holes and relativity, and

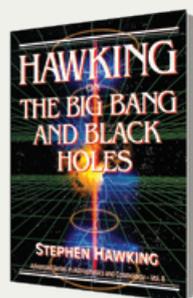
had gained fame worldwide for publishing several popular science books, including *Hawking on the Big Bang and Black Holes* and *Euclidean Quantum Gravity*.

Hawking on the Big Bang and Black Holes, contains Hawking's most important literature on black hole theory and space-time singularity. The second book, *Euclidean Quantum Gravity*, assembled his top papers on general relativity, especially quantum gravity. The achievements of Hawking in physics may not be comparable to that of Einstein or C. N. Yang, but as an ambassador of science, his contributions to the popularization of science and his influence on modern popular culture is second to none.

In his commentary "The Professor Stephen Hawking I know" 《我所认识的霍金教授》 in Ming Pao Monthly 《明报月刊》 (April 2018 Issue), Prof K K Phua, Chairman of World Scientific, said, "I still remember his words at his 75th Birthday Conference, he had said 'while there is life there is hope'. [And I believe] Professor Hawking lived a great life. He is an embodiment of perseverance and had a heart of curiosity about the world, the universe, and knowledge, as well as a deep interest in various social issues."

Hawking on the Big Bang and Black Holes

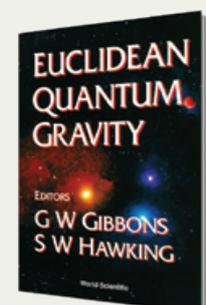
By: **Stephen Hawking** (Cambridge)



<http://www.worldscientific.com/worldscibooks/10.1142/1751>

Euclidean Quantum Gravity

Edited by: **G W Gibbons** &
S W Hawking (Cambridge)



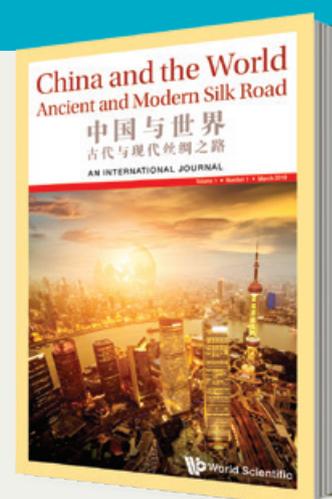
<http://www.worldscientific.com/worldscibooks/10.1142/1301>

New Journal

World Scientific launches **China and the World: Ancient and Modern Silk Road**

China and the World: Ancient and Modern Silk Road (CWSR) is a platform where the profound implications of China's efforts such as the Asian Infrastructure Investment Bank (AIIB), Regional Comprehensive Economic Partnership (RCEP), Shanghai Collaboration Organization (SCO), and the Belt-and-Road-Initiative (BRI,) are explored and discussed. Comprehensive analysis of the historical, cultural, social, economic and political impact of the aforementioned initiatives will be provided through the expertise and unique insight of global subject experts in various fields.

Journal webpage: <https://www.worldscientific.com/worldscinet/cwsr>



New Journal

China and the World: Ancient and Modern Silk Road

China and the World: Ancient and Modern Silk Road is an English academic journal that offers a unique perspective on China's progress and efforts to engage the world. Published from Singapore, the journal analyses China's relationship with the world from the vantage point of a nation-state birthed from a marriage of Confucian values and Western ideologies.

Amongst the notable papers in the journal's inaugural issue, is the paper by Professor Wang Gungwu, Chairman of ISEAS — Yusof Ishak Institute; and East Asian Institute at the National University of Singapore (NUS), entitled "Singapore and Hong Kong: Historical Images". In it, the former Vice-Chancellor of the University of Hong Kong shares his insights and reflections on the frequently compared former British colonies, and the differing trajectories of development each undertook.

The paper can be read in its entirety here:

<https://www.worldscientific.com/doi/pdf/10.1142/S2591729318500013>



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Volume 1, Issue 1

The papers in the inaugural issue attest to the extensive reach of policies and initiatives such as BRI. From culture, economics to history, traditional medicine to geopolitics, these papers are merely first indicators of the impact of such policies as Chinese engagement with the world community deepens and expands.

CWSR Vol. 1. No. 1: Table of Contents

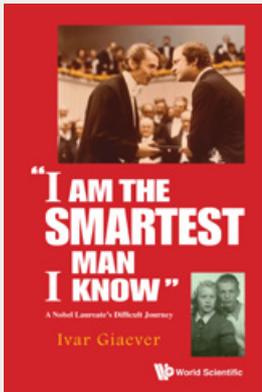
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Eye on Physics

CERN Courier reviews three World Scientific titles

We were pleased to learn that CERN Courier, the world's most authoritative international journal on high-energy physics, reviewed three World Scientific's particle and high-energy physics titles in its first book review column for 2018. The three books are: *I am the Smartest Man I Know*, *Fermilab at 50* and *Loop Quantum Gravity: The First 30 Years*.



I am the Smartest Man I Know

Ivar Giaever (Applied BioPhysics, Inc., USA)

I am the Smartest Man I Know: A Nobel Laureate's Difficult Journey tells the story of Ivar Giaever, a scientist who won the Nobel Prize in Experimental Physics in 1973. In his own words, Giaever relates an absorbing tale of how important luck and good fortune have been in shaping his life. Written with humour and often tongue-in-cheek, *I am the Smartest Man I Know* is one man's meditation on science, intellectual inquiry, and life itself.

"...a plethora of anecdotes that provide fascinating insight into a person who has made the most of his life."

CERN Courier



<https://www.worldscientific.com/worldscibooks/10.1142/10021>

Fermilab at 50

Edited by Swapan Chattopadhyay and Joseph David Lykken (Fermilab)

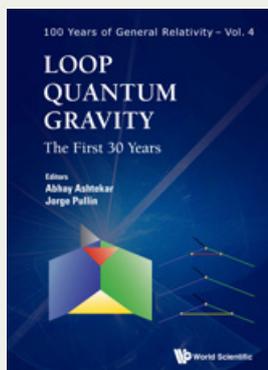
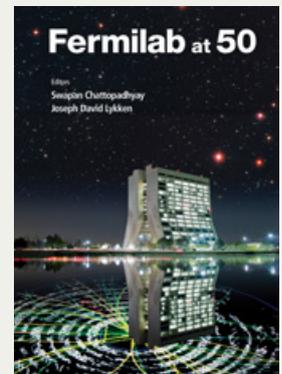
In this commemorative volume, scientific leaders from around the world celebrate Fermilab's 50th anniversary with thoughts on the laboratory's past, present and future.

"A light read, this book will appeal to all the scientists who at some point in their career stepped on the floor of Fermilab. It will also appeal to those readers who are interested in discovering more about the history of the laboratory through the records of the people who participated in it, whether it was directly or indirectly."

CERN Courier



<https://www.worldscientific.com/worldscibooks/10.1142/10637>



Loop Quantum Gravity

Edited by Abhay Ashtekar (Pennsylvania State University, USA), Jorge Pullin (Louisiana State University, USA)

Vol. 4 of 100 Years of General Relativity

Loop Quantum Gravity: The First 30 Years presents a snapshot of the state-of-the-art in loop quantum gravity from the perspective of younger leading researchers.

"Written by young theoretical physicists who are expert in the field, this volume is meant both to provide an introduction to the field and to offer a review of the latest developments, not discussed in many other existing books, for senior researchers. It will also appeal to scientists who do not work directly on LQG but are interested in issues at the interface of general relativity and quantum physics."

CERN Courier



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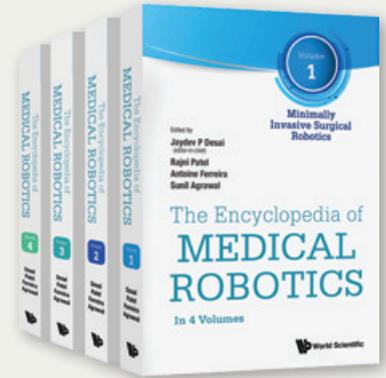
Notable Titles

The Encyclopedia of Medical Robotics (In 4 Volumes)

Editor-in-chief: **Jaydev P Desai** (Georgia Institute of Technology, USA)

Edited by: **Rajni Patel** (University of Western Ontario, Canada), **Antoine Ferreira** (Institut National des Sciences Appliquées Centre Val de Loire, campus Bourges, France), **Sunil Agrawal** (Columbia University, USA)

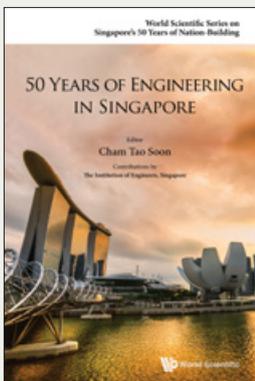
The Encyclopedia of Medical Robotics combines contributions in four distinct areas of Medical robotics, namely: Minimally Invasive Surgical Robotics, Micro and Nano Robotics in Medicine, Image-guided Surgical Procedures and Interventions, and Rehabilitation Robotics.



Volume 1 (Minimally Invasive Surgical Robotics) focuses on robotic technologies geared towards challenges and opportunities in minimally invasive surgery and the research, design, implementation and clinical use of minimally invasive robotic systems. **Volume 2** (Micro and Nano robotics in Medicine) is dedicated to research activities in an area of emerging interdisciplinary technology that is raising new scientific challenges and promising revolutionary advancement in applications such as medicine and biology. **Volume 3** (Image-guided Surgical Procedures and Interventions) focuses primarily on the use of image guidance during surgical procedures and the challenges posed by various imaging environments and how they related to the design and development of robotic systems as well as their clinical applications. Finally, **Volume 4** (Rehabilitation Robotics) is dedicated to the state-of-the-art of an emerging interdisciplinary field where robotics, sensors, and feedback are used in novel ways to re-learn, improve, or restore functional movements in humans.



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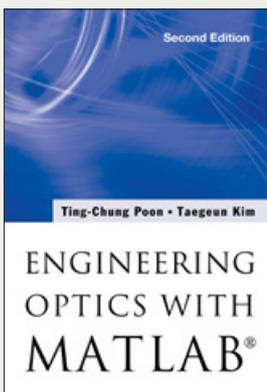
50 Years of Engineering in Singapore

Edited by: **Tao Soon Cham** (NTU, Singapore)

A joint publication by The Institution of Engineers, Singapore, and World Scientific Publishing, to celebrate Singapore's 50th birthday, *50 Years of Engineering in Singapore* brings to life the extraordinary engineering feats across multiple disciplines and tells the stories of these exceptional engineers who, with their determinations and courage, turned the little red dot into a jewel of a city. A vibrant record of engineering excellence, the publication traces the goliath challenges impeding the nation's growth over the past five decades, and the engineering innovations that brought about wealth creation, higher standards of living, and enhanced liveability.

This compendium covers land transportation (ERP system, MRT and LRT, roads and buses system); water management and engineering; energy (supply and maintenance); manufacturing in the areas of electronics, precision engineering, chemical and pharmaceutical/bio-medical engineering; housing/cities/infrastructure and land use (reclamation and underground); air and sea hub; and telecommunications, ICT and software.

<https://www.worldscientific.com/worldscibooks/10.1142/9366>



Engineering Optics with MATLAB®, 2nd Edition

Ting-Chung Poon (Virginia Tech, USA), **Taegeun Kim** (Sejong University, South Korea)

This invaluable second edition provides more in-depth discussions and examples in various chapters. The comprehensive textbook serves two purposes. The first introduces some traditional topics such as matrix formalism of geometrical optics, wave propagation and diffraction, and some fundamental background on Fourier optics. The second presents the essentials of acousto-optics and electro-optics, and provides the students with experience in modeling the theory and applications using a commonly used software tool MATLAB®.

<https://www.worldscientific.com/worldscibooks/10.1142/9984>



Notable Titles

Tommy Koh: Serving Singapore and the World

Edited by: **Lay Hwee Yeo, Peggy Kek, Gillian Koh & Li Lin Chang**

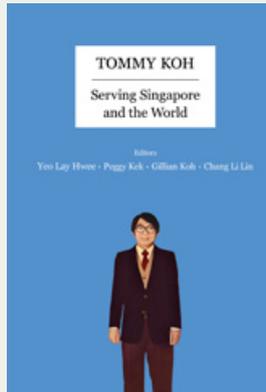
This book celebrates the many contributions of Professor Tommy Koh as a Singaporean diplomat, public intellectual and social changemaker.

It is an account of the ideas and ideals of an extraordinary Singaporean public servant who was not only born with the talent and ability to traverse many areas of society, but one who, when given the opportunity, had the drive and ambition to make the most of it to create a better world for Singaporeans and the global community.

Experts in the various fields of endeavour and people who have worked with him examine his significant contributions in essays that are organised in four main sections: Diplomacy and International Relations; Arts, Culture and Heritage; Progressive Society; International Law; and a fifth section that features tributes contributed by his colleagues and former classmates.

An inspirational collection for general readers, this book reflects the spirit of Singapore's pioneer generation whose determination and tenacity turned the nation into the modern-day miracle that Singapore is today.

<https://www.worldscientific.com/worldscibooks/10.1142/10499>



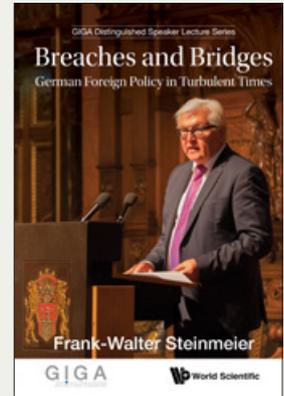
Breaches and Bridges: German Foreign Policy in Turbulent Times

Frank-Walter Steinmeier (German Foreign Minister)

This book features an agenda-setting speech by the Federal President of Germany, Dr Frank-Walter Steinmeier, delivered as a GIGA Distinguished Speaker Lecture in June 2016, when he served as the Federal Minister for Foreign Affairs.

This speech is accompanied by two essays. The first is an introduction by the First Mayor of Hamburg, Olaf Scholz, which reflects on the role of the Hanseatic City in world affairs. The second is a brief analysis by Professor Amrita Narlikar, President of the GIGA German Institute of Global and Area Studies. Narlikar identifies the necessity for a more profound understanding of historical trajectories, political traditions, and bargaining cultures of international negotiating partners, and invokes new forms of leadership and cooperation in global governance.

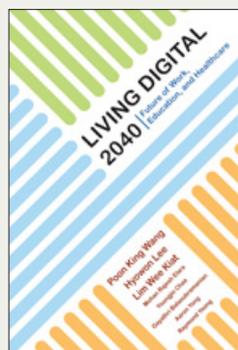
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Living Digital 2040: Future of Work, Education, and Healthcare

King Wang Poon, Hyowon Lee, Wee Kiat Lim, Rajesh Elara Mohan, Youngjin Chae, Gayathri Balasubramanian, Aaron Yong & Raymond Yeong

Living Digital 2040: Future of Work, Education, and Healthcare argues that how we prepare for the future should not be based on a dystopian or utopian view of technology's influence on society. It proposes a more balanced view that technology can help as well as harm us in different contexts. It tries to provide practical answers to questions like: "How can people thrive as their lives are disrupted and transformed? Will jobs be created or destroyed? And "Will digital divides narrow or widen in education and healthcare?"



Left to right: Dr Lim Wee Kiat (Research Fellow, Asian Business Case Centre, NTU); Mr Poon King Wang (Director, Lee Kuan Yew Centre for Innovative Cities, SUTD); Dr Lee Chien Eam (CEO Changi General Hospital); Mr Charles Omiston (partner, Bain and Company Southeast Asia); Mr Ng Chee Khem (Permanent Secretary, Smart Nation and Digital Government, Prime Minister's Office); Prof Chan Heng Chee (Chairman, Lee Kuan Yew Centre for Innovative Cities, SUTD) at the launch of *Living Digital* on 8 Feb 2018.

Guest-of-honour Mr Ng Chee Khern, Permanent Secretary (Smart Nation and Digital Government), Prime Minister's Office, commended the authors in his opening remarks for the launch, for taking the approach of understanding what living digital meant to the man-on-the-ground, and for their advice on how to thrive in an age characterized by disruption.

<https://www.worldscientific.com/worldscibooks/10.1142/10725>

