Editorial

Preface to the Special Issue "A Themed Issue on Mathematical Inequalities, Analytic Combinatorics and Related Topics in Honor of Professor Feng Qi"

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This Special Issue of the journal *Axioms* pays tribute to Professor Feng Qi's significant contributions and provides some important recent advances in mathematics. It comprises original, creative, and high-quality research papers that inspire advances in mathematical inequalities, mathematical means, the theory of special functions, analytic combinatorics, the analytic number theory, optimization, the convex analysis of functions, the matrix theory, and their applications. For more detailed information, please visit the website https://www.mdpi.com/journal/axioms/special_issues/math_inequalities (accessed on 22 April 2022).

Professor Feng Qi

Professor Feng Qi earned his Ph.D. degree, supervised by Professor Sen-Lin Xu (born in December 1941, passed away on 2 October 2022 in Beijing), from the University of Science and Technology of China in 1999. He received his master's degree, supervised by Professor Yi-Pei Chen (passed away), from Xiamen University in 1989. He graduated with his bachelor's degree from Henan University in 1986.

He is now a full-time professor at Henan Polytechnic University and Tiangong University, as well as an adjunct professor at Hulunbuir University, China. Additionally, he was an adjunct professor at Henan Normal University, Henan University, and Inner Mongolia University for Nationalities in China, and Victoria University in Australia. In 2005, he was promoted as the Specially Appointed Professor of the Education Committee of Henan Province, China.

Professor Feng Qi won the Award of Science and Technology from the Inner Mongolia Autonomous Region in 2017 and received the Certificate of High-level Talent in Henan Province in 2020. He also won several other academic awards and scientific funds from Henan Province, Inner Mongolia Autonomous Region, and Shaanxi Province in China.

He was the first former Head of the Department of Applied Mathematics and Informatics (current School of Mathematics and Informatics) at Henan Polytechnic University.

He has published over 691 research papers (accessed on 9 August 2023), affiliated to eight universities (accessed on 9 August 2023) (Henan Polytechnic University, Hulunbuir University, Tiangong University (357), Inner Mongolia Minzu University (199), Henan University (13), Henan Normal University (11), University of Science and Technology of China (20), and University of Electronic Science and Technology of China (8)), in over 225 journals, conference proceedings, Special Issues, books, and collections. Since 2012, Professor Feng Qi and many teachers and graduates at Inner Mongolia Minzu University jointly published 127 papers (accessed on 9 August 2023), in which 72 papers were abstracted and indexed by the Web of Science Core Collection and five papers were abstracted and indexed by the Engineering Village. His Erdös number is 3 (accessed on 9 August 2023).

From 2014 to 2023, he was named as one of the Most (Highly) Cited Chinese Researchers by the Elsevier-Shanghai Ranking for nine consecutive years. Since 2002, there have been over 91 papers or preprints (accessed on 8 August 2023) with titles that contain one of the following names: "Feng Qi", "F. Qi", or "Qi". His name was mentioned by Mourad Ismail in [1]. Since 2006, over 40 papers or preprints (accessed on 8 August 2023) have been published by other mathematicians around the world, with titles containing the notions of "logarithmically completely (absolutely) monotonic function" or its analogs. These notions were created or invented by Professor Feng Qi and his coauthors in 2004 and 2009, respectively. Many works published by Professor Feng Qi and his coauthors have been collected in the famous databases "The On-Line Encyclopedia of Integer Sequences" (accessed on 9 August 2023) and "Wikipedia, The Free Encyclopedia" (accessed on 9 August 2023), in monographs and handbooks [2–9], and in a Chinese textbook published by Beijing Normal University Press in 2017 for middle school students.

Professor Feng Qi delivered academic speeches (invited, keynote, and plenary) at international academic conferences, was financially supported to attend international academic conferences, was invited to be a member of the Scientific Committee, the International Advisory Committee, the International Committee, the International Organizing Committee, the International Advisory Board, the International Scientific Committee, and the Scientific Program Committee of international academic conferences, and was invited and financially supported to be a visiting professor in Australia, Denmark, Hong Kong, India, North Macedonia, Pakistan, Romania, South Korea, Taiwan, Turkey, and the USA over 25 times. He also attended domestic academic conferences and was invited and financially supported to deliver speeches over 30 times.

He is serving on the editorial boards for over 21 international mathematical journals (accessed on 8 August 2023). Moreover, he was appointed to the editorial boards for over 43 international mathematical journals (accessed on 8 August 2023). He won the top reviewer in Mathematics powered by Publons (accessed on 8 August 2023) twice: the Top Peer Reviewer 2019 and the Certified Sentinel of Science Award Recipient 2016 (The Top 10 Per Cent of Reviewers).

Since 1990, he has taught many courses for hundreds of thousands of undergraduate and graduate students, some of which include the following:

Analytic Geometry	Linear Programming
Calculus	Mathematical Inequalities and Applications
Differential Geometry	Probability and Statistics
Equations of Mathematical Physics	Real Analysis
Functions of Single Complex Variable	Real and Complex Analysis
Higher Mathematics	Selected Topics of Modern Mathematics
Integral Transforms	Special Functions and Applications
Linear Algebra	Typesetting in Mathematics ($\mathcal{AMS}$-L*T$_E$X)

Along with teaching, he has also supervised two graduates (accessed on 8 August 2023) (Jian Cao and Da-Wei Niu) at Henan Polytechnic University and six graduates (accessed on 8 August 2023) (Xiao-Jing Zhang, Wen-Hui Li, Miao-Miao Zheng, Fang-Fang Liu, Xiao-Ting Shi, and Jing-Lin Wang) at Tiangong University.

Professor Feng Qi's main academic research interests (accessed on 9 August 2023) included, but were not limited to, the following:

Analytic Combinatorics	Differential Geometry
Analytic Number Theory	Integral Transforms
Approximation Theory	Logarithmically Complete Monotonicity
Asymptotic Analysis	Mathematical Inequalities and Applications
Classical Mathematical Analysis	Mathematical Means and Applications
Completely Monotonic Degrees	Theory of Convex Functions
Complex Functions of One Variable	Theory of Special Functions

Our five Guest Editors have done our best to ensure the success of this Special Issue, and we believe our efforts will be rewarded. Our Guest Editors organized a comprehensive review process for each submission basing on the journal's policy, instructions, and guidelines. We have received 35 submissions and, after a comprehensive peer review process, only 12 high-quality articles have been accepted for publication (the acceptance rate is over 34%). The list of published contributions is as follows:

i.   Abuelwafa, M. M.; Agarwal, R. P.; Rabie, S. S.; Saker, S. H. Self-improving properties of continuous and discrete Muckenhoupt weights: a unified approach. *Axioms* **2023**, *12*, 505. https://doi.org/10.3390/axioms12060505;

ii. Agarwal, R. P.; Karapinar, E.; Kostić, M.; Cao, J.; Du, W.-S. A brief overview and survey of the scientific work by Feng Qi. *Axioms* **2022**, *11*, 385. https://doi.org/10.3390/axioms11080385;

iii. Altwaijry, N.; Dragomir, S. S.; Feki, K. Inequalities and reverse inequalities for the joint A-numerical radius of operators. *Axioms* **2023**, *12*, 316. https://doi.org/10.3390/axioms12030316;

iv. Li, Z.-W.; Gao, W.-B. Inequalities for the windowed linear canonical transform of complex functions. *Axioms* **2023**, *12*, 554. https://doi.org/10.3390/axioms12060554;

v.   Li, W.-H.; Miao, P.; Guo, B.-N. Bounds for the Neuman–Sándor mean in terms of the arithmetic and contra-harmonic means. *Axioms* **2022**, *11*, 236. https://doi.org/10.3390/axioms11050236;

vi. Li, W.-H.; Shen, Q.-X.; Guo, B.-N. Several double inequalities for integer powers of the sinc and sinhc functions with applications to the Neuman–Sándor mean and the first Seiffert mean. *Axioms* **2022**, *11*, 304. https://doi.org/10.3390/axioms11070304;

vii. Shi, H.-N.; Du, W.-S. New Inequalities and generalizations for symmetric means induced by majorization theory. *Axioms* **2022**, *11*, 279. https://doi.org/10.3390/axioms11060279;

viii. Shi, H.-N.; Wang, D.-S.; Fu, C.-R. Schur-convexity of the mean of convex functions for two variables. *Axioms* **2022**, *11*, 681. https://doi.org/10.3390/axioms11120681;

ix. Wang, J.-Y.; Yin, H.-P.; Sun, W.-L.; Guo, B.-N. Hermite–Hadamard's integral inequalities of (α, s)-GA- and (α, s, m)-GA-convex functions. *Axioms* **2022**, *11*, 616. https://doi.org/10.3390/axioms11110616;

x.　Zhang, T.; Chen, A. Some new estimates of Hermite–Hadamard inequality with application. *Axioms* **2023**, *12*, 688. https://doi.org/10.3390/axioms12070688;

xi.　Zhong, Y.; Huang, H. Reinsurance policy under interest force and bankruptcy prohibition. *Axioms* **2023**, *12*, 378. https://doi.org/10.3390/axioms12040378;

xii.　Zhou, R. R.; Yeh, J.; Ren, F. Context-free grammars for several triangular arrays. *Axioms* **2022**, *11*, 297. https://doi.org/10.3390/axioms11060297.

The 30 authors of these 12 papers are as follows:

Maryam M. Abuelwafa (see i)	Ravi Prakash Agarwal (see i, ii)
Najla Altwaijry (see iii)	Jian Cao (see ii)
Alatancang Chen (see x)	Silvestru Sever Dragomir (see iii)
Wei-Shih Du (see ii, vii)	Kais Feki (see iii)
Chun-Ru Fu (see viii)	Wen-Biao Gao (see iv)
Bai-Ni Guo (see v, vi, ix)	Huaping Huang (see xi)
Erdal Karapinar (see ii)	Marko Kostić (see ii)
Wen-Hui Li (see v, vi)	Zhen-Wei Li (see iv)
Peng Miao (see v)	Safi S. Rabie (see i)
Fuquan Ren (see xii)	Samir H. Saker (see i)
Qi-Xia Shen (see vi)	Huan-Nan Shi (see vii, viii)
Wen-Long Sun (see ix)	Dong-Sheng Wang (see viii)
Jing-Yu Wang (see ix)	Jean Yeh (see xii)
Hong-Ping Yin (see ix)	Tao Zhang (see x)
Yangmin Zhong (see xi)	Roberta Rui Zhou (see xii)

The accepted papers can be classified according to the following seven schemes:

(1)　Mathematical inequalities and applications (see i, ii, iii, iv, v, vi, vii, viii, ix, x);
(2)　Mathematical means and applications (see ii, v, vi, viii, ix, x);
(3)　Matrix theory (see ii);
(4)　Convex analysis of functions (see ii, viii, ix, x);
(5)　Special functions and applications (see ii, v, vi);
(6)　Combinatorial number theory (see ii, xii);
(7)　Optimization (see ii, vii, xi).

As of 9 August 2023, two of these twelve papers have been cited, as shown in the following table.

Published contributions	Times cited from Crossref	Times cited from Scopus	Times cited from Web of Science
v	2	3	2
vi	1	1	1

We hope that interested researchers and practitioners will be inspired by this Special Issue and find it valuable to their own research. This Special Issue has highlighted important issues and raised several new problems in these research areas. We would like to heartily thank the editorial team and the reviewers of the journal *Axioms*, particularly the Editor-in-Chief, Professor Humberto Bustince, and the Assistant Editor, Luna Shen, for their invaluable support and kind help throughout the editing process.

References

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