



PREFACE OF SPECIAL ISSUE DEDICATED TO PROFESSOR MASAO FUKUSHIMA ON THE OCCASION OF HIS 75TH BIRTHDAY

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To show our great appreciation for all the academic and professional contributions Professor Fukushima has made through his illustrious career and life, we undertook in his honor the preparation of this special issue in Pacific Journal of Optimization, the journal he founded. This issue includes 21 papers contributed by advisory and editorial board members of Pacific Journal of Optimization. Professor Fukushima was born on January 1, 1950 in Osaka, Japan. He received all academic degrees in Engineering from Kyoto University, Japan: Bachelor of Engineering, Master of Engineering (major in Applied Mathematics and Physics) and Doctor of Engineering.

He started as Instructor in 1974 at Kyoto University, became Associate professor in 1985, Professor at Nara Institute for Science and Technology from 1993 to 1996 and finally Professor at Kyoto University from 1996 to his retirement in 2013. Then, he took a position at Nanzan University until 2020 and has been Professor at the Kyoto College of Graduate Studies for Informatics. He is now Professor Emeritus of Kyoto University.

The mathematical output of Professor Masao Fukushima is immense. Indeed, started with his first research paper appeared in 1976, Professor Fukushima made substantial contributions to the fields of mathematical programming and equilibrium problems, through more than 250 papers, special volumes and books, both with his students and with many worldwide outstanding researchers. This includes topics like nonlinear programming, stochastic programming, network problems, parallel computing, variational inequality problems, nonlinear complementarity problems, mathematical programs with equilibrium constraints, meta-heuristics, and their applications to financial problems, transportation problems, scheduling problems and many others. For all this work, he has been selected as ISI Highly Cited Researcher in mathematics.

Professor Fukushima provided outstanding services to the scientific community. He has served on the editorial boards of numerous prestigious journals, including for instance SIAM Journal on Optimization, Computational Optimization and Applications, Journal of Optimization Theory and Applications, Journal of Industrial and Management Optimization, Optimization Methods and Software, European Series of Applied and Industrial Mathematics (ESAIM): Control, Optimization and the Calculus of Variations, Optimization Letters, RAIRO-Operations Research and this journal.

Professor Fukushima has played a leading role in the optimization community of the Asia Pacific region for many years. He is one of the founders of the Pacific Optimization Research Activity Group and served as the Chairman of this group in 2006-2010. He is also the founder of Pacific Journal of Optimization and was until 2021 Co-Editor of this journal.

Professional and personal attributes of Masao Fukushima have made him a great mentor of graduate students as well as young researchers. He mentored quite a few Ph.D. students and postdocs, and many of them are active researchers in their respective fields. Also many researchers have been invited to Kyoto, and have known each other at his office in Kyoto. Many of his former students play active roles in the Japanese industry, and some are working as academic researchers in various countries like China, Egypt, Philippine, and so on.

Professor Fukushima has received for all his work awards and honors including:

- The Kondo prize of the Operation Research Society of Japan (2015)
- Paul Y. Tseng Memorial Lectureship in Continuous Optimization (Mathematical Optimization Society, 2015)
- The achievement Prize of the Operation research Society of Japan (2010)
- ISI Highly Cited Researcher in mathematics (2010)
- The ISCIE Prize for distinguished paper (2006)
- The 2005 Best paper award Computational management Science Springer
- Fellow of the Operation research Society of Japan (1993)
- The ORSJ Prize for distinguished paper (1985)
- The JAACE Prize for distinguished paper (1988)

Throughout his long and prestigious career, Professor Masao Fukushima has always been a wonderful colleague. We wish him many enjoyable years to come.

To conclude this preface, we would like to express our sincere thanks to all of the Associate Editors and Advisory Board Members of PJO for presenting their articles for inclusion in this special issue and to the reviewers who gave their valuable time and effort to complete the review work in a timely fashion.