

Festschrift for  
**Tarmo Pukkila**  
on his 60th Birthday

Erkki P. Liski, Jarkko Isotalo, Jarmo Niemelä,  
Simo Puntanen, George P. H. Styan (editors)

*Festschrift*  
*for Tarmo Pukkila*  
*on his 60th Birthday*



Portrait of Tarmo Pukkila painted by Eeva Rihu, 2005.  
[Photograph by Simo Puntanen, reproduced with permission  
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**Tarmo Pukkila**  
on his 60th Birthday

Edited by

ERKKI P. LISKI   JARKKO ISOTALO  
JARMO NIEMELÄ   SIMO PUNTANEN  
GEORGE P. H. STYAN

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Erkki P. Liski, Jarkko Isotalo, Jarmo Niemelä, Simo Puntanen,  
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# Preface

Dr. Tarmo Pukkila, former Professor of Statistics and Rector of the University of Tampere, now Director General in the Ministry of Social Affairs and Health, Helsinki, turned 60 on the 26th of March 2006. To celebrate this occasion, the Department of Mathematics, Statistics and Philosophy of the University of Tampere is publishing this *Festschrift* for his 60th birthday.

Following a tabula gratulatoria, this *Festschrift* begins with a conversation with Dr. Pukkila, including some comments on his career, followed by a detailed annotated list of his research publications. Several photographs illustrate these two articles.

The main part of this *Festschrift* comprises 23 invited and refereed papers, prepared by the following colleagues, coauthors, collaborators and friends of Tarmo Pukkila:

*Brännäs, Kurt* – Umeå University, Sweden

*Brillinger, David R.* – University of California, Berkeley, USA

*Farebrother, Richard William* – University of Manchester, England, UK

*Granger, Clive W.J.* – University of California, San Diego, USA

*Kollo, Tõnu* – University of Tartu, Estonia

*Koreisha, Sergio G.* – University of Oregon, Eugene, USA

*Koskinen, Lasse A.* – Insurance Supervisory Authority, Helsinki, Finland

*Liski, Erkki P.* – University of Tampere, Finland

*Mathew, Thomas* – University of Maryland, Baltimore County, USA

*Merikoski, Jorma K.* – University of Tampere, Finland

*Mustonen, Seppo* – University of Helsinki, Finland

*Nordberg, Leif* – Åbo Akademi, Turku, Finland

*Oja, Hannu* – University of Tampere, Finland

*Pukelsheim, Friedrich* – University of Augsburg, Germany

*Puntanen, Simo* – University of Tampere, Finland

*Rantala, Jukka* – Finnish Centre for Pensions, Helsinki, Finland

*Rao, C. Radhakrishna* – Pennsylvania State University, University Park USA

*Rissanen, Jorma* – Tampere University of Technology, Finland, and Helsinki  
Institute for Information Technology

*Scott, Alastair J.* – University of Auckland, New Zealand

*Sinha, Bikas Kumar* – Indian Statistical Institute, Kolkata, India

*Sinha, Bimal Kumar* – University of Maryland, Baltimore County, USA

*Styan, George P. H.* – McGill University, Montréal (Québec), Canada

*Trenkler, Götz* – University of Dortmund, Germany

We plan that this *Festschrift* will be presented to Dr. Pukkila in a Special Session (sponsored by the University of Tampere Foundation) of the Fifteenth International Workshop on Matrices and Statistics, to be held in Uppsala, Sweden, from June 13 through June 17, 2006. We are very grateful to Professor Dietrich von Rosen for arranging this Special Session as a part of the Workshop program.

The Editorial Board for this *Festschrift* comprises Erkki P. Liski (chair), Jarkko Isotalo, Jarmo Niemelä, Simo Puntanen, and George P. H. Styan. We wish to express our warmest thanks to the contributors to this *Festschrift*: thank you very much! It was a pleasure to collaborate with you. We are also grateful to the City of Tampere and the University of Tampere Foundation for financial support.

All articles have been refereed, and for this, special thanks go the anonymous referees for their valuable work. Tarmo and Helena Pukkila deserve particular thanks for a thorough photo-browsing which yielded many memorable photos appearing in this *Festschrift*. We are also most grateful for the efforts and time that Tarmo Pukkila devoted to editing the conversation article, which appears at the front of this book. And thanks go also to Evelyn M. Styan for her help.

Finally, *Parhaimmat syntymäpäiväonnittelut, Tarmo!*

Erkki P. Liski  
Jarkko Isotalo  
Jarmo Niemelä  
Simo Puntanen  
George P. H. Styan  
May 2006

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Suomen Kulttuurirahasto / Finnish Cultural Foundation, Regional Fund of  
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Tapiola Pension  
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Visakorpi Anja and Jarmo  
Vuontisjärvi Alpo, Ounasloma Luxury Cabins  
Öller Lars-Erik, Professor

# A conversation with Tarmo Mikko Pukkila

SIMO PUNTANEN & GEORGE P. H. STYAN

**Abstract.** Dr. Tarmo Mikko Pukkila, currently Director General in the Ministry of Social Affairs and Health, Helsinki, celebrated his 60th birthday on March 26, 2006. After completing his Master's Degree in Statistics and Mathematics at the University of Tampere in 1971, he worked in the University first as an assistant in statistics and mathematics and then as a senior assistant in statistics and later as a planning manager at the Computer Centre. He completed his Ph.D. degree in 1977. In 1980, he was appointed Professor of Statistics at the University of Tampere.

He has served in numerous administrative positions at the University of Tampere: Head of the Department, Dean of the Faculty, and as Rector from 1987 to 1993. From 1993 onwards, he has served as Director General in the Ministry of Social Affairs and Health, Helsinki.

Dr. Pukkila has authored or coauthored numerous research papers and several books. He has served on several editorial boards and Finnish national committees, and has organized influential international conferences and workshops.

In 1972 he married Helena Nykänen and they have two daughters, Elina and Laura, and one grandson, Vilppu Vaskelainen.

*2000 MSC codes:* 01A60, 01A65, 01A70, 01A73, 01A74, 62-03.

*Key words and phrases:* Jerzy K. Baksalary (1944–2005); Biography; Harald Cramér (1893–1985); Morris Herman DeGroot (1931–1989); Gustav Elfving (1908–1984); Finland after World War II; Eino Haikala (1913–1993); Edward James Hannan (1921–1994); International Workshops on Matrices and Statistics; IWMS; Chinubhai Ghelabhai Khatri (1931–1989); Paavo Koli (1920–1968); Paruchuri R. Krishnaiah (1932–1987); Ministry of Social Affairs and Health, Helsinki; Photographs; Statistics and mathematics at the University of Tampere; University of Oregon, Eugene; University of Pittsburgh.

*The following conversation took place mainly by e-mail during March and April 2006.*



Simo Puntanen

**Figure 1.** Tarmo Pukkila at home in Espoo, August 2000.

# Some comments on the research publications of Tarmo Mikko Pukkila

SIMO PUNTANEN & GEORGE P. H. STYAN

**Abstract.** We comment on 62 research publications by Tarmo Mikko Pukkila, dated from 1977 through 2004, and identify his 27 coauthors. These 62 publications, which are mainly in time series analysis and statistical computing, are listed with annotations. Following Baksalary and Styan (2005), we define an “authorship matrix”  $\mathbf{A} = \{a_{ij}\}$ , where  $a_{ij} = 1$  if bibliographic entry number  $i$  is written with coauthor number  $j$  and  $a_{ij} = 0$  otherwise. We find that the (doubly-reduced) authorship matrix  $\mathbf{A}$  for Tarmo Pukkila is  $34 \times 19$  and that the matrix  $\mathbf{B} = \mathbf{A}'\mathbf{A}$  is reducible and identify four distinct groups of coauthors, which are not linked. The article ends with comments on the eigenvalues and eigenvectors of  $\mathbf{B}$ .

*2000 MSC codes:* 01A60, 01A61, 62-03.

*Key words and phrases:* Authorship matrix; Bibliography; Bibliometrics; Eigenvalues; Eigenvectors; Reducibility; Statistical computing; Time series analysis.

## Introduction

Listed in Appendix 1 below are 62 research publications by Tarmo Mikko Pukkila (b. 1946), published from 1977–2004. These publications, which are mainly in time series analysis and statistical computing, include 5 books, 30 articles (plus 2 correction notes [18] and [33]) in research journals, and 24 articles in research collections or edited books. The article [31], originally published in a research journal, has been reprinted in a research collection as [36]. English translations of the titles of the three publications in Finnish are also given in Appendix 1. These 62 publications are arranged chronologically in Appendix 1, and by journal/research collection within year. For entries reviewed by *Mathematical Reviews/MathSciNet* (MR) and/or *Zentralblatt MATH* (Zbl), the review number is given, and for signed reviews, we also give the name of the reviewer.



# A photo album for Tarmo Mikko Pukkila

SIMO PUNTANEN & GEORGE P. H. STYAN

**Abstract.** We present a set of photographs showing Dr. Tarmo Mikko Pukkila (b. 1946) and his friends, colleagues and family, taken from 1980 through 1993. In 1980, Dr. Pukkila was appointed Professor of Statistics at the University of Tampere. He has served in numerous administrative positions at the University of Tampere: Head of the Department, Dean of the Faculty, and as Rector from 1987 through 1993.

*2000 MSC codes:* 01A60, 01A65, 01A74, 62-03.

*Key words and phrases:* University of Tampere; Gustav Elfving (1908–1984); First International Tampere Seminar on Linear Statistical Models and their Applications (Tampere 1983); Eino Haikala (1913–1993); International Workshop on Linear Models, Experimental Designs, and Related Matrix Theory (Tampere 1990); Chinubhai Ghelabhai Khatri (1931–1989); Second International Tampere Conference in Statistics (Tampere 1987).



Simo Puntanen

**Figure 1.** Haikala's farm, 1983: Soile Puntanen, Johan and Ulla Fellman, Leena and Erkki Liski, Gustav Elfving, Kaisa Huuhtanen, Helena Pukkila, Pentti Huuhtanen, Tarmo Pukkila, Bill Farebrother, C. R. Rao, Bimal K. Sinha.



Simo Puntanen

**Figure 13.** Tampere 1987: Tarmo Pukkila, (Paula Hietala and Johan Fellman in the background), George E.P. Box, Friedrich Pukelsheim.



University of Tampere

**Figure 14.** Conference Dinner, Tampere 1987: George E.P. Box, Evelyn M. Styan, T.W. Anderson, Tarmo Pukkila, George P.H. Styan.

Dr. Tarmo Pukkila, former Professor of Statistics and Rector of the University of Tampere, now Director General in the Ministry of Social Affairs and Health, Helsinki, turned 60 on the 26th of March 2006. To celebrate this occasion, the Department of Mathematics, Statistics and Philosophy of the University of Tampere is publishing this Festschrift for his 60th birthday.

The main part of this Festschrift comprises 23 invited and refereed papers, prepared by the following colleagues, coauthors, collaborators and friends of Tarmo Pukkila:

Kurt Brännäs  
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Sergio G. Koreisha  
Lasse A. Koskinen  
Erkki P. Liski

Thomas Mathew  
Jorma K. Merikoski  
Seppo Mustonen  
Leif Nordberg  
Hannu Oja  
Friedrich Pukelsheim  
Simo Puntanen  
Jukka Rantala

C. Radhakrishna Rao  
Jorma Rissanen  
Alastair J. Scott  
Bikas Kumar Sinha  
Bimal Kumar Sinha  
George P. H. Styan  
Götz Trenkler



Erkki Karén, 2005

The painter Eeva Rihu, Tarmo Pukkila, Tarmo Pukkila

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