

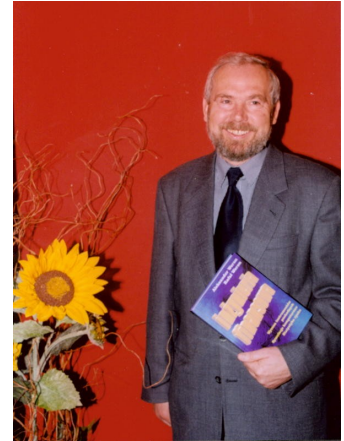
40 YEARS WENT BY:
PROFESSOR ALEKSANDER WERON
AND HIS SCIENTIFIC LIFE

Wrocław, Poland, 06.12.2008



PROF. ALEK WERON

- Born: December 4, 1945,
Zalesie-Rzeszów, Poland
- Author of more than 100 publications
- Co-author of 3 monographs:
 "Stable Processes" 1994,
 "Financial Engineering" 1998,
 "Power Exchange: Risk Management Strategies" 2000
- Editor or co-editor of 6 other books
- Invited Speaker in about
 35 international conferences



PROF. ALEK WERON

Supervisor of 16 Ph.D. theses:

1. Andrzej Makagon: "Infinite dimensional stationary processes with values in Banach spaces", January 1979.
2. Zdzisław Suchanecki: "Cylindrical processes in locally convex spaces", September 1980.
3. Jolanta Misiewicz: "Eliptically contoured measures", May 1981.
4. Grażyna Hajduk-Chmielewska: "Spectral properties of Banach space valued second-order processes", October 1988.



5. Piotr Kokoszka: "Sample path properties of infinitely-divisible processes", June 1990.
6. Krzysztof Podgórski: "Ergodic properties of stable stationary processes", June 1991.
7. Zbigniew Michna: "Stable diffusion approximations in collective risk theory", September 1996.
8. Aleksander Rejman: "Stochastic modeling and simulation of market securities under α -stable hypothesis", September 1997.
9. Joanna Nowicka-Zagrajek: "Analysis of measures of dependence for time series with α -stable innovations", December 1998.
10. Krzysztof Burnecki: "Self-similar models in risk theory", January 1999.

11. Piotr Sztuba: "Stochastic approach to derivative pricing in the HJM framework", May 2002.
12. Agnieszka Wyłomańska: "Analysis of ARMA models with varying coefficients", September 2006.
13. Magdalena Borgosz-Koczwarą: "Modeling optimal strategies in the electricity market", November 2006.
14. Jan Iwanik: "Financial engineering methods in insurance", December 2006.
15. Paweł Miśta: "Analytical and numerical approach to corporate operational risk modeling", March 2007.
16. Marcin Magdziarz: "Dependence structure for solutions of fractional differential equations with α -stable noise", September 2007

PROF. ALEK WERON

Member of

- American Finance Association
- Bachelor Finance Society
- Bernoulli Society
- CIGRE
- Polish Mathematical Society



PROF. ALEK WERON

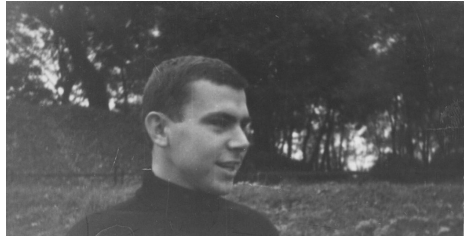
Member of Editorial Committees of

- textbook series BIBLIOTEKA MATEMATYCZNA, PWN, Warsaw, 1982-1992
- textbook series MODERN PROBABILITY AND STATISTICS, VSP, Utrecht, 1999-2002
- journals *Probability and Mathematical Statistics*, *Applicationes Mathematicae*, *Quality Technology and Quantitative Management* and *Rynek Terminowy*

PROF. ALEK WERON

- 1979 Mazurkiewicz Prize of the Polish Mathematical Society
- 1996 Steinhaus Prize of the Polish Mathematical Society
- 1995-96 Senior Research Fellowship under the Fulbright Program
- 1998 ATENA Prize for the best textbook in finance
(*Financial Engineering*), WNT Warsaw
- 2008 Hugo Steinhaus Research Award of the Rector
of Wrocław University of Technology

THE BEGINNINGS ...



Polish Student Seminar on Topology
Toruń, 26.03.1966



Math studies at University of Wrocław



1968 M. Sc., University of Wrocław
Master Thesis in Topology
Supervisor:
Prof. Bronisław Knaster



1968 - 1970 Assistant at Technical University of Wrocław

1970 - 1973 Senior Assistant at TUW

1972 Ph. D., TUW

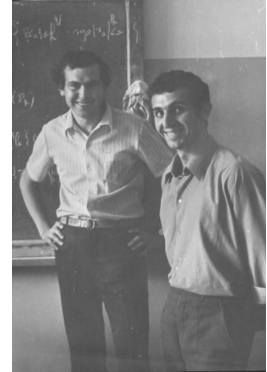
”Interpolation of multivariate stationary processes and fields”

(Probability Theory)

Supervisor: Prof. Stanisław Gładysz



1972/73 Post-Doc at Tbilisi University in Georgia



Cooperation with Prof. Nicholas N. Vakhania and Prof. Sergei A. Chobanyan

RESEARCH AREA: **Probability in Banach spaces**

1973-1977 Assistant Professor at Technical University of Wrocław

1977 D. Sc. (habilitation)

Institute of Mathematics, Polish Academy of Science, Warsaw

"Dilation theory for operator-valued functions

and processes in Banach spaces" (Functional Analysis)

Referees: Prof. Ryszard Jajte, Prof. Włodzimierz Mlak,
Prof. Czesław Ryll-Nardzewski

1977-1983 Associate Professor at TUW

1983 Professor Title from the President of People's State Council

Since 1985 Professor at TUW

70's/80's RESEARCH AREA:

- Probability theory on vector spaces
- Gaussian and stable measures



1977 - 1987

Organizer of 4 International Conferences
on Probability Theory on Vector Spaces

1982/83 Visiting Research Professor at University of North Carolina,
Chapel Hill, Center for Stochastic Processes

RESEARCH AREA:

- Stable processes
- Ergodic theory for stable processes
- Wald decomposition
- Prediction theory

Cooperation with
Prof. Stamatis Cambanis
and Dr. Clyde D. Hardin jr.



1983/84 Visiting Associate Professor at Louisiana State University, Baton Rouge

Cooperation with Prof. R. Rajagopal

RESEARCH AREA: **Statistical Physics I**

- Irreversibility of physical processes
- Decay theory
- Relaxation theory



Cooperation with
Prof. Ilya Prigogine
(Nobel Prize winner in Chemistry, 1977)
Solvay Institutes for Physics and Chemistry,
Brussels



1987-1990 Dean of the PPT Faculty,
Technical University of Wrocław

- 1986 New curriculum
MATHEMATICAL INFORMATICS
jointly with Prof. Tomasz Byczkowski
and Prof. Anzelm Iwanik
- 1988 STUDIUM TALENT



Since 1990 Director of the Hugo Steinhaus Center



2002 - The Hugo Steinhaus Year

1994 New curriculum

FINANCIAL AND ACTUARIAL MATHEMATICS

PPT Faculty, Technical University of Wrocław



WITH STUDENTS...

1995/96 Fulbright Senior Research Scholar,
University of California, Santa Barbara, LA



RESEARCH AREA:

Financial Engineering



Cooperation with:

Prof. Harry M. Markowitz, UCLA
(Nobel Prize winner in Economics, 1990)

Prof. Robert F. Engle, UCSD
(Nobel Prize winner in Economics, 2003)



Prof. Paul Embrechts, ETH Zurich
Prof. Svetlozar T. Rachev, UCSB



Cooperation with the Energy Sector:

- 1994 - 2006 IASE
- 2000 Polish Power Exchange
- 1999 - 2000 Advisor to Jerzy Steinhoff, Minister of Economy, Poland

2005 Advisor to the Rector of Wrocław University of Technology,
Prof. Tadeusz Luty, on the European Institute of Technology (EIT)

2006/07 New curriculum (jointly with Prof. Wojciech Okrasiński)
EUROPEAN MASTERS EDUCATION
IN INDUSTRIAL MATHEMATICS
PPT Faculty, Wrocław University of Technology



Since 2004 RESEARCH AREA: **Statistical Physics II**

- Fractional Fokker-Planck Equation
- Subordinated Langevin Equation
- Anomalous Diffusion

21st Marian Smoluchowski Symposium
on Statistical Physics



Co-organizer of
Smoluchowski Symposia
on Statistical Physics
(jointly with
Prof. Ewa Gudowska-Nowak, UJ)



Statistical Physics II



Cooperation with
Prof. Joseph Klafter
Prof. Igor Sokolov
Prof. Ralph Metzler
Prof. Karina Weron



MAIN RESULTS (JOINTLY WITH DR. MARCIN MAGDZIARZ):

- Equivalence between fractional Fokker-Planck equations and subordinated Langevin equations
- **Fundamental theorem of anomalous diffusion:**
Anomalous diffusion
can be embedded
in Brownian diffusion
iff
it is a semimartingale

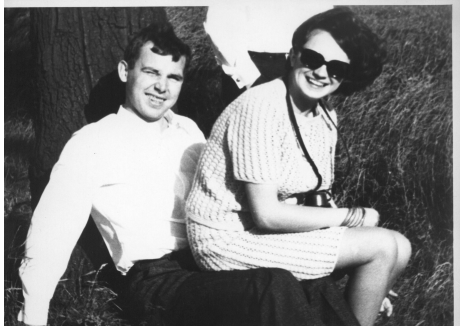


2008 NEW RESEARCH PLANS:
Complexity of climate processes

Cooperation with Dr. Nicholas Watkins
BAS – British Antarctic Survey, Cambridge



FAMILY...



AS A GRANDPA...



Rys. Marcin Weron

