

Prof. Dr. Krzysztof Wilmanski  
Rue Diderot 4, 13469 Berlin, Germany

Berlin, January 30, 2012

## 1. Curriculum Vitae

- [1940] March 1; born in Lodz, Poland
- [1957] Matura at T. Kosciuszko Gymnasium, Lodz, Poland
- [1959] married to Anna Sosin; two sons: Pawel (1959), Jan (1962)
- [1962] MSc at Civil Engineering Department, Technical University of Lodz, Poland; diplom work on *Elastic-plastic thermal stresses in a thin ring*
- [1962-1966] reader at the Technical University of Lodz (Poland)
- [1965] graduated at the Technical University of Lodz (Poland). PhD-work: *Some two dimensional problems of fibrous materials*. Field: Continuous Models of Discrete Systems.
- [1966-86] Associate Professor and Professor at the Institute of Fundamental Technological Research, Polish Academy of Sciences, Warsaw, Poland. Since 1970 the head of the Research Group: "Continuum Thermodynamics"
- [1969-1970] Postgraduate at the Johns Hopkins University, Baltimore (USA). Works on axiomatic and kinetic foundations of continuum thermodynamics with Prof. J. Ericksen and Prof. C. Truesdell (both Johns Hopkins University). Field: Nonlocal Continuum Mechanics
- [1970] Habilitation at the Polish Academy of Sciences, Warsaw (Poland). Work: Dynamics of Bodies with Microstructure
- [1971] M. T. Huber Prize of the Polish Academy of Science for the work on axiomatic foundations of thermodynamics
- [1972-74] Visiting Professor at the College of Engineering, University of Baghdad, Iraq
- [1979] Nomination to the Professor (title) by the State Council of Poland
- [1979-80] Fellow at "Wissenschaftskolleg zu Berlin", Institute for Advanced Studies. Works on martensitic phase transformations (SMA), non-newtonian fluids, acoustic waves in continua with Prof. Ingo Müller (TU Berlin, Germany), Prof. Ronald Rivlin (Lehigh University, USA), Prof. Joseph Kestin (Brown University, USA)

- [1985-86] Visiting Professor at the University of Paderborn, Germany. Work on a nonlocal thermodynamic model of plasmas and electrolytes with Prof. J. Schröter
- [1987-1990] Contract Professor at the Technical University of Hamburg-Harburg, Germany. Work on crystal plasticity and the evolution of textures with Prof. O. Mahrenholtz
- [1990-1992] Contract Professor at the Technical University of Berlin, Germany. Work on the martensitic phase transformations with Prof. Ingo Müller
- [1992-1996] Lecturer at the University of Essen, Department of Civil Engineering. Work on thermodynamic models of porous materials
- [1995] Habilitation (*Venia legendi*) at the University of Essen, Germany.
- [1996-2005] Professor at the Weierstrass Institute for Applied Analysis and Stochastics, Berlin, Germany. Head of the Research Group “Continuum Mechanics” in WIAS (Berlin)
- [1998] Habilitation (*Venia legendi*) at the Technical University of Berlin, Germany.
- [1999] Conferment of the German citizenship
- [2005-2010] Professor of Mechanics at the Institute of Structural Engineering, University of Zielona Gora (Poland)
- [2005-] member of Staff at the ROSE School, Centre for Post-graduate Training and Research in Earthquake Engineering & Engineering Seismology, Pavia (Italy)
- [2010-] affiliation at Technische Universität Berlin, Institut für Prozess- und Verfahrenstechnik (Berlin, Germany)

## 2. Teaching activities

- [1962-1965] Undergraduate courses (lectures and tutorials) in Strength of Materials, Mechanics of Structures, Theory of Elasticity at the Technical University of Lodz (Poland) and its division in Plock (Poland)
- [1967-1984] Undergraduate courses (lectures, tutorials and some laboratory demonstrations) at the Technical University of Kielce (Poland) and College of Engineering, University of Baghdad (Iraq, 1972-1974). Subjects: Strength of Materials, Engineering Analysis

- [1967-1992] Graduate courses at Polish Academy of Sciences (IPPT, Warsaw, Poland), Warsaw University (Poland), Technical University of Poznań (Poland), Technical University of Opole (Poland), Technical University of Kielce (Poland), University of Paderborn (Germany), Technical University of Hamburg-Harburg (Germany). Subjects: linear and nonlinear mechanics of continua, phenomenological thermodynamics, theory of propagation of linear and nonlinear waves in continua, theory of mixtures and of multicomponent systems, magnetohydrodynamics and macroscopic theory of electrolytes, extended thermodynamics, kinetic theory of gases, University of Zielona Góra (Poland). Subjects: Mechanics, Continuum Thermodynamics, Physics of Structures, Dynamics of Structures, Theoretical Mechanics.
- Supervision of Ph.D. Theses:
  1. B. Uziębło (Polish Academy of Sciences, Warsaw, Poland),
  2. M. Elzanowski (Polish Academy of Sciences, Warsaw, Poland),
  3. J. Frankowski (Technical University of Kielce, Poland),
  4. B. Albers (Technical University of Berlin, Germany).
- Supervision of some 30 MSc Theses (Diplomworks) at various universities.

### 3. Some chosen lectures and courses

Within the frame of scientific conferences, seminars and invitations by various scientific institutions I present in every year some 6-8 lectures. Some examples from the recent years:

1. 3 courses (two of them organized by myself; 6 monographic lectures in each course with notes published by Springer Vienna) at CISM (International Centre for Mechanical Sciences) in Udine (Italy) in the years 1978, 1998, 2004.
2. Graduate course of phenomenological thermodynamics (30 hours) at the Weierstrass Institute for Applied Analysis and Stochastics (Berlin, Germany), 1996-1997.
3. General lecture at the 33rd Conference of Solid Mechanics in Zakopane (Poland), 2000 on: *Extended thermodynamics of porous and granular materials*.
4. Graduate courses (6 hours) for architects within the European Program "Structural Health Monitoring System" Università di Pisa (Italy), 2000 on: *Waves and nondestructive testing of porous materials*.

5. Graduate course of thermodynamics at the XXVth Summerschool on Mathematical Physics, Ravello (Italy), 2000.
6. General lecture at the conference "Modeling and Mechanics of Granular and Porous Materials", Reggio Calabria (Italy), 2000 on: *Mass exchange, diffusion and large deformations of poroelastic materials*.
7. Ph.D. Course (app. 15 hours) at the joint school of the Technical Universities of Turin, Milan and Rome, Turin (Italy), 2001 on: *Thermodynamics of multicomponent systems*.
8. General lecture at the conference GEOMATH3 in Horton (Greece), 2002 on: *Microworld and macroworld – multiscaling problems of geophysics*.
9. General lecture at the conference STAMM 2002, Maiori (Italy), 2002 on: *Acoustic waves and nondestructive testing of granular materials*.
10. Lecture at ROSE School (European School for Advanced Studies in Reduction of Seismic Risk), Università di Pavia (Italy), 2003 on: *Bulk and surface waves in saturated poroelastic materials – low frequency approximation*.
11. General lecture (key-note lecture) and the conference CANCAM 2003 in Calgary (Canada), 2003 on: *Macroscopic modeling of porous and granular materials – microstructure, thermodynamics and some boundary-initial value problems*.
12. Graduate Course (45 hours) at the Technion, Haifa (Israel), 2006 on: *Continuum Thermodynamics*.
13. Graduate Course (30 hours) at the Technical University of Graz, 2007 on: *Continuum Thermodynamics*.

## 4. Scientific collaboration with individual scientists

Some more important scientific partners from the past and present:

1. Prof. Dr. Ingo Müller (Technical University Berlin)
2. Prof. Dr. Henryk Zorski (IPPT, Warsaw, Poland),
3. Prof. Dr. Clifford Truesdell (The Johns Hopkins University, Baltimore, USA),
4. Prof. Dr. Jerald Ericksen (The Johns Hopkins University, Baltimore, USA),
5. Prof. Dr. Ronald Rivlin (Lehigh University, Bethlehem, USA),

6. Prof. Dr. Gianfranco Capriz (Universita di Pisa, Italy),
7. Prof. Dr. Carlo Lai (ROSE School, Pavia, Italy),
8. Prof. Dr. Gerard Maugin (Univ. Pierre et Marie Curie, Paris, France),
9. Prof. Dr. Tommaso Ruggeri (Universita di Bologna, Italy),
10. Prof. Dr. Kolumban Hutter (Universität Darmstadt, Germany),
11. Prof. Dr. Dimitri Kolymbas (Universität Innsbruck, Austria),
12. Prof. Dr. Renato Lancellotta (Universita di Torino, Italy).

Within this collaboration an exchange of scientists, seminar lectures and courses etc. have been organized.

## 5. Some activities in corporations and organization of science

During the last 30 years I have organized and participated in the organization of numerous international scientific conferences. Some more important examples:

1. Polish-American Symposium on *Physical Fields in Material Media*, Warsaw (Poland), August 25-30, 1975 (Scientific Committee: A. C. Eringen, W. Nowacki, B. A. Boley, S. Kaliski, S. L. Koh, H. Zorski, T. S. Chang).
2. XVIIIth Semester in Banach Centre (Warsaw, Poland): *Mathematical models and methods in mechanics*, 1981. Lecturers: C. Atkinson, C. E. Beevers, G. Capriz, C. Cercignani, D. R. J. Chilingworth, M. Costabel, A. Damlamian, K. Hutter, E. Meister, Yu. Mitropolski, I. Müller, W. Nowacki, L. E. Payne, G. F. Smith, K. Stewartson, etc.
3. Euromech Colloquium: *Mean field theory of shape memory alloys*, Jablonna (Poland), 1981.
4. Euromech Colloquium: *Porous media – theories and experiments*, Essen (Germany), 1997.
5. Conference of the Int. Soc. for Interaction of Mechanics and Mathematics: *Continuum Mechanics and Thermodynamics*, Potsdam, 2001.
6. Chair of the Prenominated Session at 21st ICTAM – IUTAM Congress in Warsaw (Poland), 2004: *Impact and wave propagation* (with Prof. Andrew Norris, Rutgers University, USA).
7. Organization of the CISM course in Udine (Italy): *Surface waves in geomechanics: direct and inverse modeling for soils and rocks* (with Prof. Carlo Lai, Universita di Pavia, Italy).

8. Conference: *Continuous and Discrete Modelling in Mechanics* (CDMM2005), Warszawa (Poland), September 5-9, 2005.
9. Co-chair of the Conference: *18th International Conference on Computer Methods in Mechanics, CMM2009*, in Zielona Gora (Polnad), May18.21, 2009.

From 1975 to 1984 I was the president of the Section Mechanics of the Mechanics Committee, Polish Academy of Sciences (Warsaw, Poland).

From 1971 to 1984 I was the member of the Scientific Council of the Institute of Fundamental Technological Research (Polish Academy of Sciences, Warsaw, Poland).

From September 1980 to December 1981 I was the member of the Committee of the Trade Union "Solidarnosc" of the Polish Academy of Sciences (Poland).

#### **Membership in Scientific Societies:**

1. International Society for the Interaction of Mechanics and Mathematics (ISIMM). Grounding member. From 2000 to 2003 – Secretary-Treasurer.
2. European Mechanics Society (EMS).
3. Society for Natural Philosophy (SNP).

#### **Some review activities:**

1. Reviewer of DFG (Deutsche Forschungsgemeinschaft, Germany).
2. Reviewer of MIUR-COFIN ("Albo dei revisori", Italian Ministry for Education, Universities and Research, Italy).
3. Reviewer of the "Alexander von Humboldt Foundation" (Germany).
4. Reviewer of numerous scientific journals (e.g. Int. J. Engn. Sci., ZAMM, ZAMP, Archives of Mechanics, Cont. Mech. Thermodyn., etc.).

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