

CURRICULUM VITAE

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EDUCATION

AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY, Krakow, Poland¹

1981 Ph.D., Engineering Science (specialty: Physics of Metals and Physical Metallurgy)

1975 M.S., Electrical Engineering (specialty: Applied Nuclear Physics)

OUTLINE OF CAREER

MIAMI UNIVERSITY, Oxford, OH

Dean and Professor of Engineering Science, School of Engineering and Applied Science
(2000–present)

ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago, IL

1. Department of Mechanical, Materials and Aerospace Engineering

Research Professor (2000-05)

Professor and Chairman (1995-2000)

2. Department of Metallurgical and Materials Engineering

Professor (1994-95)

Associate Professor with tenure (1991-94)

Visiting Associate Professor (1988-91)

¹ *AGH University of Science and Technology in Krakow is one of the two best Universities of Science and Technology in Poland (alongside Warsaw Polytechnic) and is considered to be among the best Polytechnic Universities in Europe.*

AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY, Krakow, Poland
Associate Professor, Department of Metallurgy and Materials Science (1988)

CARNEGIE-MELLON UNIVERSITY, Pittsburgh, Pennsylvania
Research Associate, Department of Materials Science and Engineering (1985-87)

UNIVERSITY OF SAARBRUECKEN, Saarbruecken, Germany
Alexander Von Humboldt Fellow, Department of Materials Science (1984-85)

AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY, Krakow, Poland
Assistant Professor, Department of Metallurgy and Materials Science (1982-83)
Graduate Assistant, Department of Metallurgy and Materials Science (1978-81)

NUCLEAR PHYSICS INSTITUTE, Krakow, Poland
Research Assistant (1976-77)

MAJOR HONORS AND AWARDS

- Alexander von Humboldt Foundation Fellowship, 1984
- Doctor of Science Habilitate (D.Sc.), 1989
(the highest scientific degree in many European countries conferred for: "outstanding teaching and research achievements in science and engineering"),
- Chairman of the Board, Polish Institute of Science and Culture - Polish University Abroad (1990 - 93)
- The Cavalier's Cross of the Order of Merit of the Republic of Poland (1998)
(presented in recognition of exceptional contributions to international cooperation)
- ASM International (formerly American Society for Materials) Fellow (1998)
- President of the Republic of Poland Professor of Engineering Sciences Award (2000)
- Honorary Consul of the Republic of Poland in the U.S. (2004)

OTHER DISTINCTIONS

- Member of several Program and Organizing Committees of International, European and Polish Conferences on Transmission Electron Microscopy
- Member of the Boards: Metallurgy and Materials Engineering Department at AGH University of Science and Technology, Krakow, Poland; International School of Technology, Krakow, Poland; Polish Institute of Arts and Sciences of America
- Listed in Who's Who in Midwest (1991), Who's Who in American Education (1993), Polish-American Who's Who (1995), American Men & Women of Science (1997), Who's Who in America (2008)
- Board of Review of the Metallurgical Transactions A (1993 - 1996), Editorial Board: Brazilian Journal of Materials Science & Engineering (1997 - present),

Editorial Board, Journal of Achievements in Materials and Manufacturing Engineering (2004 – present)

- Invited seminar speaker at, among others, USA: Northwestern Un., Cornell Un., University of California (Berkeley), Carnegie Mellon University, University of Illinois, Case Western Reserve University, Argonne National Laboratory, Wright-Patterson Air Force Base, General Electric, Haynes Int., United Technologies; TMS & ASM Int. Annual Meetings; Germany: Saarbruecken Un., Darmstadt Un., Berlin Un.; Poland: Warsaw's Polytechnic, Silesian Polytechnic, AGH University of Science and Technology, Krakow; Israel: Ben Gurion Un., Technion Un., Russia: Moscow's Polytechnic Institute
- Several keynote, education-related addresses (details available upon request)
- Several research and teaching awards (details available upon request)
- Chairman of the Panel: "ABET 2000, First Experiences", Gordon Conference on Materials Science and Engineering, August 2000
- Member of the National Panel on the Future of Engineering Education (2003)
- Member, Advisory Council, Institute for Distance Education, Lodz, Poland (2006)
- Panelist, "Poland – USA, What's it really like?", organized by Newsweek, Warsaw (2007)
- Member, Advisory Council of World Affairs Council / Global Center of Greater Cincinnati (2007)

DEANSHIP AT MIAMI UNIVERSITY

Dean's responsibilities (details available upon request)

- academic leadership of SEAS
- academic planning
- setting and implementation of academic policies
- chair, SEAS Executive Council
- enhancement of undergraduate and graduate programs and curriculum
- fostering diversity
- accreditation
- recruitment, retention, rewarding and rejuvenation of faculty
- faculty development
- evaluation of tenure-track faculty members and those faculty members who aspire to become full professors
- recruitment, selection and evaluation of department chairs
- recruitment, selection and evaluation of Associate and Assistant Deans and Assistant to the Dean
- fiscal management - budget planning and allocation of resources
- development and fundraising
- improvement of physical facilities and equipment
- support of university-wide goals

- representing and advocacy for SEAS within Miami University
- maintaining close relationships with regional campus deans
- representing SEAS and Miami University as a member of state and national groups (such as Ohio Engineering Deans' Council and National Engineering Deans' Council)
- representing SEAS to external agencies, professional associations and the public-at-large
- seeking advice from the various councils and committees within SEAS

Dean's noteworthy service on Miami University-wide Committees (details available upon request)

- Council of Academic Deans
- University Tenure and Promotion Committee – duties include a thorough review of, and discussion and voting on, all tenure and/or promotion applications (on average 50 – 60 cases per year)
- Chair, Search Committees for Vice President of Information Technology, Executive Director of Hamilton Campus, and Dean of the College of Arts and Science
- Search Committee for Provost and Vice President for Academic Affairs
- Senate Subcommittee on Academic Affairs
- Senate Subcommittee on Tenure-related Issues
- Fiscal Priorities and Budget Planning Committee – annual budgetary presentations and discussions (ex officio)
- Enrollment Management Committee
- Committee on the relationship among Miami's three campuses

School of Engineering and Applied Science (SEAS) – fact sheet

Departments

1. Mechanical and Manufacturing Engineering (Oxford campus)
2. Computer Science and Systems Analysis (Oxford campus)
3. Paper and Chemical Engineering (Oxford campus)
4. Electrical and Computer Engineering (Oxford campus)
5. Engineering Technology (Hamilton and Middletown campuses)
6. Computer and Information Technology (Hamilton and Middletown campuses)
7. Nursing (Hamilton and Middletown campuses)

Interdisciplinary programs

1. Engineering Management
(with Manufacturing, Paper and Environmental Engineering tracks)
2. General Engineering

Faculty

- 77 full-time
- ~25 adjunct and visiting
- 11 additional tenure-track faculty to be hired in 2007/08 and 2008/09

Students

- ~ 1750

Dean's direct reports

- 13

School of Engineering and Applied Science – major changes since 2000

Curriculum

Oxford Campus

- New undergraduate majors
 - Computer Science (Fall 2001)
 - Mechanical Engineering (Fall 2002)
 - Computer Engineering (Fall 2003)
 - Electrical Engineering majors (Fall 2003)
 - Engineering (general) (Fall 2004)
 - Chemical Engineering (Fall 2005)
 - Software Engineering (Fall 2008)
 - Engineering Management –Systems Analysis track (Fall 2008)
- New research-based master's program in Computer Science (Fall 2003)
- New research-based master's program in Computational Engineering and Science developed and undergoing state approval process (to be implemented in Fall 2008)
- Program Development Plans for new research-based master's programs in Electrical and Computer Engineering and in Mechanical and Manufacturing Engineering developed (anticipated implementation in Fall 2009)

Middletown and Hamilton Campuses

- New Associate Degree program in Computer and Information Technology, with four concentrations: Programming and Networking (Fall 2003), IT Support and Visual Media Technology (Spring 2005)
- New Licensed Practical Nurse Track and BS in Nursing in compressed form (Fall 2003)
- New BS program emphasis in Mechanical Engineering Technology (Fall 2004)
- New traditional BS in Nursing program (Fall 2007)
- New BS in Computer and Information Technology on the drawing board

Faculty Development and Diversity

- 31 new faculty hired on the Oxford campus (engineering, computing)

- 12 new tenure track-faculty hired on the regional campuses (engineering/computer/ information technology, nursing)
- Minority and women candidates for faculty positions actively recruited; of the 31 new hires in Oxford 6 are women, 8 are Asian Americans (including two women), three are African Americans
- A broad strategy to improve research climate and increase research productivity implemented

Administrative structure

Oxford Campus

- New Department of Electrical and Computer Engineering established (Fall 2004)
- Dean's Office and SEAS Information Technology Services restructured to better reflect changing SEAS mission, vision and objectives; 5 new unclassified staff positions added (including Associate Dean for Research and Graduate Studies and Assistant Dean) created

Middletown and Hamilton Campuses

- New Computer and Information Technology Department established (Fall 2002)
- Nursing BS program relocated from Oxford campus to the regional campuses

SEAS Facilities

- A new (30M\$+) facility was designed to house the School of Engineering and Applied Science. A program of requirements was developed and the architectural firm of Burt, Hill, Kosar, and Rittleman selected in 2002. The scope of the project has been to design and build a new facility and redesign and renovate an existing building. The new facility was completed in the Fall of 2006 and houses the departments of Electrical and Computer Engineering, Mechanical and Manufacturing Engineering and Paper and Chemical Engineering. The existing building renovation started in Fall 2006 with occupancy expected December 2007. This area will house the Dean's office, the Computer Science and Systems Analysis department, and SEAS IT group. This new facility and attached renovated building will more than double the space allocated to the School of Engineering and Applied Science.
- Six new laboratories (thermal/fluids, communications and networks, digital signal processing, mechanical vibrations and dynamic systems, digital systems, and rapid prototyping fabrication) were established in the new facility and fully equipped
- Six new computer laboratories in the renovated building were endowed

Significant accomplishments of SEAS since 2000 - highlights²

- Benchmarking with peer and aspirational institutions was conducted
- Long term planning was conducted resulting in establishing strategic directions and goals
- Expectations for faculty excellence in research and scholarship increased
- Academic support for new and existing faculty was strengthened
- Scholarly faculty productivity was dramatically improved, in the last five years the number of articles published by Oxford faculty increased by over 300% and external founding by over 600%
- Diversity of faculty increased
- In Fall 2002 there were about 200 engineering, 450 computing and 50 nursing students enrolled in programs on the Oxford campus. In Fall 2006, we enrolled about 500 engineering and 300 computing students. (Since 2003, the nursing program has not been offered in Oxford.)
- Significant attempts aimed at developing a curriculum for the 21st century at both the undergraduate and graduate level were undertaken and implemented
- Academic standards were strengthened
- External and Student Advisory Councils were restructured
- School's Board of Ambassadors was established
- Several major prospects for the ongoing Miami's Capital Campaign were identified and cultivated
- School's revenue base was strengthened
- Several initiatives aimed at increasing SEAS visibility were undertaken (new publications, awards, events, etc.)
- New SEAS and departmental governance documents were developed and approved
- Several new outreach programs were developed

² Narrative descriptions of the accomplishments available upon request

CHAIRMANSHIP AT ILLINOIS INSTITUTE OF TECHNOLOGY

Mechanical, Materials And Aerospace Engineering Department's Milestones, 1995 - 2000

- Three undergraduate programs in Mechanical Engineering, Aerospace Engineering, Metallurgical & Materials Engineering were reviewed by the Accreditation Board for Engineering and Technology (ABET) in the Fall of 1996 and received full accreditation from the agency until September 2003
- In the 1997/98 academic year, the three undergraduate programs were extensively revised according to ABET 2000 guidelines, introducing a common curriculum for the first two years, reinforcing the freshman level "Introduction to the Professions" course, adding Interprofessional Projects in the junior and senior years, developing new courses and laboratories
- In the 1996/97 and 1997/98 academic years, MMAE graduate programs underwent a complete revision, streamlining graduate policies and procedures and issuing new graduate student guidelines for M.S. and Ph.D. degrees
- All MMAE undergraduate and graduate programs received full, 10 years accreditation from the North Central Accreditation agency in 1997
- New Professional Masters degrees that could be completed in one year were designed and implemented; a series of short courses and four certificate programs were designed and implemented
- Between 1994 and 1999, the number of the MMAE graduate students increased 21% and the grants and sponsored programs increased 53 %
- IIT Research Institute Chair in Manufacturing and Reliability was founded
- New laboratories for: Materials Characterization, Advanced Heat Treatment, Advanced Mechanical Testing, Laser Processing, Experimental Solid Mechanics, and Robotics/Mechatronics were established
- MMAE Advisory Board was established in 1998/99
- New partnerships with industry were established, among others with General Motors, Alumax, Haynes Int., McCook Metals, Finkl, Rockwell International
- Thermal Processing Research Center was established (2000)

RESEARCH HIGHLIGHTS

FIELD OF SPECIALTY

Materials Science and Engineering, Mechanical and Physical Metallurgy

RESEARCH INTERESTS

Current

- Synthesis, characterization and properties of nanocrystalline materials.
- Processing, designing, and characterization of ordered intermetallic compounds.
- Precipitation and strain hardening mechanisms in Ni-Mo-Cr alloys.
- Advanced aluminum alloys for aerospace applications.

Other while at Illinois Institute of Technology, 1988 - 2000

- Transient liquid phase bonding of high-temperature structural materials.
- Phase development in Silver-Clad BSCCO superconductors.
- Hydrogen effects in single-crystal, nickel-base superalloys.
- Interfacial strength and hydrogen effects in metal-matrix composites.

Carnegie-Mellon University, 1985 - 1987

- Temperature and hydrogen effects in nickel-base single crystal superalloys.
- Metal-matrix composites for high temperature structures.
- Deformation and wear in fully pearlitic rail steels.
- Transient liquid phase bonding process.

Saarbruecken University, 1984 - 1985

- The structure of interfaces between crystals and glasses.
- The influence of grain boundary structure on point defect-grain boundary on interaction.
- Strengthening of quenched metals.

AGH University of Science and Technology, 1981 - 1983

- Influence of stacking fault energy on deformation structure and properties of austenitic stainless steels.
- Precipitation hardening of HSLA steels.
- Grain boundary strengthening.

MAJOR RESEARCH ACCOMPLISHMENTS

- The development of a theory of grain boundary strengthening which explains the effect of strain on k and σ_0 parameters of the Hall-Petch equation (see, *e.g.*, list of selected publications – page 11, position [1], 1982).
- First experimental proof that the structure of grain boundaries affects their efficiency as point defect sinks or sources ([5], 1986, frequently quoted publication); before 1985 the grain boundaries, both low and high angle, were believed to be equally efficient point defect sinks/sources.
- A successful modeling of the results of a study of the transient liquid phase (TLP) bonding ([7], 1988); the modeling has been quoted in literally every paper on the TLP during the last 16 years.
- Rare experimental proof that hydrogen affects the development of dislocation structure during plastic deformation ([9], 1988).
- The most important outcomes of Dr. Dollár's research group's extensive studies on NiAl-base intermetallics are: demonstration of the feasibility of producing bulk NiAl-based alloys by mechanical alloying (MA) and their potential for high temperature structural applications, and recognition of several scientifically important microstructural effects in this class of materials ([17], 1993).
- Successful processing a fully dense, crack-free nanocrystalline intermetallic NiAl (grain size about 5 nm), exhibiting room temperature ductility; the first evidence of R.T. ductility in a nanocrystalline intermetallic compound ([20,23], 1997/98). Contributions to improved understanding of inherent limitations of strength and ductility of nanocrystalline materials.

RESEARCH SUPPORT – Grants in excess of 100k\$

(full list includes over 20 awards)

M. Dollár, co-Principal Investigator,
Polish State Committee for Scientific Research
Processing and Characterization of Ti-Al-Nb alloys
01/01/2004 – 31/12/2006; 420,000PLZ (~ \$140,000)

M. Dollár, co-Principal Investigator,
Polish State Committee for Scientific Research
“Intermetallic Alloys – processing, structure, properties and applications”
01/01/2001 – 12/31/2003; 450,000PLZ (~ \$150,000)

M. Dollár, Principal Investigator

Industrial support and B.Galvin/B.Pritzker Fund
Modern Aluminum and Ni-Mo-Cr Alloys for Aircraft Applications
09/01/98 – 08/31/01; \$140,000

M. Dollár, Principal Investigator
Air Force Office of Scientific Research
"Processing and Characterization of Fine Grained Ordered Intermetallic Alloys"
07/01/1994 - 06/30/1997; \$286,000

M. Dollár and J. Todd - Principal Investigators
National Science Foundation and Finkl and Sons Inc.
"Acquisition of an Analytical Transmission Electron Microscope"
09/01/1992 - 02/28/1994; \$393,000

M. Dollár, Principal Investigator
Air Force Office of Scientific Research
"Synthesis, Characterization, and Properties of Nanometer-Sized Intermetallics"
07/01/1992 - 06/30/1995; \$105,000

M. Dollár, Principal Investigator, P. Nash, Co-Principal Investigator
Air Force Office of Scientific Research
"Grain Boundary Effects in Ordered Intermetallic Alloys"
02/15/1990 - 02/14/1994; \$479,000

CONSULTING

- United Technology Corporation
- General Electric
- Haynes International, Inc.
- General Motors
- Ford Motor Company
- NASA
- Finkl and Sons, Inc.
- Roll Service, Inc.
- Institute of Ferrous Metallurgy, Katowice, Poland
- Institute for Non-ferrous Metals, Gliwice, Poland

SELECTED PUBLICATIONS³

1. M.Dollár and S.Gorczyca, "The Effect of Grain Size on Polycrystal Hardening", *Scripta Metall.*, 16 (1982) 901
2. M.Dollár and S.Gorczyca, "The Influence of Grain Size on the Work Hardening of an Austenitic Stainless Steel", *Mat. Sci. & Eng.*, 64 (1984) L27
3. M.Dollár and H.Gleiter, "Point Defect Annihilation at Grain Boundaries in Gold", *Scripta Metall.*, 19 (1985) 481
4. M.Dollár and H.Gleiter, "Dislocation Annealing in Interfaces between Crystals and Glasses", *Scripta Metall.*, 20 (1986) 275
5. M.Dollár, "Grain Boundaries as Sinks or Sources for Point Defects", *Scripta Metall.*, 20 (1986) 1059
6. M.Dollár and A.W.Thompson, "The Effect of Grain Size and Strain on the Tensile Flow Stress of Quenched Aluminum", *Acta Metall.*, 35 (1987) 227
7. K.Tuah-Poku, M.Dollár, and T.B.Massalski, "A Study of Transient Liquid Phase Bonding applied to an Ag/Cu/Ag Sandwich Joint", *Metall.Trans.*, 19A (1988) 675
8. M.Dollár, I.M.Bernstein, and A.W.Thompson, "Influence of Deformation Substructure on Flow and Fracture of a Fully Pearlitic Steel", *Acta Metall.*, 36 (1988) 311
9. M.Dollár and I.M.Bernstein, "The Effect of Hydrogen on Deformation Substructure, Flow and Fracture in a Nickel-Base, Single-Crystal Superalloy", *Acta Metall.*, 36 (1988) 2369
10. O.E.Chikezie, S.Gorczyca, and M.Dollár, "A New Approach to Flow Stress - Grain Size Relationship", *Archives of Metallurgy*, 35 (1990) 15
11. S.Dymek, M.Dollár, and D.Klarstrom, "Strain Hardening Mechanisms in Haynes Alloy 242", *Scripta Met.*, 25 (1991) 865
12. C.P.You, M.Dollár, A.W.Thompson, and I.M.Bernstein, "Microstructure - Property Relationship in a Particulate-Reinforced Aluminum Composite", *Metall. Trans.*, 22A (1991) 2445
13. M.Dollár, I.M.Bernstein, A.Domnanovic, W.Kromp, and H.Pinczolics, "Hydrogen Effects on Low-Cycle Fatigue of the Single-Crystal Nickel-Base Superalloy CMSX-2", *Metall. Trans.*, 22A (1991) 2597
14. S.Dymek, M.Dollár, P.Nash, and S.J.Hwang, "Deformation Mechanisms and Ductility of Mechanically Alloyed NiAl", *Mater. Sci. & Eng.*, A152 (1992) 160
15. M.Dollár, S.Dymek, P.Nash, and S.J.Hwang, "The Occurrence of <110> Slip in NiAl", *Scripta Metall. & Mat.*, 26 (1992) 29
16. S.Dymek, S.J.Hwang, M.Dollár, J.S. Kallend, and P.Nash, "Microstructure and Texture in Hot-extruded NiAl", *Scripta Metall. & Mat.*, 27 (1992) 161
17. M.Dollár, S.Dymek, P.Nash, and S.J.Hwang, "The Role of Microstructure in Mechanically Alloyed NiAl", *Metall. Trans.*, 24A (1993) 1993
18. S.Dymek, M.Dollár, and S.Gorczyca, "Status and Prognosis for High-Temperature Structural Materials", *Metallurgist*, 61 (1994) 15

³ full list comprises 52 archival publications and 40 refereed conference proceedings and is available upon request

19. S.Suh, M.Dollár, P.Nash, "Creep in Mechanically Alloyed NiAl", J. Mater. Sci. & Eng., A192/93 (1995) 691
20. M.S.Choudry, J.A.Eastman, R.J.DiMelfi and M.Dollár, "Evidence of Room Temperature Ductility in Nanocrystalline NiAl using Biaxial Disk Bend Testing", Scripta Materialia, 37 (1997) 843
21. S.Dymek, M.Dollár and K. Leonard, "Synthesis and Characterization of Mechanically Alloyed Nb₃Al-Base Alloys, Materials Sci. & Eng.A, 239-240 (1997) 507
22. H.Choo, P.Nash and M.Dollár, "Mechanical Properties of NiAl-AlN-Al₂O₃ Composites", Materials Sci. & Eng. A, 239-240 (1997) 464
23. M.Dollár, M.Choudry and J.Eastman, "Synthesis, Characterization and Mechanical Properties of Nanocrystalline NiAl", Materials Engineering, 19 (1998) 803
24. S.Dymek, M.Dollár, K.Leonard and M.Wrobel, "Processing and Mechanical Properties of Mechanically Alloyed Niobium-rich Nb-Al Alloys", Materials Engineering, 19 (1998) 1147
25. M.S.Choudry, M.Dollár and J.A.Eastman, "Nanocrystalline Intermetallics - Processing, Characterization and Mechanical Properties, Materials Sci. & Eng., A256 (1998) 25
26. S.Dymek, M.Dollár and M.Wrobel, "Environmentally Assisted Dynamic Embrittlement in a Long Range Ordered Ni-Mo-Cr Alloy", Scripta Materialia, 43 (2000) 343
27. S.Dymek, M.Dollár, M.Farooqi, "Optimization of Mechanical Properties of a Ni - Mo - Cr Alloy by Structural Modifications Induced by Changes in Heat Treatment", Materials Science and Engineering, 319-321 (2001) 284
28. S.Dymek, M.Wróbel, M.Blicharski and M.Dollár, "Mechanical Alloying of a Nb-24V-18Al", Materials Engineering, 22 (2001) 37
29. A.Dollár, S.Dymek and M.Dollár, "The Effect of Microstructure on Ductility of NiAl", Archives of Metallurgy, 47 (2002) 3
30. S.Dymek and M.Dollár, "TEM Investigation of Age-Hardenable Al 2519 Alloy Subjected to Stress Corrosion Cracking", Materials Chemistry and Physics, 81 (2003) 286
31. M.Wrobel, S.Dymek, M.Dollár and M.Blicharski, "Deformation Mechanisms in an Age-hardenable Ni-Mo-Cr alloy Subjected to Cold Rolling", Materials Review, September Issue (2003) 807
32. S.Dymek and M.Dollár, "TEM Investigation of Age-Hardenable Al 2519 Alloy Subjected to Stress Corrosion Cracking", Materials Chemistry and Physics, 81 (2003) 286
33. M.Dollár, A.Dollár, "On the strength and ductility of nanocrystalline materials", Journal of Materials Processing Technology, 157-158 (2004) 491
34. S.Dymek, Z.Witczak and M.Dollár, "Influence of the Processing Route on Microstructure and Properties of the Polycrystalline NiAl, Journal of Microscopy", 224 (2006) 12
35. S.Dymek, M.Wróbel, M.Dollár and M.Blicharski, "Influence of Plastic Deformation and Prolonged Aging on Microstructure of a Haynes 242 Alloy", Journal of Microscopy", 224 (2006) 24

TEACHING HIGHLIGHTS

GENERAL TEACHING INTERESTS

Materials Science and Engineering, Mechanical Behavior of Materials

COURSES TAUGHT

Undergraduate level: Fundamentals of Crystalline Solids, Engineering Materials and Design, Mechanical Metallurgy, Physical Metallurgy I, Physical Metallurgy II, Advanced Metallographic Techniques, Microstructural Analysis of Materials, Materials in Manufacturing, Mechanical Behavior of Materials, Physics of Solids

Graduate level: Crystal Defect Theory, Dislocations and Strengthening Mechanisms, Problems in High -Temperature Materials, Strengthening Mechanisms, Microstructural Analysis of Materials, Transmission Electron Microscopy

NEW COURSES DEVELOPED

Fundamentals of Crystalline Solids, Physical Metallurgy II, Diffraction and Microscopy (not yet taught), Microstructural Analysis of Materials, Problems in High-Temperature Materials, Transmission Electron Microscopy, Materials in Manufacturing

SHORT COURSES

Analytical Transmission Electron Microscopy of Materials, High-temperature Structural Materials for Turbine Engine Applications

EVALUATION BY STUDENTS WHILE AT IIT (1988-2000)

Professor M.Dollar's rating of courses taught (on a scale from 1 – 5): 33 courses taught, average rating: 4.64

To put the number in perspective: MMAE department's averages oscillated between 4.10 and 4.25, whereas Main Campus averages were typically close to 4.15. In an average semester, approximately 15% of faculty ratings exceeded 4.50. What I read in my evaluations was consistent- I was challenging, engaging, fair, and always accessible. Please note that I have also taught the sophomore course in Engineering Materials while at Miami University.

SUPERVISION OF THESES

11 M.Sc. Theses, 7 Ph. D. Theses

Short biography of Marek Dollár

Marek Dollár was born, raised, and educated in Poland. His academic foundation is from AGH University of Science and Technology in Krakow, Poland, one of Europe's leading Polytechnic Universities. His undergraduate, M.S., and Ph.D. studies were, respectively, in electrical engineering, applied physics, and materials science and engineering. As the recipient of the prestigious Alexander von Humboldt fellowship, he spent one and a half years in mid-eighties conducting research studies at the University of Saarbruecken in Germany. He came to the U.S. for the first time in 1985 at the invitation of Carnegie-Mellon University where he spent two and a half years as a research associate. He returned to Poland but the American allure proved to be too strong; in 1988 he came back to the U.S. where he joined the faculty at the Illinois Institute of Technology (IIT) in Chicago.

Marek Dollár's teaching and scholarly achievements at IIT led to a quick tenure decision in his third year and promotion to full professor in his fifth year there. In 1995, he was appointed Chair of a newly established Department of Mechanical, Materials and Aerospace Engineering and served in this capacity for over five years. In 2000, he left IIT but his association with IIT continued as he held the position of Research Professor at this institution until 2005.

Since 2000, Marek Dollár has been with Miami University in Oxford, Ohio as Dean of Engineering and Applied Science and Professor of Engineering Science. Under his leadership, Miami's School of Engineering and Applied Science has been transformed from an academic division, offering select niche programs, into a comprehensive school of engineering and applied science. Today, he has direct responsibility for the school comprising 7 academic departments, 78 tenure-track and tenured faculty, over 25 adjunct and visiting faculty, and about 1800 students. The school offers programs in engineering, computing, engineering management, engineering and information technology, and nursing.

Marek Dollár has an outstanding record of academic accomplishments in research and teaching. His scholarly reputation was established in materials science and engineering and he is perhaps best known for his contributions to our understanding of structure-properties relationships in high-temperature structural materials for aerospace applications. He has authored over 90 peer reviewed publications. In 1998, "*in recognition of distinguished contributions to the field of materials science and materials engineering*" he was elected fellow of a major professional organization in his field, ASM Int. (formerly American Society for Materials). He also holds the prestigious President of the Republic of Poland Professor of Engineering Sciences title. Throughout his career, he has enjoyed excellent teaching evaluations.

Since coming to the U.S., Marek Dollár has been involved in the life of Polish-American community. Among his many activities, he was Chairman of the Board of the Polish Institute of Science and Culture and Polish University Abroad in Chicago, IL. In "*recognition of exceptional contributions to international cooperation*" he was awarded the Cavalier's Cross of the Order of Merit of the Republic of Poland, one of the highest recognitions for a person of Polish ancestry living abroad. In 2004, he was appointed Honorary Consul of the Republic of Poland and in this role he works on expanding academic, cultural, and economic links between Poland and the U.S., and helping to establish cooperation between and among universities, organizations, companies and individuals to the benefit of both countries.

Marek Dollár is an avid skier and windsurfer. He plays tennis, racquetball, and volleyball. (As a college student, he won the 100 meters backstroke and 100 meters freestyle competition during a national academic swimming championship.) He likes playing chess and bridge, is interested in the 20th century history, in particular history of totalitarian regimes, and enjoys jazz and classical music.