

Curriculum Vitae

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Summary

- PhD in Material Science with over 45 years of experience in academia and industry
- Expert in X-ray diffraction (XRD) analysis of organic and inorganic materials
- Fellow of the International Centre for Diffraction Data
- Former editor of XRD database (*PDF*) and journals (*Powder Diffraction*)
- Founder of XRD service laboratory and consulting service
- Inventor of XRD system for counterfeit pharmaceutical detector
- Author/coauthor of 135+ published articles
- Expert in material analysis and patent infringement litigation

Education

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| 1982 | Post Doctoral Fellow , Bell Labs, Murray Hill NJ - Major areas of study: XRD characterization of III-V thin films. |
| 1982 | Ph.D. (Mechanics and Materials Science), Rutgers University, Piscataway NJ - Major areas of study: structural and failure analysis of materials deformed by fatigue and stress corrosion cracking; development of computerized x-ray testing methods; modeling of hardening mechanisms and phase transformations. |
| 1974 | M.E. (Metallurgy and Materials Science) Carnegie-Mellon University, Pittsburgh PA., - Major areas of study: metal processing methods and semiconductor characterization. |
| 1971 | B.S. (Physics) Carnegie-Mellon University, Pittsburgh PA. |

Post Graduate Training

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| 2017 | How to Excel and Succeed as an Expert Witness in Patent Cases: Special Techniques – Seak Workshop, Falmouth MA |
| 2017 | How to Excel at Your Expert Witness Deposition – Seak Workshop, |

- Falmouth MA
- 2016 **Advanced Testifying Skills for Experts** – Seak Workshop, Chicago IL
- 2013-2016 **Current Good Manufacturing Practices (cGMP)** – Classroom training in FDA required aspects of pharmaceutical testing.
- 2013 **How to Write a Bulletproof Expert Witness Report** – Seak Workshop, Washington DC
- 2003 **Advanced Rietveld Analysis** – Georgia Tech University, Atlanta, GA
- 2000 **Rietveld Analysis** – Universität Bayreuth, Bayreuth, Bavaria, Germany

Academic Employment

- 2008- pres **Emeritus Professor**, Rutgers University, Piscataway NJ, Material Science and Engineering Dept.
- 1998-2008 **Professor**, Rutgers University, Piscataway NJ, Ceramic and Materials Engineering Department (now *Materials Science & Engineering Dept.*).
- 1995-1998 **Associate Professor**, Rutgers University, Piscataway NJ, Ceramic and Materials Engineering Department.
- 1988-1995 **Associate Professor**, Rutgers University, Piscataway NJ, Dept. of Mechanics and Materials Science.
- 1982-1988 **Assistant Professor**, Rutgers University, Piscataway NJ, Dept. of Mechanics and Materials Science.
- 1978-1982 **Research Assistant**, Rutgers University, Piscataway NJ, Dept. of Mechanics and Materials Science.

Non-Academic Employment

- 1997-2015 **H&M Analytical Services**, Allentown NJ, (Co-Founder and Chief Scientist).
- 2011-pres **Veracity Network**, Vero Beach FL, (Co-founder/Science Advisor) - formerly Xstream Systems.
- 2004-2011 **Xstream Systems**, Vero Beach FL, (Co-founder/Science Advisor).
- 1999-2001 **Nanopac**, New Brunswick NJ, (Co-founder)
- 1977-1978 **TRW** (Reda Pump Division), Bartlesville OK, Materials Engineering Section, (Metallurgist).
- 1974-1977 **Olin Metals Research Laboratory**, New Haven CT, Physical Metallurgy Section, (Metallurgist).
- 1970-1972 **Harry Diamond Research Laboratory**, Washington, DC, Microminiature

Branch, (Physicist).

Honors

2006 **Fellow**, International Centre for Diffraction Data, Newtown Square PA.
1982 **Post-Doctoral Fellow**, Bell Laboratories, Murray Hill, NJ

Editorial Positions

1994-2007 **Editor**, *Metals Index of the Powder Diffraction File*, ICDD
1998-2007 **Assistant Editor for New Diffraction Data**, *Powder Diffraction* (Journal)
1998-2001 **Assistant Editor**, *Nanostructured Materials* (Journal)
1996-2000 **Editorial Staff**, *PDF-4 Relational Database*, ICDD
1997-1998 **Editorial Staff**, *The Blue Book*, ICDD
1987-1988 **Chair, Editorial Board**, TMS/AIME Conference on High Temperature Superconductors, Rutgers University
1985-1986 **Member, Editorial Board**, TMS/AIME Conference on Semiconductor Defects, Bell Labs
1979-1984 **Assistant Editor**, *Metals Index of the Powder Diffraction File*, ICDD
1982-1983 **Member, Editorial Board**, US/France Cooperative Meeting, Snowmass, CO

Technical Society Memberships (past 10 years)

American Ceramic Society
American Crystallographic Association
International Centre for Diffraction Data
Materials Research Society
Sigma Xi Honorary Society

Teaching (Courses Taught)

150:254 Laboratory II (X-ray diffraction and X-ray fluorescence)
150:206 Thermodynamics
150:309 Analytical Techniques in Ceramics
150:408 Analytical Techniques for Ceramics Research

150:520	X-ray Diffraction and Spectroscopy in Ceramics
150-521	X-ray Diffraction and Spectroscopy Laboratory
150-524	Advanced Characterization
150:532	Kinetics: Diffusion, Phase Transformations and Sintering
150:563	Advanced X-ray Diffraction
440-127	Introduction to Computing for Engineers
440-407	Mechanical Properties of Materials
655-351	Metallurgical Engineering
655-551	Physical Metallurgy I
655-552	Physical Metallurgy II
635-553	Mechanical Behavior of Metals
655-561	Computer Aided Experimentation
655-595	Advanced Physical Metallurgy I
655-601	Kinetics of Metal Systems
655-xxx	X-ray Diffraction (unaccredited course)

Teaching (Courses Developed)

150:254	Laboratory II (X-ray diffraction and X-ray fluorescence)
150:520	X-ray Diffraction and Spectroscopy in Ceramics
150:521	X-ray Diffraction and X-ray Spectroscopy Laboratory
440-125	Introduction to FORTRAN
655-561	Computer Aided Experimentation
655-553	Mechanical Behavior of Metals
655-601	Kinetics in Metal Systems

Teaching (Courses Supervised)

440-125	1990 - 1996 (Average of 125 students/year)
440-127	1982 - 1996 (Average of 900 students/year)
655-221	1990 - 1991 (Approximately 750 students)
655-222	1990 - 1991 (Approximately 400 students)

Personnel Supervised

	Christian Pinzone, Ph.D. 2006
	Chandrasekhar Reddy Gorla, Ph.D. 1999
	Yu Chi Wang, Ph.D. 1998
	Matthew Schurman, Ph.D. 1998
Ph.D.	Shih-Chieh Liao, Ph.D. 1996
Students	Chiao-Yi Hwang, Ph.D. 1995
	Ganjiang Feng, Ph.D. 1992
	Jhong Wah Lee, Ph.D., 1992
	Shyam Rao, Ph.D., 1992
	Chi-Fung Lo, Ph.D., 1989
	Hidehiko Kamide (1986-88)
	Nagabusham Patibandla (1989-90)
Post-Docs	Ping Lu (1993-95)
	B S Sywe (1994-95) (w/ Y. C. Lu)
	Shih Chieh Liao (1997-99)
	James Colaizzi (1999-00)
Visiting	Masanori Kurita (1988-89), Nagaoka Technological University, Japan
Professors	Zwi Kalman (1989-2001), Hebrew University, Jerusalem, Israel

University Service

	Hub Computer Committee (1994-1998)
	Common Purposes (Executive Committee) (1994-95)
University	Search Committee for VP for Computing (1991-92)
	Radiation Safety Committee (1984-90)
	Freshman Computing Committee (1983-96)
	Freshman Computer Course Coordinator (1983-96)
College	College Planning Committee (1989-1994)
	Health and Safety Committee (1986-1991)
	Grievance Committee (1991-94)
Department	Committee on Strategic Plan (1993)



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