

# Curriculum Vita

## **ROCHEFORT, Willie E. (Skip)**

Associate Professor of Chemical Engineering

Director, OSU and College of Engineering Pre-college K-12 Outreach Programs

## **DEGREES**

B.S., Chemical Engineering, University of Massachusetts, 1976

M.S., Chemical Engineering, Northwestern University, 1978

Ph.D., Chemical Engineering, University of California at San Diego, 1986

## **ACADEMIC POSITIONS**

Research Assistant, Chemical Engineering Department, University of Massachusetts, 1975-1976

Teaching and Research Assistant, Chemical Engineering Department, Northwestern University, 1976-1978

Teaching and Research Assistant, Department of Applied Mechanics and Engineering Sciences, University of California at San Diego, 1981-1986

ChE Undergraduate Laboratory Instructor, Department of Applied Mechanics and Engineering Sciences, University of California at San Diego, 1982-1986

NSF Postdoctoral Research Fellow, Ecole Supérieure de Physique et Chimie (ESPCI), Laboratoire d'Hydrodynamique et Mécanique Physique, Paris, France, 1986-1987

ChE Undergraduate Laboratory Instructor, Chemical Engineering Department, University of California at Santa Barbara, 1987-1988

Postdoctoral Research Associate, Chemical Engineering Department, University of California at Santa Barbara, 1988-1989

Staff Research Engineer, Chemical Engineering Department, University of California at Santa Barbara, 1989-1990

Instructor (part-time), Chemistry Department, San Francisco State University, 1992

Associate Professor (tenure track), Department of Chemical Engineering, Oregon State University, 1993-1999

Honors College Faculty, Oregon State University Honors College, 1997-present

Associate Professor (tenured), Department of Chemical Engineering, Oregon State University, 1999

Director, OSU Pre-college K-12 Outreach Programs 2003 - present

Director, COE Pre-college K-12 Outreach, 2005 - present

## **NON-ACADEMIC POSITIONS**

- *Polymer Engineer*, Kodak Apparatus Division, Rochester, New York, 1976 (summer)
- *Member of Technical Staff*, AT&T Bell Laboratories, Murray Hill, NJ, 1979 - 1981
- *Senior Research Engineer*, Dow Chemical Research Center, Walnut Creek, CA, 1990 - 1992
- *Project Leader*, Dow Chemical Research Center, Walnut Creek, CA, 1992 - 1993

### **Consultant**

Patent Litigation – polymer expert witness, 1990 - present

Hewlett-Packard, Corvallis, OR 1994 - present

ENTEK International, Lebanon, OR 1999 – present

NIKE IHM, Beaverton, OR 2000 – present

Timberline Tool, Whitefish Montana, 2002 – present

## **FIELDS OF SPECIALIZATION**

Polymer and Biomaterials – Rheological, Thermal, and Molecular Characterization

Non-Newtonian Fluid Mechanics (Gels, Colloids and Rheologically Complex Systems)

Polymer Processing (Liquid Crystal Polymers; Composites; Recycled Plastics)

Undergraduate Engineering Education and K-12 Science Curriculum Development

## **Awards and Nominations**

2007 OSU Mortar Board Top Professor Award  
2005 Loren D. McKinley Science Educator Award  
2004 OSU Dar Reese Excellence in Advising Award  
2004 College of Engineering Austin-Paul Faculty Award  
2002 OSU Honors College Outstanding Faculty – Honorable Mention  
1999 ASEE Dean's Teaching Award (Pacific Northwest Section)  
1999 Finalist – Corvallis Chamber of Commerce Outstanding Educator Award  
1998 National AIChE Outstanding Student Chapter Advisor  
1998 ASEE Dow Outstanding new Faculty Award (Pacific Northwest Section)  
1998 OSU Greek Community Outstanding Professor Award  
1997 University Faculty Advisor of the Year (ASOSU)  
1996 Loyd Carter Award – OSU College of Engineering Outstanding Teacher  
1996 OSU Nominee for Henry Dreyfus Teacher-Scholar Award Competition  
1986 NSF Post-Doctoral Fellowship: U.S.-France Exchange for Scientists and Engineers

### **Graduate, Undergraduate and High School Student Research and Training**

#### ***Graduate Students***

Changyong (Lance) Kim, M.S. ChE, 1995  
Abed Al-Amri, M.S.ChE, 1995  
Hardeepak (Happy) S. Gill, M.S. ChE, 1996  
Charles Lind, M.S., Washington State University, 1996 (co-advisor for thesis work at OSU)  
Zafar Malik, M.S. ChE, 1997  
Manish Giri, M.S. ChE, 1998  
Shih-Wei Ho, M.S. ChE, 1998  
Dai-Wei (David) Yu, M.S. ChE, 1998  
Bin Xu, M.S. ChE, 1999  
Dick Caseli, M.S. Materials Science, 1999  
David Gaibler, M.S. ChE, 2001  
Brian Jones, M.S. ChE, 2001  
Yorick Wauhaus, M.S. ChE, 2001  
Brandon Barrett, M.S. ChE, 2001  
Diana Djokoto, M.S. ChE, 2003  
John Hunt, M.S. ChE, 2003  
Cheryl Carbone, M.S. Materials Science, 2004  
Danielle Leiske, M.S. ChE, 2004  
Jim Kearns, M.S. Materials Science, 2004  
Abigail Kimerling, Ph.D. Chemical Engineering - UMass, Amherst (August, 2006)  
Rebecca Bader, Ph.D. Materials Science (December, 2006)  
Kevin Harris, M.S. ChE (June 2007)

#### ***Honors College Theses***

Dan Euhus, UHC, 1999  
Eric Davis, UHC, 1999  
Dan Braman, UHC, 2000  
Rick Osburn, UHC, 2000  
Kristi Keefe, UHC, 2002  
Eric Mock, UHC, 2003  
Josh Ellis, BioE Senior project, 2003

Neil Geisler, UHC, 2004  
Wyatt Tenhauff, UHC, 2004  
Rachel Hinton, UHC, 2004  
Ryan Kubota, BioE Senior Project, 2004  
Heidi Schmidt, UHC Senior Thesis, 2005  
Katie Wiegandt, UHC Senior Thesis, 2005  
Hannah Tuinstra, UHC Senior Thesis, June 2006  
Sara Tracy, ChE Senior Project, June 2006  
Nick Boehm, UHC Senior Thesis, June 2007  
Kelly Perry, UHC Senior Thesis, June 2007

***Undergraduate Research*** Jason Hower ('99-'02), Kevin Harris ('99-02), Erik Meuhlenkamp ('99-01), Kwame Adom ('99-'02), Szabolcs Farkas ('00-'02), Raz Ali ('01), Neil Geisler ('01), Cory Rogers ('01), Janelle Mangini ('01-'02), Asrar Mohammed ('02), Tarek Fadel ('02), Danielle Leiske ('02), Sara Tracy ('04-'05), Chandra Corley, ('04), Virginia McMakin ('04), Julie Meloy ('04), Alex Cook ('05), Beth Beaudry ('05), Tesia Dobrydnia ('05), Paul Pierogovski ('05), Elizabeth Spencer ('05), Matthew Crews ('05), Katherine Volmert (Cornell, '05), Kari Varin ('06), Colette Griffith ('06), Staci Van Norman ('06, '07), Kelsey Childress ('07), Trevor Chart ('07), Kayla Pierson ('06, '07), Paul Dornath ('06, '07), Alia Mulder-Rosi ('07)

***HS Student Research:*** Jason Hower ('98-'99) Adam Welander ('99-'01), Jamie Bergen ('99), Annie Gai ('00-'01), Hai Le ('01-'02), Meghaan Smith ('01-'02), Kira Elsasser ('01-'02), Erica Zaworski ('04), Neil Lakin ('04), Paul Dornath ('05), Kyle McVay ('07), Christa Rose ('07), Coralie Backlund ('07)

***ASE HS Students:*** Jason Hower ('97), Adam Welander ('98), Annie Gai ('99), Hai Le ('00), Tim Cooke ('01), Stephanie Hobbs ('01); six High School students in summer 2002; seven HS students in summer 2003; eleven HS students in summer 2004; seven HS students in summer 2005; Sara Varin ('06), Megan Blass ('06), Tara Krishnan ('07)

## **K-20 Outreach Activities**

- Director, OSU Pre-college K-12 Programs (2003 – present)
- Director, COE Pre-college K-12 Programs (2005 – present)

## ***Summer Experience in Science and Engineering for Youth (SESEY)***

- **co-director (with Christine Kelly, BioE) and founder of the program.**
- **\$31,000** funding from *Dreyfus Foundation* and *OSU Pre-College Programs*
- Summer research program for women and minorities underrepresented in science and engineering.
- **1997** - 24 High School participants (19 girls, 5 boys) and one HS science teacher.
- **1998** - 21 High School participants (19 girls, 2 boys).
- **1999** - 25 High School participants (19 girls, 6 boys)
- **2000** - 24 High School participants (19 girls, 5 boys)
- **2001** – 26 High School Participants (21 girls, 5 boys)
- **2002** – 35 High School Participants (29 girls, 6 boys)
- **2003** – 26 High School Students (19 girls, 7 boys) and one HS math teacher
- **2004** – 40 High School Students (34 girls, 6 boys)
- **2005** – 36 High School Students (28 girls, 8 boys)
- **2006** – 46 High School Students (38 girls, 8 boys)

- **2007** – 53 High School Students (42 girls, 11 boys)

***Saturday Academy E-Camp – Middle School Engineering Camp***  
**- co-founder (with Ellen Ford) and director**

- **2004 – 2007:** One week summer camp for 24 MS students

***SKIES – Spirited Kids in Engineering and Science***  
**- co-founder (with Karen Swanger, KidSpirit) and director**

- **2003 – 2007:** 10 week K-5 summer camp for 40 students per week.

***Apprenticeships in Science and Engineering (ASE) for High School Students***

- **1997-** \$2500 from *NYPRO Oregon* to fund high school student (Jason Hower, Corvallis High School) for eight week research project.
- **1998** - \$2500 from *NASA Space Grant Program* to fund high school student (Adam Welander, Central High School, Independence, OR) for eight week research project.
- **1999** - \$2500 from *NASA Space Grant Program* to fund high school student (Annie Gai, Sheldon High School, Eugene, OR) for eight week research project.
- **2000** - \$2500 from *NASA Space Grant Program* to fund high school student (Hai Le, McKay High School, OR) for eight week research project.
- **2001** - \$5400 from *NASA Space Grant Program* and *Amtek LLC* to fund two HS students
- **2002** – Six (6) High School students; HHMI, Space Grant, ETIC funding
- **2003** – Seven (7) High School Students; HHMI, Space Grant, ETIC, Hewlett Foundation
- **2004** – Eleven (11) High School Students; HHMI, Space Grant, ETIC, Hewlett Foundation
- **2005** – Seven (7) High School Students; HHMI, Space Grant, ETIC, Hewlett Foundation
- **2006** – Two High School Students; ETIC
- **2007** – One High School Student; ETIC
- **Midsummer Conference** -- Workshop on "Plastics in Daily Life" (July '96 through '07)
- **Midsummer Conference** ('05, '06, '07) Plenary Lecture "*The What, Where, How, and Why of Choosing a College*"
- **Year-End Conference** -- Chairperson of Technical Sessions (August '96 through '06)
  
- **Intel Northwest High School Science Expo** (1997, 2001 – 08, Head Judge, Engineering)
- **Intel International Science and Engineering Fair (ISEF)** (Head Judge, Engineering, 2004, 2005)
- **Intel International Science and Engineering Fair (ISEF)** (OSU Special Awards Judge, 2004-06)

**Service Activities**

***ChE Department***

- First Year Student Advisor, September 2005 - present
- Head Academic Advisor, March 2003 – September 2005
- AIChE and TAPPI Student Chapter Advisor, 1993 - present
- ChE Dept. High School Outreach Coordinator ('94 - present)
- Beaver Open House ('93 - '05); Kaleidoscope Minorities Program ('96 - '05)
- Graduate Admissions Committee (9/93 - 6/95)
- Undergraduate Curriculum Committee (6/94 - present)
- Coordinator of Undergraduate Laboratory Improvement Funding Campaign ('96-'98)

***College of Engineering***

- Task force for the revision of *Introduction to Engineering Curriculum* (summer, 1995)

- Initiator and coordinator of *COE Freshman Poster Competition* (1995)
- COE Awards and Recognition Committee ('97, '98)
- COE Diversity Committee (2004-06)
- COE Women and Minorities in Engineering Ambassadors (Faculty Advisor '04 - present)
- Director, COE Precollege Programs (new position Fall 2005- present)

#### **University**

- Honors College Faculty
- University Student Awards and Recognition Committee (1996 – 1998, 2007-2008)  
- Chairperson - '96, '97, '98 Waldo-Cummings Sophomore Academic Excellence Award
- OSU Precollege Programs Advisory Board (Shirley Lucas, Chairperson) (1997- 2003)
- Director, OSU Precollege Programs (2003- present)

#### **Professional Societies**

##### ***American Institute of Chemical Engineers (AIChE)***

- OSU AIChE Student Chapter Advisor, 1993 - present
- Oregon Section AIChE -- Executive Committee ('93 – '03), Chair '03-present
- AIChE National Student Chem-E Car Competition – Chair, Rules Committee ('97- present)
- Student Chapters Committee (SCC) -- AIChE National ('97 – present, 2<sup>nd</sup> Vice-Chair 2007-08)
- AIChE Regional Conference - Pacific Northwest Regional Liason (1997- present)

##### ***Technical Association of the Pulp and Paper Industry (TAPPI)***

- OSU TAPPI Student Chapter Advisor, 1993 - present
- Pacific Section TAPPI-- OSU Representative on Executive Committee, 1993 - present

##### ***American Society of Engineering Education (ASEE)***, 1993 - present

- Chemical Engineering Division; Division for Experimentation and Laboratory-Oriented Studies; Freshman Engineering Programs

##### ***American Chemical Society (ACS)***, 1993 - present

##### ***Society of Rheology***, 1976 – present; *2007 AIP Liaison Committee on Underrepresented Minorities*

**Journal Reviewer:** AIChE Journal; Journal of Rheology; Macromolecules; Polymer; Journal of Polymer Science; Polymer Engineering and Science.

##### **NSF Course and Curriculum Development Review Panel**

- June '95, July '96, July '97 (Panel Chairperson)

##### **NSF SBIR Review Panel – Sustainable Energy and Materials** (2006 & 2007)

#### **PUBLICATIONS** (\*indicates principle author(s))

##### **Technical Journals**

W.E. Rochefort\*, G.G. Smith, H. Rachapudy, V.R. Raju, and W.W. Graessley, "Properties of Amorphous and Crystallizable Hydrocarbon Polymers, II. Rheology of Linear and Star-Branched Polybutadiene," *J. Polymer Science: Polymer Physics Ed.*, **17**, 1197 (1979)

C.M. Vrentas\*, W.E. Rochefort\*, G.G. Smith, and W.W. Graessley, "Comparison of Eccentric Rotating Disk and Oscillatory Measurements of Dynamic Moduli in Polymer Liquids," *Polymer Eng. and Science*, **21** (5), 285 (1981)

Dale S. Pearson\*, Ann Mera, and Willie E. Rochefort, "Concentration Dependence of the Viscosity of Polyisoprene Solutions," *ACS Polymer Preprints*, **22** (1), 102 (1981)

Dale S. Pearson\* and Willie E. Rochefort\*, "Behavior of Concentrated Polystyrene Solutions in Large-Amplitude Oscillatory Shear Fields," *J. Polymer Science: Polymer Physics Ed.*, **20**, 83 (1982)

- W.E. Rochefort\*, S. Middleman, and P.C. Chau\*, "An Innovative Chemical Engineering Process Laboratory," *Chemical Engineering Education*, **19** (3), 150 (1985)
- Willie E. Rochefort\* and Stanley Middleman, "Effect of Molecular Configuration on Xanthan Gum Drag Reduction" *AIP Proc: Polymer-Flow Interactions*, Y. Rabin, Ed., **137**, 117 (1985)
- W.E. Rochefort\*, T. Rehg, and P.C. Chau, "Trivalent Cation Stabilization of Alginate Gel for Cell Immobilization," *Biotechnology Letters*, **8**, 115 (1986)
- Willie E. Rochefort\* and Stanley Middleman, "Rheology of Xanthan Gum: Salt, Temperature, and Strain Effects in Oscillatory and Steady Shear Experiments," *J. Rheology*, **31** (4), 337 (1987)
- Willie E. Rochefort\* and Stanley Middleman, "Relationship Between Rheological Behavior and Drag Reduction for Dilute Xanthan Gum Solutions," *Drag Reduction in Fluid Flows: Techniques for Friction Control*, Sellin and Moses, Ed., p. 69, Ellis Horwood Publishers (1989)
- W.E. Rochefort\*, R. McHugh, and S. Middleman, "Xanthan Gum Drag Reduction in a Recirculating Flow Loop: Multiple Pass Stability Studies," *Drag Reduction in Fluid Flows: Techniques for Friction Control*, Sellin and Moses, Ed., p.319, Ellis Horwood Publishers (1989)
- W.E. Rochefort\*, G.W. Heffner, D.S. Pearson, R.D. Miller, and P. Cotts, "Rheological and Rheoptical Studies of Poly (alkylsilanes)," *Macromolecules*, **24**, 4861 (1991).
- B. Ernst\*, M. M. Denn, P. E. Pierini, and W. E. Rochefort, "Rheological Properties of Liquid Crystalline Solutions of cis-poly(p-phenylenebenzobisoxazole) in Polyphosphoric Acid (PBO/PPA)," *J. Rheology*, **36** (2), 289 (1992)
- A. Greiner\*, W.E. Rochefort, K. Greiner, H-W Schmidt, and D.S. Pearson, "Formation of Thermoreversible Gels from Liquid Crystalline Polyesters," *Makromol. Chem., Rapid Commun.*, **13**, 25 (1992)
- M.-R. Fuh and W.E. Rochefort\*, "Analysis of Residual Phosphorous in PBO Film by X-Ray Fluorescence Spectroscopy," *TALANTA*, **41** (12), 2087-2090 (1994)
- P. Mather\*, N. Grizzuti, G. Heffner, M. Ricker, W.E. Rochefort, M. Seitz, H.-W. Schmidt, and D.S. Pearson, "Synthesis and Characterization of a Semiflexible Liquid Crystalline Polyester with a Broad Nematic Region," *Liquid Crystals*, **17** (6), 811-826 (1995)
- G.W. Heffner\*, W.E. Rochefort\*, and D.S. Pearson, "Characterization of Poly(3-octylthiophene) II. Melt Rheological Characterization," *Polymer Engineering and Science*, **35**, 868 (1995)
- D. Roitman\*, R. Janek, J. McAlister, R. Wessling, W.E. Rochefort\*, "Rigid Rods or Semiflexible Chains? A Comparative Study of the Solution Behavior of cis-PBO and trans-PBT in Methanesulonic Acid (MSA)," *Bulletin of the American Physical Society*, **40**, 289 (1995)
- Andreas Greiner\* and Willie E. Rochefort\*, "Thermoreversible Gelation of Rigid Rod-Like and Semirigid Polymers," *Mechanical and Thermophysical Properties of Polymer Liquid Crystals*, Chapter 14, W. Brostow, ed., Chapman and Hall Publishers (1996)
- Bin Xu\*, John Simonsen, and W.E. Skip Rochefort, "Mechanical Properties and Creep Resistance in Polystyrene/High Density Polyethylene Blends," *Journal of Applied Polymer Science*, **76**, 1100-1108 (2000)
- Bin Xu\*, John Simonsen, and W.E. Skip Rochefort, "Creep Resistance of Wood-filled Polystyrene/High Density Polyethylene Blends," *Journal of Applied Polymer Science* (accepted December, 1999)
- Manish Giri\*, John Simonsen, and W.E. Skip Rochefort, "Dispersion of Pulp Slurries Using Carboxy Methyl Cellulose," *TAPPI Journal* (accepted, December 1999)
- Chang\*, Koretsky, Kimura, Hackleman, Rochefort, "Microelectronics Processing in the Undergraduate ChE Laboratory", *Chemical Engineering Education* (summer 2003).
- Rebecca Bader\* and W.E. Rochefort, "Rheological Characterization of Photopolymerized Poly(vinyl alcohols) for use in nucleus pulposus replacement, *Journal of Biomedical Materials Research, Part A*, (published online 12/27 and in press).

### Conference Proceedings (reviewed)

Milo Koretsky\*, W.E. Skip Rochefort\*, and William F. Reiter, "An Interdisciplinary Laboratory for Printed Circuit Board Design and Manufacturing," *Proceedings of the ASEE National Meeting*, Milwaukee, WI, Session 2613, June 1997

W.E. Skip Rochefort, "A Traditional Material Balances Course Sprinkled with "Non-Traditional" Experiences," *Proceedings of the ASEE National Meeting*, Seattle, WA, Session 1313, June 1998

W.E. Skip Rochefort, "Leadership and Mentoring in Undergraduate Engineering Programs," *Proceedings of the ASEE National Meeting*, Seattle, WA, Session 2213, June 1998

W.E. Skip Rochefort\* and Michelle Bothwell, "Recruitment and Advising of High School Students for Non-Traditional" Groups," *Proceedings of the ASEE National Meeting*, Seattle, WA, Session 3213, June 1998

*ASEE National Meeting (Nashville, June 2003)*

- "Microelectronics Processing in the Undergraduate ChE Laboratory" Koretsky (presenter), Chang, Kimura, Hackleman, Rochefort,

- "OSU GK-12 Program for the Delivery of Science Content to Oregon Schools" Rochefort (presenter), Arp. Haak, Lytton

*AIChE National Meeting (San Francisco, November, 2003)*

- "Microelectronics Processing in the Undergraduate ChE Laboratory", Chang (presenter), Koretsky, Kimura, Hackleman, Rochefort

*ASEE National (Salt Lake City, Utah June 2004)*

- "Everything I know I learned in Kindergarten: Synergisms between K-12 Outreach and Recruitment and Retention of Women in Engineering", Rochefort (presenter), Levien, Momsen and Ford

- K-12 Outreach Initiatives, K-12 Division (Session Moderator)

*ASEE National (Portland, OR June 2005)*

- "Use of Wireless Laptops to Enhance a First-Year Engineering Orientation Course", Rochefort (presenter) and Levien

- ChE Division Local Arrangements Chair

### PATENTS

R.H. Bowman, W.E. Rochefort, M.-B. Liu, and P.E. Pierini, "Process for Coagulating, Washing, and Leaching of Shaped Polybenzazole Articles," U.S. Patent 5,292,469 (March 8, 1994)

L. Reddy, W.E. Rochefort, M.-B. Liu, and P.E. Pierini, "Convective Leaching of Polybenzazole Films," U.S. Patent 5,292,470 (March 8, 1994)

P.E. Pierini, R.H. Bowman, W.E. Rochefort, and M.-B. Liu, "Process for Coagulating and Washing Lyotropic Polybenzazole Films," U.S. Patent 5,302,334 (March 12, 1994)

Y. So, S.J. Martin, C. Chau, R.A. Wessling, A. Sen, K. Katsuhiko, D.B. Roitman, and W.E. Rochefort, "Polybenzazole Fibers Having Improved Tensile Strength Retention," U.S. Patent 5,552,221 (September 3, 1996)

Willie E. Rochefort and Kenneth H. Green, "Polyethylene Pipe Patch Systems and Methods", U.S. Patent Application 186256, filed January 31, 2006.

## **RESEARCH AND INDUSTRY SUPPORT (2003 – 2006)**

### ***Proposals Funded (2003-06)***

- 1) **Hewlett Foundation** Rochefort and Ellen Ford (Saturday Academy)
  - \$85,600 (7/1/04 – 6/30/05) to develop and deliver K-12 Engineering and Science Programs.
  - \$81,600 (7/1/04 – 6/30/05) to develop and deliver K-12 Engineering and Science Programs.
  - \$81,600 (7/1/05 – 6/30/06) to develop and deliver K-12 Engineering and Science Programs.
- 2) **Hewlett Foundation** – Rochefort and Ellen Momsen (Director, COE WME)
  - \$24,500 (2004-05) – Transitional Learning Community “Women Engineering Their Futures”
- 3) **Intel** , Momsen and Rochefort
  - \$20,000 (12/04 – 12/05), “College is a Plan”
- 4) **Research Experiences for Undergraduates and High School Students**
  - URISC (\$800 winter/spring 2004) – Hinton, Hackleman, Rochefort
  - URISC (\$3000) and HHMI (\$3450) (summer 2004) - Rochefort and Sara Tracy (ChE So.)
  - URISC (\$3000 summer 2004) - Chang and Michael Brooks (ChE So)
  - ASE HS Students Summer 2004 (11 students @ \$2700/student)
    - Hewlett Foundation - \$14,850 (5.5 positions) • Oregon Space Grant -- \$5400 (2 positions)
    - ETIC - \$4050 (1.5 positions) • HHMI - \$2700 (1 position) • IEEE - \$2700 (1 position)
- 5) **Keyhole Tool Design for Repair of PE Gas Pipes (with Timberline Tool, Whitefish, Montana)**
  - \$300,000 DOE SBIR (Sept/03 – Jun/05) and DOE NETL (April 1, 2004 – March 30, 2006)
- 6) **Hewlett Foundation** – Rochefort and Ellen Momsen (Director, COE WME)
  - \$38,000 (2005-06) – Transitional Learning Community in the First Year Engineering Course
- 7) **Hewlett Foundation** – Rochefort and Ellen Momsen (Director, COE WME)
  - \$15,000 (2005) – CONNECT Week Engineering Activities (Fall 2005)
- 8) **Intel** , Momsen and Rochefort
  - \$25,000 (1/06 – 9/06), REU for Women and Minorities in Engineering
- 9) **Erkkila Foundation** – Rochefort, Brian Bay, and Rebecca Bader
  - \$15,000 (1/06 – 12/06) – “Hydrogel for the Replacement of the Nucleus Pulposus in Spinal Disc Repair”
- 10) **ETIC OPAS** – Rochefort
  - \$13,200 (2006) – Engineering and Science Summer Camps (Summer 2006)
- 11) **Built Environment and Sustainable Technologies (BEST)**
  - \$25,000 (May 2008) Rochefort (PI), “Recycled Plastics for Building Insulation in Green Building Environments”