

## JENNIFER JEWETT VANANTWERP

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### EDUCATION:

#### Ph.D., Chemical Engineering

1999

University of Illinois at Urbana-Champaign

Thesis: *Affinity Maturation of the D1.3 Antibody Using Yeast Surface Display and Flow Cytometry*

Advisor: Dr. K. Dane Wittrup

#### Graduate Teacher Certification

University of Illinois at Urbana-Champaign

#### M.S., Chemical Engineering

1997

University of Illinois at Urbana-Champaign

Thesis: *Thermodynamic Characterization of Affinity Maturation: Entropic Changes Exhibited in a Higher Affinity Mutant of the D1.3 Antibody*

Advisor: Dr. K. Dane Wittrup

#### B.S. Chemical Engineering, with high honor

1994

Michigan State University, East Lansing, MI

### WORK EXPERIENCE:

#### Calvin University

Grand Rapids, Michigan

*Professor, Engineering Department*

2011-present

*Associate Professor, Engineering Department*

2006-2011

*Assistant Professor, Engineering Department*

1999-2006

- ENGR 101: Introduction to Engineering Design
- ENGR 102: Engineering Communications, Analysis, and Design
- ENGR 106/106L: Engineering Chemistry and Materials Science & Lab
- ENGR 205: Materials Science and Engineering
- ENGR 209/209L: Introduction to Laws of Conservation and Thermodynamics & Lab
- ENGR 303/303L: Chemical Engineering Principles & Thermodynamics
- ENGR 319/319L: Introduction to Thermal/Fluid Sciences & Lab
- ENGR 335: Mass Transfer and Separations
- ENGR 337: Chemical Engineering Laboratory
- ENGR W82: Advanced Topics in Chemical Engineering
- IDIS 110: Research and Information Technology

#### University of Washington

Seattle, Washington

*Affiliate Professor*

2023-present

*Department of Electrical and Computer Engineering*

#### Consulting

Grand Rapids, Michigan

*Environmental Engineering*

2007-2010

Quality assurance reviews; Preparation and review of grant applications for alternative energy projects (Fleis & VandenBrink Engineering, Inc., Grand Rapids, Michigan).

*Chemical Engineering*

2002-2003

Evaluate and implement new sampling system for pilot plant (Pfizer, Inc., Holland, Michigan). Supervise student research assistants.

**Fleis & VandenBrink Engineering, Inc.**

**Grand Rapids, Michigan**

*Professional Extern, Environmental Engineering*

2006-2007

Develop wastewater treatment plant models with simulation software, and use to predict performance. Plan, construct, and implement pilot study for major expansion of trickling filter treatment system. Conduct quality assurance reviews.

**Pfizer, Inc.**

**Holland, Michigan**

*Professional Intern, Chemical Development Group*

Summer, 2000

- Feasibility study of biotransformations for synthesis of pharmaceuticals.

**University of Illinois**

**Urbana, Illinois**

*Research Assistant, Department of Chemical Engineering*

1994-1999

- Research Area: Protein Engineering (for higher affinity antibodies)
- Techniques: Creation and screening of protein libraries for directed evolution of protein properties, Production and purification of proteins, Yeast surface display, Flow cytometry (fluorescence activated cell sorting), Isothermal titration calorimetry, Fluorescence spectroscopy, Molecular biology.
- Supervised four undergraduate students conducting biochemical engineering research related to my thesis.

**University of Illinois**

**Urbana, Illinois**

*Teaching Assistant, Department of Chemical Engineering*

1995-1997

- Introduction to Chemical Engineering (CHE 261), Chemical Engineering Thermodynamics (CHE 370), Chemical Engineering Laboratory (CHE 374), Special Topics - Biochemical Engineering (CHE 396).
- Outstanding Teaching Award, U. of Illinois College of Liberal Arts and Sciences, 1999
- University of Illinois List of Teachers Ranked as Excellent by their Students, 1997

**Amway Corporation**

**Ada, Michigan**

*Engineering Intern, Process Research and Development Dept.*

Summer 1993

- Tested the ULTRAMAX process optimization software by designing and conducting experiments, for both the pilot plant and production line, to increase the bulk density of powdered laundry detergent.
- Wrote a manual to aid effective use of the software for future process development.

**IBM**

**Burlington, Vermont**

*Engineering Intern*

Summer 1992

- Designed and conducted experiments to improve the process for fabrication of lithography masks, including work in Class I Clean Room environment.

**Michigan State University**

**East Lansing, Michigan**

*Undergraduate Research Assistant, Dept. of Chemical Engineering*

1990-1992

- Conducted fluid dynamics experiments involving liquid-liquid hydrocyclone separations.
- Wrote protocols for lab techniques.

## BOOKS:

VanAntwerp, J.J., & Wilson, D. (2022). *Sex, Gender, and Engineering: Harassment at Work and in School*. Cambridge Scholars Publishing: Newcastle upon Tyne, U.K.

## PEER- REVIEWED PUBLICATIONS AND PRESENTATIONS:

VanAntwerp, J.J., Wilson, D., Floyd Smith, T., Misra, S., Mullen, A., & Riskin, E. (2023). Sex, gender, and engineering: Responding to harassment at work and in school. *Proceedings of the 2023 American Society for Engineering Education (ASEE) Conference*, Baltimore, MD, June 2023.

Misra, S., Kardam, N., VanAntwerp, J., & Wilson, D. (2023). How did the landscape of student belonging shift during COVID-19? *Journal of Engineering Education*, 1-29. <https://doi.org/10.1002/jee.20542>

Wilson, D., & VanAntwerp, J.J. (2023, June). What do engineering and other STEM faculty need: Exploring the nuances of psychological needs. *Proceedings of the 2023 American Society for Engineering Education (ASEE) Conference*, Baltimore, MD.

Wilson, D., VanAntwerp, J.J., & Misra, S. (2023, June). Engineering CARES: Measuring basic psychological needs in the engineering workplace. *Proceedings of the 2023 American Society for Engineering Education (ASEE) Conference*, Baltimore, MD.

VanAntwerp, J.J. & Wilson, D. (2023, June). Gender harassment at work and in school: Seeing it; solving it. *Proceedings of the 2023 American Society for Engineering Education (ASEE) Conference*, Baltimore, MD.

VanAntwerp, J.J. (2023, February). Recognizing and Eliminating Gender Harassment in Engineering [Presentation]. *WeLocal Meeting of the Society of Women Engineers*, Detroit, MI.

VanAntwerp, J.J. & Wilson, D. (2021). Left out: A review of women's struggle to develop a sense of belonging in engineering. *SAGE Open*, **11**(3): 1-19. <https://doi.org/10.1177/21582440211040791>

VanAntwerp, J.J., Wilson, D., Summers, L., Maynen, D., & Wright, J. (2019). After #MeToo: What's next for women in the engineering workplace? *Proceedings of the 2019 American Society for Engineering Education (ASEE) Conference*, Tampa, FL, June, 2019. <https://peer.asee.org/33155>

Wilson, D., VanAntwerp, J.J., Wright, J., & Summers, L. (2019). Need satisfaction and need frustration among women and men faculty in engineering: A self-determination perspective. *Proceedings of the 2019 American Society for Engineering Education (ASEE) Conference*, Tampa, FL, June, 2019. <https://peer.asee.org/33132>

VanAntwerp, J.J., & Wilson, D. (2018). Differences in motivation patterns among early and mid-career engineers. *J. Women & Minorities in Science and Engineering*, **24**(3): 227-259. <https://doi.org/10.1615/JWomenMinorScienEng.2018019616>

Baker, R., Yonker, J., & VanAntwerp, J.J. (2017, March). Equipping faculty to engage the theology of vocation with undergraduates [Presentation]. NetVUE Conference: Renewing the Theological Exploration of Vocation. Charlotte, NC.

VanAntwerp, J.J., & Wilson, D. (2015). Difference between engineering men and women: How and why they choose what they do during early career. *Proceedings of the 2015 American Society for Engineering Education (ASEE) Conference*, Seattle, WA, June, 2015. <https://peer.asee.org/23881> **Awarded "Best Paper" by the Women in Engineering Division of ASEE.**

VanAntwerp, J.J., Bruxvoort, C., Plett, M., & Wilson, D. (2011). Does Christian faith make a difference in motivating career decisions in engineering? *Proceedings of the 9<sup>th</sup> Christian Engineering Education Conference*, Vancouver, B.C., June, 2011. <http://tinyurl.com/2011CEEC-Proc>

Plett, M., Hawkinson, C., VanAntwerp, J.J., Wilson, D., Bruxvoort, C. (2011). Engineering identity and the workplace persistence of women with engineering degrees. *Proceedings of the 2011 American Society for Engineering Education (ASEE) Conference*, Vancouver, B.C., June, 2011. <https://peer.asee.org/17872>

Wilson, D., Plett, M., VanAntwerp, J.J., & Bruxvoort, C. (2011). Opportunities to serve: Important from middle school to retirement. *2011 WEPAN Annual Conference*, Seattle, WA, June, 2011.

VanAntwerp, J.J., Reed, R., Bruxvoort, C., & Carlson, N. (2008). Engineering student retention: Development of a validated, quantitative instrument for exploring the role of personal and institutional context. *Proceedings of the 2008 American Society for Engineering Education (ASEE) Conference*, Pittsburgh, PA, June, 2008. <https://peer.asee.org/3899>

VanAntwerp, J.J., & Ermer, G.E. (2006). Male and female He created them: Why Christians should care about educating more engineers and how to achieve it. *Proceedings of the 6<sup>th</sup> Christian Engineering Education Conference*, Bourbonnais, IL, June, 2006. <http://tinyurl.com/2006CEEC-Proc>

VanAntwerp, J.J. (2006). The Christian foundations of an engineering education. *Proceedings of the 6<sup>th</sup> Christian Engineering Education Conference*, Bourbonnais, IL, June, 2006. <http://tinyurl.com/2006CEEC-Proc>

VanAntwerp, J.J., VanAntwerp, J., Vander Griend, D.A., & Wentzheimer, W.W. (2004). Chemistry and materials science for all engineering disciplines: A novel interdisciplinary team-teaching approach. *Proceedings of the 2004 American Society for Engineering Education (ASEE) Conference*, Salt Lake City, Utah, June, 2004. <https://peer.asee.org/13330>

Wentzheimer, W.W., Ermer, G.E., VanAntwerp, J.J., & VanderLeest, S.H. (2004). An optimal engineering education: The BSE at a Liberal Arts college. *Proceedings of the 2004 American Society for Engineering Education (ASEE) Conference*, Salt Lake City, Utah, June, 2004. <https://peer.asee.org/13213>

VanAntwerp, J.J. & Wittrup, K.D. (2000). Fine affinity discrimination by yeast surface display and flow cytometry. *Biotechnology Progress*, **16**: 31-37. <https://doi.org/10.1021/bp990133s>

Shusta, E.V., VanAntwerp, J.J., & Wittrup, K.D. (1999). Biosynthetic polypeptide libraries. *Current Opinion in Biotechnology*, **10**: 117-122. [https://doi.org/10.1016/S0958-1669\(99\)80020-2](https://doi.org/10.1016/S0958-1669(99)80020-2)

VanAntwerp, J.J., & Wittrup, K.D. (1998). Thermodynamic characterization of affinity maturation: the D1.3 antibody and a higher affinity mutant. *Journal of Molecular Recognition*, **11**: 10-13. [https://doi.org/10.1002/\(SICI\)1099-1352\(199812\)11:1/6<10::AID-JMR381>3.0.CO;2-H](https://doi.org/10.1002/(SICI)1099-1352(199812)11:1/6<10::AID-JMR381>3.0.CO;2-H)

VanAntwerp, J.J., & Wittrup, K.D. (1998, November). Osmotic stress and affinity maturation by yeast surface display. *American Institute of Chemical Engineers Annual Meeting*, Miami, FL.

Midelfort, K.S., Boder, E.T., Kieke, M.C., Shusta, E.V., VanAntwerp, J.J., Kranz, D.M., & Wittrup, K.D. (1998, October). Directed evolution of protein binding, stability, and expression properties by yeast surface display [Poster]. *Molecular Interaction Technologies '98*, San Francisco, CA.

VanAntwerp, J.J., Boder, E.T., & Wittrup, K.D. (1998, August). Antibody engineering by yeast surface display [Presentation]. *216th American Chemical Society National Meeting*, Boston, MA.

VanAntwerp, J.J., & Wittrup, K.D. (1997, June). Thermodynamic characterization of antibody and higher mutant binding to antigen [Poster]. *12th International Symposium on Affinity Interactions: Fundamentals and Applications of Biomolecular Recognition*, Kalmar, Sweden.

VanAntwerp, J.J., & Wittrup, K.D. (1996, November). Thermodynamic characterization of the D1.3 antibody and a mutant: the role of bound water molecules [Poster]. *American Institute of Chemical Engineers Annual Meeting*, Chicago, IL.

### **SELECTED ONLINE PUBLICATIONS:**

VanAntwerp, J. J. (2022, March 15). Belonging in the Engineering CARES study. *Belonging in Engineering*, edited by D. Wilson and J.J. VanAntwerp.

<https://belongingengineering.blogspot.com/2022/03/announcing-engineering-cares-research.html>

VanAntwerp, J. J. (2022, February 16). Our words do matter. *Women in Engineering*, edited by J.J. VanAntwerp and D. Wilson. <https://storiesintosolutions.blogspot.com/2022/02/our-words-do-matter-sexism-devalues.html>

Wilson, D., & VanAntwerp, J., eds. (2021). *Turning stories into solutions*. <http://storiesintosolutions.life/>

### **OTHER PUBLICATIONS:**

VanAntwerp, J.J. (2006). A trickling filter pilot study for the introduction of new industrial wastewater to a municipal stream: work plan. Fleis & VandenBrink Engineering, Inc., internal document, November 2006.

Schonewill, P., Smith, E., VanAntwerp, J., VanAntwerp, J.J., VandenBosch, B., Vliem, J., & Wentzheimer, W.W. (2003). Alternative sampling methods for pharmaceutical manufacturing. Final project report for Pfizer, Inc., November 2003.

VanAntwerp, J.J. (2000). Feasibility study of biotransformation for Gabapentin synthesis. Final Report for Internship, Pfizer Internal Document, August 9, 2000.

VanAntwerp, J.J. (2000). Regioselectivity during biotransformations for Gabapentin synthesis. Pfizer Internal Document, July 28, 2000.

VanAntwerp, J.J. (2000). Increasing yields from biotransformations for Gabapentin synthesis. Pfizer Internal Document, July 7, 2000.

### **OTHER PRESENTATIONS:**

*Panel moderator: Sex, gender, and engineering: Responding to harassment at work and in school* [Panel discussion]. *Proceedings of the 2023 American Society for Engineering Education (ASEE) Conference*, Baltimore, MD, June 2023.

*Keynote address: VanAntwerp, J.J. & Wilson, D. Gender Harassment. Lobby Day for the American Association of University Women (AAUW) – Washington Chapter*. Virtual meeting, Spokane, Washington, Jan. 30, 2023.

*Interviewed by Mattson, C., The Mode/Switch. It's not just her problem: Dealing with sexual harassment in organizational community*, September 17, 2022. <https://themodeswitch.substack.com/p/its-not-just-her-problem>

*Invited lecture:* VanAntwerp, J.J. (2022, October 2 and 4). *Sex, Gender and Engineering* [Webinar]. CWiS Live! American Scientific Affiliation. [https://www.youtube.com/watch?v=1KT\\_bfd9ds](https://www.youtube.com/watch?v=1KT_bfd9ds)

*Speaker:* Sex, Gender and Engineering [Recorded presentation]. Calvin University Engineering Department Seminar Series, September, 2022. <https://www.youtube.com/watch?v=toQ8xnaNEA0&t=1965s>

*Invited Panelist:* Picture a scientist: Film screening and discussion. Joint meeting of the American Scientific Affiliation (West Michigan Chapter) and the Christian Women in Science, Calvin University, November 13, 2021.

*Invited lecture:* Women in the engineering workforce, through the lens of motivation theory. Seminar series, Michigan State University, Department of Chemical Engineering and Materials Science. February, 2020.

*Panelist:* After #MeToo: What's next for women in the engineering workplace? (2019, June). 2019 American Society for Engineering Education (ASEE) Conference, Tampa, FL.

*Keynote address:* VanAntwerp, J.J., & VanAntwerp, J. Calvin College Engineering Department 30<sup>th</sup> Anniversary West Coast Reunion Dinner, Seattle, WA, June 2015.

*Speaker:* Motivational differences in early-career pathway choices of engineering graduates. Calvin College Engineering Department Seminar Series, October, 2014.

*Invited lecture:* VanAntwerp, J.J. & Bruxvoort, C. Examining calling as a motivator in career decisions: A comparison of engineering graduates from secular and Christian undergraduate institutions. Social Sciences Seminar Series, Calvin College, February 17, 2012.

*Panelist:* Engineering student retention. *Christian Engineering Education Conference*, Waco, TX, June, 2009.

*Panelist:* Engineering career paths: the role of faith and gender. *2008 Christian Engineering Education Conference*, Beaver Falls, PA, June, 2008.

*Speaker:* Land of milk and water: Cleaning up our mess. Calvin College Engineering Department Seminar Series, November, 2007.

*Speaker:* Biotransformations: Let Bacteria Do the Dirty Work. Pfizer Chemical Development Group, Internal Presentation, August 9, 2000.

*Presenter:* VanAntwerp, J.J. & Wittrup, K.D. The role of osmotic stress in the affinity maturation of the D1.3 antibody by yeast surface display [Poster]. The Whitaker Foundation Annual Meeting, La Jolla, CA, August 1998.

*Presenter:* VanAntwerp, J.J. & Wittrup, K.D.. Thermodynamic characterization of affinity maturation: the D1.3 antibody and a higher affinity mutant. *11th Annual Gibbs Conference on Biothermodynamics*, Carbondale, IL, October, 1997.

## **GRANTS:**

VanAntwerp, J.J. (2022) *Large-scale Study of Engineering Workforce Retention*. Calvin College Sabbatical Leave. Amount awarded: one academic semester of leave at 60% FTE.

VanAntwerp, J.J. (2021). *Women in the Engineering Workplace*. Calvin University Research Fellowship. Amount awarded: Release time for Interim semester.

Lee, W., Lundberg, M., VanAntwerp, J.J., Rienstra, D., & Walhout, M. (2015-16). *Faith and Vocation: A Faculty Development Workshop*. Council of Independent Colleges Network for Vocation in Undergraduate Education (NetVUE) Professional Development Grant. Amount awarded: \$10,000.

VanAntwerp, J.J. (2013-2014). *Workplace Persistence of Women Engineers*. Calvin College Sabbatical Leave. Amount awarded: one academic year of leave at 30% FTE.

VanAntwerp, J.J. (2009-2010). *Career Pathways of Degreed Engineers*. Calvin College Research Fellowship. Amount awarded: Release time equivalent to one course.

Dornbos, D., J.J VanAntwerp, J.J. & Wentzheimer, W.W. (2009). *Technical and economic efficacy of woody invasive species for conversion to fuel ethanol*. ISRI Student Research Grant. Amount awarded: Stipends and supplies to support two student researchers and two faculty mentors for 15 months.

VanAntwerp, J.J., Plett, M.I., Bruxvoort, C., & Wilson, D. (2009). *Career Pathways of Women Engineers: The Role of Faith and Person*. Calvin Center for Christian Scholarship Small Grant. Amount awarded: \$1,500.

VanAntwerp, J.J., Bruxvoort, C., & Reed, R. (2007-2008). *Engineering Student Retention in a Non-PhD-Granting 4-year College*. Calvin College Research Fellowship. Amount awarded: Release time equivalent to two courses.

VanAntwerp, J.J. (2006). *A Professional Externship in Environmental Engineering*. Calvin College Sabbatical Leave. Amount awarded: one semester and one interim of full-time leave.

VanAntwerp, J.J., Bruxvoort, C., & Reed, R. (2006). *Engineering Student Retention in a Non-PhD-Granting 4-year College*. Calvin Center for Social Research Small Grants Program. Amount awarded: \$1,000 in-kind support.

VanAntwerp, J.J. (2006). *Conducting Rigorous Research in Engineering Education*. National Science Foundation CCLI-ND (DUE - 0341127 and HRD - 0411994). Amount awarded: Expenses to attend one-week workshop plus \$3,000.

VanAntwerp, J., VanAntwerp, J.J., & Wentzheimer, W.W. (2001). *Alternative sampling methods/sites for pilot plant scale reactors*. Chemical Development, Pfizer Inc. (Holland, MI). Amount awarded: \$99,600.

## **PROFESSIONAL DEVELOPMENT ACTIVITIES:**

### *Teaching Development and Pedagogy*

- American Society for Engineering Education Annual Meeting: 2004, 2006, 2008, 2009, 2011, 2015, 2019, 2023
- POGIL (Process-Oriented, Guided-Inquiry Learning) Workshop, Calvin College, May 2017
- Christian Engineering Education Conference: 2004, 2006, 2008, 2009, 2011, 2015
- Exceed Teaching Workshop, American Society of Mechanical Engineers, Santa Clara, CA, 2004
- Graduate Teaching Certification, Univ. of Illinois Office of Instructional Resources, 1999
- Instructor for University of Illinois All-Campus Teaching Assistant Orientation, 1998
- "Effective Teaching: A Workshop," taught by R. Felder and R. Brent, and sponsored by the Academy for Excellence in Engineering Education at the University of Illinois, 1998
- Completed one-semester course, University of Illinois Dept. of Educational Organization and Leadership, "Teaching in the College and University Setting," 1995

### *Research and Professional Activities*

- Society of Women Engineers Annual Meeting (2022) and SWE-Local-Detroit (2023)

- The Council of Independent Colleges Network for Vocation in Undergraduate Education (NetVUE) National Conference: 2015, 2017
- Served as Senior Faculty Divisional Leader, “Faith and Vocation” Faculty Development Workshop, 2015-16 NetVUE Professional Development grant
- “Qualitative Research Methods” Workshop, taught by Michael Emerson, Rice University and sponsored by the Calvin College Dean for the Social Sciences and Contextual Disciplines, Grand Rapids, MI, June 6-10, 2011
- “Conducting Rigorous Research in Engineering Education” workshop, National Science Foundation CCLI-ND, Golden, CO, 2006
- American Institute of Chemical Engineers Annual Meeting: 1996, 1998, 2002, 2005
- Symposium on Synthetic Organic Chemistry, Hope College, Holland, MI, 2000

#### *Other Professional Development*

- Reading Group: *A Christian Field Guide to Technology for Engineers and Designers* (E. Brue, D.C. Schuurman, S.H. Vanderleest), Calvin University, September 2022.
- Reading Group: *Heavy Burdens: Seven Ways LGBTQ Christians Experience Harm in the Church* (B.E. Rivera), Calvin University, September 2022.
- “Christians and Cultural Difference,” Workshop, Calvin University Office of Diversity & Inclusion, March 2020.
- Book Discussion: *Emerging Adulthood and Faith* (J. Hill), Calvin University, October 2018.
- “Implicit Bias in the Search Process,” Workshop, Calvin College Human Resources, October 2018.
- “Inclusive Excellence,” Workshop, Calvin College Office of Diversity & Inclusion, September 2018.
- “Microaggressions” workshop sponsored by the Calvin College Multicultural Affairs Office, Fall 2014 (FEN)
- “Intercultural Communication” Workshop at the Calvin College Anti-Racism Conference, March 5, 2012 (FEN)
- J. Pieper Reading Group with the Dean of the Chapel, Calvin College, MI, 2003
- “How a Reformed Christian Perspective Can Inform Biotechnology and Biotechnology-Related Policy,” Working Group, Calvin Center for Christian Scholarship, 2001-2002

#### **PROFESSIONAL SERVICE:**

- Reviewer for:
  - *Engineering Studies*: 2022
  - *International Journal of Gender, Science, & Technology*: 2021
  - American Society for Engineering Education Conference: 2005-2023
  - Christian Engineering Education Conference: 2004, 2006, 2008, 2009, 2011, 2015
  - Advanced Placement Course Development in Engineering: 2015
  - Textbook (*Emergence and Evolution of Novel Designs*): Wiley, 2004
- External Program Reviewer for assessment of Mechanical Engineering Master of Science degree program, California Baptist University (2019).
- Treasurer, Women in Engineering Division, American Society for Engineering Education, 2006 – 2009
- “Careers in Chemical Engineering” visits to high school classes, 2000-2002
- Calvin College “Engineering Explorations” program for middle school students, 2003

#### **INSTITUTIONAL SERVICE:**

*Calvin University Governance Committees:*

- Professional Status Committee, 2022 – present
- Workplace Quality Taskforce, 2017 – 2021
- *Ad hoc* Faculty Workload Committee, 2017 – 2018
- *Ad hoc* Faculty Compensation Committee, 2016 – 2017
- Faculty Senator, Natural Sciences & Math Divisional Representative, 2008-2011 & 2014-2017.
- Student Discipline Appellate Board, 2010 – 2013 (Convener, 2011 – 2013)
- Student Life Committee, 2003-2006; 2007-2009 (Chair, 2008-2009)
- Student Discipline Committee, 2000-2003

*Engineering Departmental Service:*

- Engineering Department Personnel Committee, 2009 – 2021 (Chair, 2015 – 2020)
- Engineering Department Advisor to Women in Engineering Student Intern, 2011 – 2015
- Keynote Address, Calvin College Engineering Department 30<sup>th</sup> Anniversary Dinner, Seattle, WA, 2015
- Faculty Advisor to Society of Women Engineers and Calvin Women Scientists students organizations, 2001-2002; 2005 – 2011
- Engineering Department Subcommittee for review of Mission Statement, Fall 2010
- Engineering Department Promotions Committee, 2008 – 2010
- Mentor to new faculty, 2007-2010, 2020-2021
- Mentor for Calvin College Discovery Club Fellowship Pre-college program, 2005
- Engineering Department Seminar Coordinator, 2004-2005
- Engineering Department Meetings – Recorder of Minutes, 2003-2004

*Other University Service:*

- Academic Advisor for approximately 15-20 undergraduate engineering students each year
- Academic Advisor for NSF-supported S-STEM student retention project, 2018-2022
- Mentor, Calvin College Student Mentoring Program, 2000-2003; 2017-2019
- Campus Coordinator, NetVUE (Network for Vocation in Undergraduate Education), 2014 – 2017
- Co-Leader, Campus-wide Bible study 2011, 2014, 2016, 2017
- Faculty Interviewer, Calvin Research Fellows Program, 2017
- Guest speaker on Teaching & Faith Integration, New Faculty Orientation, 2016
- Speaker, Calvin College Chapel: 1999, 2007
- Facilitator, Discussion groups at Calvin College preceding Equality Riders visit, 2006
- Instructor, Calvin Academy for Lifelong Learning (CALL) Class, 2005

**COMMUNITY SERVICE:**

- Seymour Christian Reformed Church
  - Shepherding Elder, 2020-2023
  - Clerk of Council & Administrative Board Elder, 2010-2013
  - Chair, Worship Committee, 2008 – 2013
- Science Olympiad coach, Ada Christian Middle School Team, 2013

**AWARDS:**

- **Best Paper** of the Women in Engineering Division, American Society for Engineering Education Annual Meeting, 2015
- Whitaker Foundation **Graduate Fellowship** in Biomedical Engineering, 1995-1999

- **Outstanding Teaching Award**, U. of Illinois College of Liberal Arts and Sciences, 1999
- University of Illinois **List of Teachers Ranked as Excellent by their Students**, 1997
- National Defense Science and Engineering **Graduate Fellowship**, 1994-1995
- National Science Foundation **Graduate Research Fellowship**, 1994
- The Honor Society of Phi Kappa Phi - National **Graduate Fellowship**, 1994-1995
- American Institute of Chemical Engineers (AIChE) **National Student Design Competition**, Honorable Mention Award, 1994