

Bradley C. Bundy, Ph.D.

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Dr. Bundy is an Associate Professor in the Department of Chemical Engineering at Brigham Young University. His university appointment consists of teaching/mentoring, research, and citizenship. His long-term objectives are to:

1. Maintain a high quality research program focused on Cell-free Synthetic Biology,
2. Continually improve the educational/mentoring experience of undergraduate/graduate students with a focus on enabling students to achieve/exceed their life goals, and
3. Better the professional community, department, and university through meaningful citizenship.

Toward this objective, during the past 9.5 years at BYU, he has published **32** peer-reviewed archival articles, obtained **\$1.5M** USD in extramural awards, taught **50+** classes, and mentored **10** graduate students and **100+** undergraduates as research advisor.

Education

2009 Ph.D. Chemical Engineering, Stanford University, Stanford, CA
2006 M.S. Chemical Engineering, Stanford University, Stanford, CA
2004 B.S. Chemical Engineering, Brigham Young University, Provo, UT

Research Positions

2015 – Pres **Associate Professor**, Brigham Young University, Dept. of Chem. Engineering.
Research activity focus: 1) Engineering the production of site-specific covalent enzyme immobilization, 2) Expanding the language of biology with non-canonical amino acid incorporation, 3) Improving pharmaceutical and industrial biocatalyst performance with site-specific protein-polymer conjugates, 4) Engineering biosensors, 5) Designing vaccines, 6) Synthesizing cancer therapeutics, 7) Developing just-add-water cell-free synthetic biology systems, 8) Protecting enzymes in engineered virus capsids.

2009 – 2015 **Assistant Professor**, Brigham Young University, Dept. of Chem. Engineering.
Research activity focus as described under Associate Professor above.

2004 – 2009 **Ph.D. Student**, Lab of Dr. James Swartz, Stanford University.
Dissertation: "A Cell-free Approach to Virus-like Particle Production and Post-translational Modification"

2004 **Lithography Research & Development Intern**, Micron Technology Inc.
Engineered new optical lithography techniques for next generation memory devices

Teaching Experience

2009 – Pres **Instructor**, Brigham Young University
Courses Include: ChEn 191: Freshmen Seminar; ChEn 170: Introduction to Chemical Engineering; ChEn 263: Computational Tools for Chemical Engineers; ChEn 273: Chemical Process Principles; ChEn 291: Career Skills 1; ChEn 376: Heat and Mass Transfer; ChEn 475: Unit Operations Lab 1; ChEn 493R: Job Finding Seminar; ChEn 519: Graduate Biochemical Engineering;

2007 – 2009 **Department Teaching Assistant Trainer**, Stanford University

- Prepared and conducted annual 2-day teaching assistant training required for all chemical engineering graduate students and performed ad hoc training.
- 2007 – 2009 **Head Teaching Assistant Mentor**, Stanford University
Co-established and co-directed a teaching assistant peer-mentoring program to improve the quality of chemical engineering TAs
- 2007 – 2009 **Center for Teaching and Learning Department Liaison**, Stanford University
Served as the graduate student liaison between the Stanford Center for Teaching and Learning Center and the Department of Chemical Engineering by learning and communicating best university teaching practices to the department.
- 2006 **Lecturer/Teaching Assistant**, Stanford University
Served as teaching assistant and lectured weekly for the Chemical Engineering 150/250: Biochemical Engineering and Chemical Engineering 355: Advanced Biochemical Engineering courses.

Extramural Research Grants (\$1.5 Million)

- 2017 National Science Foundation
Designing Unnatural-Amino-Acid-Enabled Second-Generation Biomaterials
Role: Co-Principal Investigator
Award Amount: **\$389,990** Funding Period: 09/2017-08/2020
- 2016 National Science Foundation REU Supplement
Award Amount: **\$7,000** Funding Period: 12/2016-07/2018
- 2015 National Science Foundation REU Supplement
Award Amount: **\$6,000** Funding Period: 12/2015-07/2018
- 2014 National Science Foundation REU Supplement
Award Amount: **\$6,000** Funding Period: 08/2014-07/2018
- 2013 DARPA Young Faculty Award Grant
A Cell-free Synthetic Biology Approach to Expanding the Language of Biology
Role: Principal Investigator (Only PI)
Award Amount: **\$498,885** Funding Period: 08/2013-07/2015
- 2013 National Science Foundation CAREER Award Grant
Controlled Enzyme Biocatalyst Immobilization
Role: Principal Investigator (Only PI)
Award Amount: **\$400,717** Funding Period: 07/2013-07/2019
- 2013 National Pork Board Grant
A Cell-free Synthesis Approach for the Rapid and Cost-Effective Production of Foot and Mouth Disease Vaccines
Role: Principal Investigator (Only PI)
Award Amount: **\$75,000** Funding Period: 07/2013-04/2015
- 2012 NASA Travel Award Grant
Engineering Controlled Covalent Protein Immobilization for Lab-On-A-Chip Technology
Role: Principal Investigator (Only PI)
Award Amount: **\$2,500** Funding Period: 11/2012
- 2011 NASA Young Faculty Training Award Grant
Engineering Controlled Covalent Protein Immobilization for Planetary Exploration with Next Generation Lab-On-A-Chip Technology
Role: Principal Investigator (Only PI)
Award Amount: **\$25,000** Funding Period: 07/2011-12/2012
- 2011 National Science Foundation EAGER Award Grant
Biocatalyst Orientation Control During Immobilization
Role: Principal Investigator (Only PI)
Award Amount: **\$70,571** Funding Period: 06/2011-05/2012

- 2010 NASA Graduate Student Training Grant
Development of a Robust Site-specific Protein-Surface Covalent Conjugation Technique for the Development of Next Generation Protein Microarrays Chips
Role: Principal Investigator/ Advisor of Funded Graduate Student
Award Amount: **\$9,720** Funding Period: 06/2010-06/2011

Extramural Awards and Honors

- 2017 Invited Plenary Lecturer, Chemical Engineers in Medicine Topical Area, AIChE
2015 Outstanding Reviewer Award, Vaccine (Journal)
2014 Invited Plenary Lecturer, Cell-free Protein Synthesis 4th International Status Seminar
2013 DARPA Young Faculty Award (2013-2015)
2013 NSF CAREER Award (2013-2019)
2012 Top 50 Ad Hoc Reviewer of Biotechnology and Bioengineering (Journal)
2007 3rd Place Poster Award, Stanford Engineering Fair
2004 Stanford Graduate Fellowship, 2004-2007
2004 Micron Technologies Graduate Fellowship
2004 Tau Beta Pi Graduate Fellowship
2003 Best Poster Award, Micron Technologies Student Symposium
2003 Edwin S. Hinckley Scholar
2002 Micron Technologies Scholar

Extramural Mentored Graduate Student Awards/Grants (\$156K)

- 2018 NASA Graduate Fellowship. NASA Rocky Mountain Space Consortium. Long E (Applicant), Bundy BC (Faculty Advisor/Mentor). \$5,000. 9/2018-5/2019.
2015 Graduate Research Fellowship. National Science Foundation. Wilding KM (Applicant), Bundy BC (Faculty Advisor/Mentor). \$138,000. 9/2015-8/2018.
2014 NASA Graduate Fellowship. NASA Rocky Mountain Space Consortium. Wilding KM (Applicant), Bundy BC (Faculty Advisor/Mentor). \$7,000. 9/2014-5/2015.
2013 NASA Graduate Fellowship. NASA Rocky Mountain Space Consortium. Smith MT (Applicant), Bundy BC (Faculty Advisor/Mentor). \$6,000. 9/2012-5/2013.

Extramural Mentored Undergraduate Student Awards/Grants

- 2018 1st Place National Undergraduate Research Paper Competition. AIChE Annual International Meeting. Pittsburgh, PA. Wilkerson JW (Student), Bundy BC (Faculty Research Advisor/Mentor). *Premiere Undergraduate Research Competition for Chemical Engineers in the Nation. Must qualify by winning 1st place at the regional competitions.*
2018 1st Place Rocky Mountain Regional Undergraduate Research Paper Competition. AIChE Regional Meeting. Brigham Young University, Provo, UT. Wilkerson JW (Student), Bundy BC (Faculty Research Advisor/Mentor).
2018 Caltech Summer Undergraduate Research Fellow. Neilsen G (Applicant), Bundy BC (Faculty Advisor/Mentor). ~\$5,000. 6/2018-8/2018.
2017 3rd Place National Undergraduate Research Paper Competition. AIChE Annual International Meeting. Minneapolis, MN. Earl CC (Student), Bundy BC (Faculty Research Advisor/Mentor). *Premiere Undergraduate Research Competition for Chemical Engineers in the Nation. Must qualify by winning 1st place at the regional competitions.*
2017 1st Place Rocky Mountain Regional Undergraduate Research Paper Competition. AIChE Regional Meeting. University of North Dakota, Grand Forks, ND. Earl CC (Student), Bundy BC (Faculty Research Advisor/Mentor).
2015 1st Place National Undergraduate Research Poster Competition. AIChE Annual International Meeting. SLC, UT. Muhlestein C (Student), Bundy BC (Faculty Research Advisor/Mentor).

Intramural Mentored Graduate/Undergraduate Student Awards/Grants (~\$54K)

- 2018 Don B. Olson Research Fellowship. Nielsen G (Applicant), Bundy BC (Faculty Advisor/Mentor). ~\$10,000. 9/2018-4/2019.
- 2018 Simmons Cancer Research Fellowship. Long EA (Applicant), Bundy BC (Faculty Advisor/Mentor). \$8,000. 5/2018-8/2018.
- 2018 Simmons Cancer Research Fellowship. Wilding KM (Applicant), Bundy BC (Faculty Advisor/Mentor). \$8,000. 5/2018-8/2018.
- 2016 Simmons Cancer Research Fellowship. Schinn SM (Applicant), Bundy BC (Faculty Advisor/Mentor). \$8,000. 5/2016-8/2016.
- 2016 Don B. Olson Research Fellowship. Christian ML (Applicant), Bundy BC (Faculty Advisor/Mentor). ~\$10,000. 9/2015-4/2016.
- 2013 Don B. Olson Research Fellowship. Katz A (Applicant), Bundy BC (Faculty Advisor/Mentor). ~\$10,000. 9/2012-4/2013.

Intramural Research Grants (\$85K)

- 2015 Research Initiation Grant, College of Engineering and Technology, BYU
- 2013 Mentored Graduate Teaching Grant, LDS Foundation/Graduate Studies, BYU
- 2012 Mentored Graduate Teaching Grant, LDS Foundation/Graduate Studies, BYU
- 2012 Mentored Research Environment Grant, Brigham Young University
- 2011 Mentored Graduate Teaching Grant, LDS Foundation/Graduate Studies, BYU
- 2010 Mentored Research Environment Grant, Brigham Young University
- 2010 Mentored Graduate Teaching Grant, LDS Foundation/Graduate Studies, BYU
- 2009 Research Initiation Grant, College of Engineering and Technology, BYU

Intramural Awards and Honors

- 2018 Outstanding Faculty Award, Department of Chemical Engineering, BYU
- 2017 Excellence in Education Award, BYU College of Engineering
- 2017 Outstanding Faculty Teaching Award for the Department of Chemical Engineering, BYU
- 2016 University Young Scholar Award, BYU
- 2016 Outstanding Faculty Teaching Award for the Department of Chemical Engineering, BYU
- 2013 Outstanding Faculty Teaching Award for the Department of Chemical Engineering, BYU
- 2011 Outstanding Faculty Teaching Award for the Department of Chemical Engineering, BYU
- 2010 Outstanding Faculty Teaching Award for the Department of Chemical Engineering, BYU
- 2004 BYU Chemical Engineering Undergraduate Research Presentation Winner
- 2004 AIChE Outstanding Chemical Engineering Senior Award
- 2003 Bennion Outstanding Chemical Engineering Junior Award
- 2001 Brigham Young University Full Tuition Academic Scholarship (2001-2003)

Peer-Reviewed Publications (33 total; 31 first or corresponding author papers)

Underlined authors are undergraduate students advised by Bundy (**45** instances).

Italicized authors are *graduate students* advised by Bundy (**51** instances).

Impact factor (IF) and citation number are also noted.

1. *Wilding KM, Hunt JP, Wilkerson JW, Funk PJ, Swensen RL, Carver WC, Christian ML, Bundy BC*. 2018. Endotoxin-Free E. coli-Based Cell-Free Protein Synthesis: Pre-Expression Endotoxin Removal Approaches for on-Demand Cancer Therapeutic Production. *Biotechnology Journal*. Accepted. Published Online on 19 July 2019. DOI: 10.1002/biot.201800271. (IF 3.5; Cited 1)

2. **Bundy BC**, *Hunt JP*, Jewett MC, Swartz JR, Wood DW, Frey DD, Rao G. 2018. Cell-free Biomanufacturing. *Current Opinion in Chemical Engineering*. 22:177-183. (IF 4.0; Cited 0)
3. Davis BR, Soltani M, Ford H, Nelson JAD, **Bundy BC**. 2018. Reengineering cell-free protein synthesis as a biosensor: Biosensing with transcription, translation, and protein-folding. *Biochemical Engineering Journal*. Cell-free Systems Special Issue. 138:165-171 (IF 3.0; Cited 2)
4. Wilkerson JW, Yang SO, Funk PJ, Stanley SK, **Bundy BC**. 2018. Nanoreactors: Strategies to Encapsulate Enzyme Biocatalysts in Virus-like Particles. *New Biotechnology*. 44:59-63. (IF 3.7; Cited 2)
5. Yang SO, Saleh ASM, Earl CC, Tang MJS, Smith MT, Wood DW, **Bundy BC**. 2018. Biosensing Estrogenic Endocrine Disruptors in Human Blood and Urine: A RAPID Cell-free Protein Synthesis Approach. *Disruptors. Toxicology and Applied Pharmacology*. 345:19-25. (IF 4.0; Cited 5)
6. Wilding KM, Schinn SM, Long EA, **Bundy BC**. 2018. The Emerging Impact of Cell-free Chemical Biosynthesis. *Current Opinion in Biotechnology*. 53:115-121 (IF 9.3; Cited 11)
7. Wilding KM, Smith AK, Wilkerson JW, Bush DB, Knotts TA, **Bundy BC**. 2018. The Locational Impact of Site-Specific PEGylation: Streamlined Screening with Cell-free Protein Expression and Coarse-grain Simulation. *ACS Synthetic Biology*. 7(2):510-521 (IF 5.4; Cited 7)
8. Earl CC, Smith MT, RA Lease, **Bundy BC**. 2018. Polyvinylsulfonic acid: A Low-cost RNase inhibitor for enhanced RNA preservation and cell-free protein translation. *Bioengineered*. 9(1):90-97. (IF 1.7; Cited 2)
9. *Hunt JP*, *Schinn SM*, Jones MD, **Bundy BC**. 2017. Rapid, Portable Detection of Endocrine Disrupting Chemicals Through Ligand-Nuclear Hormone Receptor Interactions. *Analyst*. 142(24):4595-4600. (IF 4.1; Cited 2)
10. *Saleh ASM*, *Shakalli Tang MJ*, *Smith MT*, Hunt JM, Law RA, Wood DW, **Bundy BC**. 2017. Cell-Free Protein Synthesis Approach to Biosensing hTR β -Specific Endocrine Disruptors. *Analytical Chemistry*. 89(6):3395-3401 (IF 6.3; Cited 15)
11. *Salehi ASM*, *Smith MT*, *Schinn SM*, Hunt JM, Muhlestein C, *Diray-Arce J*, Nielsen BL, **Bundy BC**. 2017. Efficient tRNA Degradation and Quantification in Escherichia Coli Cell Extract Using RNase-Coated Magnetic Beads: A Key Step Towards Codon Emancipation. *Biotechnology Progress*. 33(5):1401–1407. (IF 2.0; Cited 8)
12. *Schinn SM*, Bradley W, Groesbeck A, *Wu JC*, *Broadbent A*, **Bundy BC**. 2017, Rapid In Vitro Screening for the Location-Dependent Effects of Unnatural Amino Acids on Protein Expression and Activity. *Biotechnology and Bioengineering*. 114(10):2412–2417. (IF 4.5; Cited 12)
13. *Hunt JP*, *Yang SO*, *Wilding KM*, **Bundy BC**. 2017. The growing impact of lyophilized cell-free protein expression systems. *Bioengineered*. 8(4):325-330. (IF 1.7; Cited 10)
14. *Smith MT*, *Salehi SMA*, Bennett AM, *Williams JB*, Pitt WG, **Bundy BC**. 2016. Cell-free Synthesis of a Cytotoxic Cancer Therapeutic: Onconase Production and a Just-add-water Cell-free System. *Biotechnology Journal*. 11(2):274-281. (IF 3.7; Cited: 45; *Top 5% Altmetric Impact Score; News coverage includes 2 local TV stations and 12 online news articles*)
15. *Schinn SM*, *Broadbent A*, Bradley WT, **Bundy BC**. 2016. Protein Synthesis Directly from PCR: Progress and Applications of Cell-free Protein Synthesis with Linear DNA. *New Biotechnology*. 33 (4): 480-487. (IF 3.8; Cited 20)
16. *Salehi ASM*, Earl CC, Muhlestein C, **Bundy BC**. 2016. Escherichia coli-based Cell-free Extract Development for Protein-based Cancer Therapeutic Production. *International Journal of Developmental Biology*. 60:237-243. (IF 2.3; Cited 9)
17. *Poomejad N*, *Momtahan N*, *Salehi ASM*, Scott D, Fronk C, Roeder BL; Reynolds PR, **Bundy BC**, Cook AD. 2016. Optimized decellularization of whole porcine kidneys improves reseeded cell behavior. *Biomedical Materials*. 11(2): 025003. (IF 2.3; Cited 13)

18. *Smith MT, Bennett AM, Hunt JC, Bundy BC*. 2015. Creating a Completely Cell-free System for Protein Synthesis. *Biotechnology Progress*. 31(6):1716-1719. (IF 2.0; Cited 23)
19. *Wu JC, Hutchings CH, Lindsay MJ, Werner CJ, Bundy BC*. 2015. Enhanced Enzyme Stability Through Site-Directed Covalent Immobilization. *Journal of Biotechnology*. 193:83-90. (IF 2.6; Cited 59)
20. *Smith MT, Wilding KM, Hunt JM, Bennett AM, Bundy BC*. 2014. The Emerging Impact of Cell-free Synthetic Biology. *FEBS Letters*. 588(15):2755-2761. (IF 3.6; Cited 61)
21. *Smith MT, Bennett AM, Grubman MJ, Bundy BC*. 2014. Foot and Mouth Disease: Technical and Political Challenges to Eradication. *Vaccine*. 32(31):3902-3908. (IF 3.2; Cited 25)
22. *Smith MT, Berkheimer SD, Werner CJ, Bundy BC*. 2014. Lyophilized Escherichia coli-based Cell-free Systems for Robust, High-density, Long-term Storage. *Biotechniques*. 56(4):186-193. (IF 2.0; Cited 34)
23. *Shrestha P, Smith MT, Bundy BC*. 2014. Cell-free Unnatural Amino Acid Incorporation with Alternative Energy Systems and Linear Expression Templates. *New Biotechnology*. 31(1):28-34. (IF 3.8; Cited 26)
24. *Smith MT, Hawes AK, Shrestha P, Rainsdon JM, Wu JC, Bundy BC*. 2014. Alternative Fermentation Conditions for Improved Escherichia coli-based Cell-free Protein Synthesis Requiring Supplemental Components for Proper Synthesis. *Process Biochemistry*. 49(2):217-222. (IF 2.5; Cited 21)
25. *Smith MT, Hawes AK, Bundy BC*. 2013. Reengineering Viruses and Virus-like Particles through Chemical Functionalization Strategies. *Current Opinion in Biotechnology*. 24(4):620-626. (IF 9.3; Cited 71)
26. *Amaz KR, Wu JC, Bundy BC, Jewett MC*. 2013. Transforming Synthetic Biology with Cell-free Systems. In *Synthetic Biology: Tools & Applications*. Zhao H, Ed. Elsevier. (Cited 14)
27. *Wu JC, Smith MT, Varner CT, Bundy BC*. 2013. Enhanced protein stability through minimally-invasive, direct, covalent and site-specific immobilization. *Biotechnology Progress*. 29(1):247-254. (IF 2.0; Cited 35)
28. *Shrestha P, Holland T, Bundy BC*. 2012. Streamlined extract preparation for Escherichia coli-based cell-free protein synthesis by sonication or bead vortex mixing. *Biotechniques*. 53(3):163-174. (IF 2.0; Cited 58)
29. *Varner CT, Smith MT, Bush DB, Bundy BC*. 2012. The incorporation of A2 protein to produce novel Qbeta virus-like particles using cell-free protein synthesis. *Biotechnology Progress*. 28(2):549-555. (IF 2.0; Cited 34)
30. *Bundy BC, Swartz JR*. 2011. Efficient disulfide bond formation in virus-like particles. *Journal of Biotechnology*. 154(4):230-239. (IF 2.6; Cited 74)
31. *Bundy BC, Swartz JR*. 2010. Site-specific incorporation of p-propargyloxyphenylalanine in a cell-free environment for direct protein-protein click conjugation. *Bioconjugate Chemistry*. 21(2):255-263. (IF 4.8; Cited 142)
32. *Bundy BC, Swartz JR*. 2008. Escherichia coli-based cell-free protein synthesis of virus-like particles. *Biotechnology and Bioengineering*. 100(1):28-37. (IF 4.5; Cited 129)
33. *Bundy BC, Hales HB*. 2008. A streamline reservoir simulator with dynamic gridding. *Journal of Canadian Petroleum Technology*. 47(3):32-38. (IF 1.0; Cited 3)

Patents

1. Bundy BC, Hunt JP, Smith MT, Shakalli M, Wood DW. Cell-free Methods of Detecting Bioactive Ligands. U.S. Patent **Application** No. 15813026. Filed on 14 November 2017.
2. Bundy BC, Smith MT, Wu JC. Cell-free Synthetic Incorporation of Non-natural Amino Acids into Proteins. International Patent **Application** No. PCT/US14/40078. Filed 29 May 2014.
3. Bundy BC, Swartz JR, Chan W. Encapsidation of Heterologous Entities into Virus-like Particles. **Issued U.S. Patent** No. 8,324,149. Issued on 04 December 2012.

4. Bundy BC and Swartz JR. Direct Attachment of Polypeptides to Virus Like Particles. U.S. Patent **Application** No. 61/199,240. Filed on 14 November 2008.
5. Bundy BC and Swartz JR. Cell-free Synthesis of Virus-like Particles. International Patent **Application** No. PCT/US2007/015270. Filed on 29 June 2007.

Technical Presentations (120+)

List available at <http://bundy.byu.edu/publications> with undergraduate coauthors advised by Bundy (**100+** instances) and graduate students advised by Bundy (**100+** instances).

Teaching Evaluations

Combined student evaluations for the 53 courses I have taught at BYU are listed below with 5 being the highest possible ranking. Also included are the average student evaluation for all college courses next to my score (separated by /). Scores given on the prior 8 point scale were normalized to 5.

	Student #	GPA	Classes	Student Evaluations Score
2009-2016 Combined	2157	3.17	53	4.7 / 4.3

Extramural Citizenship Activities

2018-Pres Programing Chair, Bioengineering Division (Organize oversee the programing for 60+ sessions for 500+ presentations)

2017-2018 Area Chair, Bioengineering Division: AIChE Division 15C (Organize 25+ sessions for 300+ presentations, Invite 50+ session chairs, Oversee peer-review, Vote on AIChE awards, Advertise sessions, Invite 25+ featured speakers)

2017 ASEE Summer School for New Professors – Invited Presenter at NC State

2017-Pres Editorial Board Member, New Biotechnology

2016-Pres Editorial Board Member, Biotechnology Progress

2014-Pres Provo City Science Palooza Bioengineering Demo (**500+** K-12 Students)

2014-Pres Provost, Wasatch Elementary Science Fair Judge

2014-Pres UVU PREP Invited Guest “Career Awareness” Lecturer (**500+** K-12 Students)

2011-Pres BYU Engineering Week Hands-on Engineering Demos (**6,000+** K-12 Students)

2011-Pres Boy Scouts of America Merit Badge Councilor

2011-Pres Wasatch Elementary Active Learning Enzyme Demonstration Presenter

2010-Pres AIChE Annual National Meeting Session Chair (**20+** sessions)

2010-Pres Journal Article Reviewer for **30+** Scientific Journals

2010-Pres NSF Grant Proposal Reviewer for **5+** Separate Panels

2013-2017 BYU Radio Guest Expert on Biocatalysis and Synthetic Biology

2016 NIH BCMB Study Section Member (Proposal Reviewer)

2016 US DOE BES Proposal Reviewer

2016 Co-Area Chair, AIChE Division 15C: Bioengineering Division

2015 Invited Session Chair, International Conference on Biomolecular Engineering

2015 NIH COBRE Grant Proposal Reviewer

2015 Co-Area Chair Elect, AIChE Division 15C: Bioengineering Division

2014 University of Queensland Australia External Ph.D. Thesis Reviewer

2014 Advancement in Academic Rank External Reviewer

2012 ASEE Summer School Presenter

Intramural Citizenship Activities

2017-Pres Chair, University Radiation and Laser Safety Committee

2017-Pres Engineering College Building Graphics Committee Member

2016-Pres BYU Faith and Learning Fellow (represent Engineering and Technology)

2014-Pres BYU Cancer Research Center Member

2013-Pres Advisor of BYU Chapter of the Society of Biological Engineers
2013-Pres Chair, Chemical Engineering Department Public Relations Committee
2013-Pres Chemical Engineering Department Executive Committee Member
2009-Pres Don B. Olsen Scholarship/Mentorship Selection Committee Member
2009-Pres BYU ORCA Grant Reviewer
2009-Pres BYU Graduate Studies Fellowship Reviewer
2009-Pres 450+ Letters of Recommendations Submitted
2016-2017 Department Faculty Search Committee Member
2015-2017 Engineering College Teaching and Learning Committee Member / Specialist
2017 BYU Faith and Learning Seminar Series Co-organizer/Participant
2013 College Freshmen Mentoring Training Panel Member
2011-2012 Chemical Engineering Department Public Relations Committee Member
2010-2011 BYU Center for Teaching and Learning Consultant
2009-2010 Chemical Engineering Department Graduate Committee Member

Research Mentoring Activities**Graduates Advised at BYU: 9 PhD, 2 MS** (8 graduated, 3 current)**Undergraduates Advised at BYU: 100+** (15+ received undergraduate research awards)