

# MEGHAN M. THOMMES

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## EDUCATION

**Boston University**, Boston, MA  
Ph.D. in Biomedical Engineering

September 2013 – present  
GPA: 3.86/4.00

**Case Western Reserve University**, Cleveland, OH  
B.S.E. in Biomedical Engineering, focus in Bioelectric Engineering  
Minors in Electrical Engineering and Chemistry

August 2009 – May 2013  
GPA: 3.88/4.00  
*magna cum laude*

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## PUBLICATIONS

**Meghan Thommes**, Taiyao Wang, Qi Zhao, Ioannis Ch. Paschalidis, Daniel Segrè. Designing metabolic division of labor in microbial communities. *mSystems* 4:e00263-18. doi: 10.1128/mSystems.00263-18

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## POSTERS AND PRESENTATIONS

(\*presenter)

1. **Meghan Thommes\***, Taiyao Wang, Qi Zhao, Joshua Goldford, Ioannis Ch. Paschalidis, Daniel Segrè. Microbes distributing metabolism: How cross-feeding interactions support metabolic division of labor. 2018 Boston University Microbiome Day. Boston, MA. February 14, 2018. (Poster Presentation)
2. **Meghan Thommes\***, Taiyao Wang, Qi Zhao, Joshua Goldford, Ioannis Ch. Paschalidis, Daniel Segrè. Computational design of metabolic division of labor for synthetic microbial communities. 2017 Metabolic Pathway Analysis Conference. Boseman, MT. July 24-28, 2017. Abstract Book, page 83. (Poster Presentation)
3. **Meghan Thommes\***, Andrea Lubbe, Jessica Lee, Melisa Osborne, Arion Stettner, Ilija Dukovski, Alyssa Baugh, Nicholas Shevalier, Joshua Wirtz, Sergey Stolyar, Christopher Marx, Trent Northen, and Daniel Segrè. Synthetic microbial ecology for biofuel production from lignocellulose. 2017 Genomic Sciences Program Annual PI Meeting. Crystal City, VA. February 6-8, 2017. Abstract Book, page 324. (Poster Presentation)
4. **Meghan Thommes\***, Taiyao Wang\*, Qi Zhao, Joshua Goldford, Ioannis Ch. Paschalidis, Daniel Segrè. Metabolic design of reaction partitioning for engineering microbial communities. 2016 AG3C Annual Meeting. Austin, TX. October 24, 2016. (Poster Presentation)
5. **Meghan Thommes\*** and Daniel Segrè. Computer-driven design and experimental testing of a synthetic microbial community. BMES 2016 Annual Meeting. Minneapolis, MN. October 5-8, 2016. Program Book, page 104. (Poster Presentation)
6. **Meghan Thommes** and Daniel Segrè. Controlling microbial growth dynamics through environmental manipulation. Boston University Biomedical Engineering Student Seminar. Boston, MA. June 8, 2016. (Oral Presentation)
7. **Meghan Thommes\***, Andrea Lubbe\*, Jessica Lee, Arion Stettner, Ilija Dukovski, Alyssa Baugh, Nicholas Shevalier, Joshua Wirtz, Sergey Stolyar, Christopher Marx, Trent Northen, and Daniel Segrè. Designing a microbial community for production of biofuel from lignocellulose. 2016 Genomic Sciences Program Annual PI Meeting. Tysons, VA. March 7-9, 2016. Abstract Book, page 120-121. (Poster Presentation)

8. Arion Stettner\*, **Meghan Thommes\***, Andrea Lubbe, Ilija Dukovski, Brian Granger, Jessica Lee, Christopher Marx, Trent Northen, and Daniel Segrè. Mapping inter-species interactions and metabolic synergy for next-generation biofuel production. 2015 Genomic Sciences Contractors-Grantees Meeting XIII. Tysons, VA. February 23-25, 2015. Abstract Book, page 251-252. (Poster Presentation)
  9. **Meghan Thommes\*** and Abidemi Bolu Ajiboye. Development of noninvasive brain-machine interfaces for control of hand grasp force in a virtual functional electrical stimulation arm model. 2013 April Research ShowCASE and Intersections: SOURCE Symposium and Poster Session. Cleveland, OH. April 18, 2013. (Poster Presentation)
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## TEACHING EXPERIENCE

### ***Boston University***

ENG BF 528: Applications in Translational Bioinformatics Spring 2017  
Course Lecturer  
Professor Adam Labadorf

ENG BE 491: Biomedical Measurements I Summer 2015  
Course Designer  
Professor Darren Roblyer

ENG BE 491: Biomedical Measurements I Fall 2014  
Teaching Assistant  
Professors David Mountain, Darren Roblyer, and Andrew Jackson

### ***Case Western Reserve University***

ENGR 145: Chemistry of Materials Spring 2013  
Recitation Instructor  
Professor Mark Deguire

ENGR 145: Chemistry of Materials Fall 2012  
Recitation Instructor  
Professor David Schiraldi

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## GRANTS AND SCHOLARSHIPS

### ***Boston University***

Teaching as Research Fellowship Fall 2015

Distinguished BME Fellowship September 2013 – August 2014

### ***Case Western Reserve University***

SOURCE Undergraduate Research Grant Summer 2012

President's Scholarship August 2009 – May 2013

Case Alumni Scholarship August 2011 – May 2013

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## LEADERSHIP EXPERIENCE AND ACTIVITIES

### ***Boston University***

BU Microbiome Initiative Students and Postdocs Committee	Sept. 2017 – Sept. 2018
Graduate Student Advisory Board	Oct. 2017 – present
Student Association of Graduate Engineers	May 2014 – May 2017
• President	<i>May 2015 – May 2017</i>
• BME Representative	<i>May 2014 – May 2015</i>
Toastmasters “GeekSpeak”	June 2015 – June 2016
• Vice President of Public Relations	<i>June 2015 – June 2016</i>
BME Graduate Student Committee	Sept. 2013 – May 2017
• Professional Development Subcommittee	
• Biomedical Engineering Seminar Planning Committee	
Graduate Women in Science and Engineering (GWISE) Mentor	2013 – 2014 & 2014 – 2015
(GWISE) Girls’ Science Club Mentor	Oct. 2014 – May 2015

### ***Case Western Reserve University***

Tau Beta Pi (Ohio Alpha Chapter)	Nov. 2010 – May 2013
• Vice President	<i>May 2012 – May 2013</i>
• Bookswap Chair	<i>May 2011 – May 2012</i>
Women in Science and Engineering Roundtable (WISER) Peer Mentor	Sept. 2012 – May 2013
Alpha Eta Mu Beta	March 2011 – May 2013
Varsity Track and Field	Aug. 2009 – May 2013
Varsity Cross-Country	Aug. 2009 – May 2011

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## ACHIEVEMENTS AND HONORS

### ***Boston University***

2018 Boston University Microbiome Day Best Poster Presentation  
2017 Metabolic Pathway Analysis Conference Best Poster Presentation  
2015 Teaching as Research Fellowship  
2015 BME Teaching Assistant of the Year

### ***Case Western Reserve University***

2013 BME Faculty Award  
2013 WISER Peer Mentor Award  
2012 BME Scholarship Award  
UAA All-Academic Recognition

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## **PROFESSIONAL EXPERIENCE**

**Powdermet, Inc.**, Euclid, OH  
Research Engineer Intern

Summer 2011

- Created aluminum composites to increase thermal conductivity while maintaining a high strength to weight ratio

**Case's Rising Engineers and Technological Entrepreneurs**, Cleveland, OH  
Design Engineer

Summer 2010

- Determined product demands, decided corresponding solutions, wrote documentation detailing the entire design process, and assembled and presented a working prototype of a modified SimMan to healthcare professionals