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| Department of Civil, and Environmental Engineering  The University of Texas at Austin  301 E. Dean Keeton St. Stop C1786  Austin, TX 78712-1173 | Email: [bryantchambers@gmail.com](mailto:bryantchambers@gmail.com)  Phone: ( +1) 832.589.7918  Skype: bryantchambers  U.S. Citizen |
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**EDUCATION**

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| THE UNIVERSITY OF TEXAS AT AUSTIN  Ph.D. in Civil Engineering  M.S. in Environmental Engineering  *Advisor: Mary Jo Kirisits*  Areas of focus:  *Microbiology*  *Systems biology*  *Bioinformatics*  *Statistical modeling*  *Nanoparticle fate and toxicology*  THE UNIVERSITY OF TEXAS AT AUSTIN  B.S. in Biochemistry | Spring 2018  Fall 2013  Spring 2007 |

**PUBLICATIONS**

\*denotes undergraduate mentee

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| **PREPARATION**  **Chambers, B. A.**, Hofmann, H., Kirisits, M. J., Silver and silver nanoparticles cause and select for antibiotic resistance in *Pseudomonas aeruginosa. Manuscript in preparation for Proceedings of the National Academy of Science*  **Chambers, B. A.**, D’Alton, S., \*Smith, S. K., Kirisits, M. J., A molecular biological model for the surface attachment action of silver nanoparticles*. Manuscript in preparation for American Chemical Society Nano*  **Chambers, B. A**., Sabaraya, I. V., Saleh, N.B., Kirisits, M. J. Cohort adoption: The effect of a four-year pre-college STEM outreach program. *Manuscript in preparation for the Journal of Science Education and Technology*  **CIRCULATION**  **Chambers, B. A.** A molecular biological model describing silver nanoparticle mechanisms of toxicity and associated antibiotic resistance. *Dissertation Published by The University of Texas at Austin*. **2018**  Saleh, N. B., **Chambers, B. A.,** Aich N. Kirisits, M. J. Mechanistic lessons learned from studies of planktonic bacteria with metallic nanomaterials: implications for interactions between nanomaterials and biofilm bacteria, *Frontiers in Microbiology.* **2015**  **Chambers, B. A.**, Afrooz A. R. M. N., Bae S., Aich N., Katz, L. E., Saleh N. B., Kirisits, M. J. Effects of Chloride and Ionic Strength on Physical Morphology, Dissolution, and Bacterial Toxicity of Silver Nanoparticles. *Environmental Science and Technology.* **2014** *48 (1)* 761-769. DOI: 10.1021/es403969x.  Saleh, N. B., Aich, N., **Chambers, B. A.**, Afrooz, A. R. M., Kirisits, M. J. Influence of tin doping on environmental interactions of nano indium oxides in aqueous systems. *Abstracts of Papers of the American Chemical Society*. **2014**  C.B. Mendez, S. Bae, **B. A. Chambers**, S. Fakhreddine, T. Gloyna, S. Keithley, L. Untung, M.E. Barrett, K. Kinney, and M. J. Kirisits, Effect of Roof Material on Water Quality for Rainwater Harvesting Systems Additional Physical, Chemical, and Microbiological Data. *Texas Water Development Board* **2010** |

**PRESENTATIONS**

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| Landsman M. R**., Chambers B.A**., Kirisits M. J., Contaminant transport in an Austin Urban Watershed: approaches to isolate human influence. Waller Creek Consortium. Austin Texas, May 2019  **Chambers B. A.,** Smith, S. K., Kirisits M. J., Silver nanoparticles induce antibiotic resistance in *Pseudomonas aeruginosa.* American Chemical Society National Meeting, New Orleans March 18-22, 2018  **Chambers B. A.,** Smith S. K., Kirisits M. J., Resistance is not futile: Metals generate antibiotic resistance in engineered systems. Sustainability Conference. University of Texas, November 8-11, 2016  **Chambers B. A.**, Kirisits M. J., Antibiotic resistance consequences of silver nanoparticle use. Gordon Microbial Stress Response. Mount Holyoke, July 17 -26, 2016  **Chambers B. A.**, Kirisits, M, Chloride drive low fractal dimension silver nanoparticle formation, controlling toxicity and stress response. University of Texas, March 20, 2014  **Chambers B. A.,** Katz L. E., Kirisits M. J., Chloride concentrations and ionic strength impact the toxicity and stability of silver nanoparticles in bacterial exposure media. 87th American Chemical Society Colloid and Surface Science Symposium. University of California Riverside, June 23-June 26, 2013  **Chambers B.**, Nguyen H. Kirisits, M.J. Microarray Analysis of Nanosilver Tolerance Strategies in *Pseudomonas aeruginosa* and *Escherichia coli.* Environmental Nanotechnology Gordon Conference, 2011, Waterville Valley, NH. Poster Presentation. |

**PROFESSIONAL EXPERIENCE**

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| POSTDOCTORAL RESEARCH FELLOW, AUSTIN TEXAS  - bioinformatics and modeling training program a  - modeled urban watershed contaminant flux  - characterized long-term evolution to metal stress  PHARMAFORM L.L.C., AUSTIN TEXAS  Research and Development Scientist II  - designed new drug formulations  - modeled chemical interaction during processing  Analytical Chemist II  - created methods to analyze new drug products  HUNG-WEN (BEN) LIU ANTIBIOTIC RESEARCH LAB, AUSTIN TEXAS  - characterized novel antibiotic biosynthesis  - protein isolation  - clonal engineering | 2019-2018  2009-2008  2007  2006-2004 |

**PROFESSIONAL SKILLS**

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| Lab: bioinformatics, transcriptomics, metagenomics, proteomics, RNA and DNA, mutational analysis, microbiology, network analysis, nanosynthesis, biofilm formation, various microscopy including phase contrast and SEM, various analytical chemistry techniques including HPLC, GC, NFIR Spectroscopy, AA-ICP Spectroscopy  Various informatics tools including: InParanoid, BioConductor, BowTie, Qiime and Qiime2, DESeq2  Programing: R, Matlab, Fortran, some Python, MinTeq/MinEQ  Languages: English – native, Spanish – conversational, Danish – intermediate |

**OUTREACH LEADERSHIP ROLES**

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| ENGINEERS WITHOUT BORDERS, UNIVERSITY OF TEXAS CHAPTER  Professional mentor  Filter design team leader  ENVIRONMENTAL ENGINEERING OUTREACH PROGRAM AT SAN JUAN DIEGO HIGH SCHOOL  Program coordinator  OFF ROAD SCIENCE WITH THE ENVIRONMENTAL SCIENCE INSTITUTE  Hot Science Cool Talks pre-lecture demo coordinator  INTRODUCE A GIRL TO ENGINEERING DAY  Exhibit operator | 2015-2014  2014-2011  2014-2011  2014-2011  2017, 2016 |

**TEACHING EXPERIENCE**

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| CLUBES DE CIENCIAS, UNIVERSITY OF GUANAJUATO, MEXICO  From trash to treasure: Using bacteria to power the future  *Self-written course*  THE UNIVERSITY OF TEXAS AT AUSTIN  Scientific Inquiry Across the Disciplines  *Stuart Reichler and Self-written*  Cell Biology  *Arturo De Lozanne and Self-written*  Introduction to Environmental Engineering  *Mary Jo Kirisits*  Hydraulic Engineering  John Burgin  Microbiology  *Pratibha Saxena*  *Marvin Whiteley*  *Mary Jo Kirisits*  Molecular Biology  *Scott Stevens*  *Ellen Gottlieb*  *Mary Jo Kirisits*  General Engineering Chemistry  *Self-written course*  Organic Chemistry and Biochemistry for Nursing Students  *Fatima Fahkreddine*  General Chemistry  *Sarah Sutcliffe*  *Average rating: 4.57 out of 5* | January 2015  2016, 2017  2017  2016  2015  2015  2014  2011, 2013  2015  2014  2011  2010  2006  2005 |

**WORKSHOPS AND CERTIFICATES**

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| TRANSLATING GRADUATE NANO-EXPERIENCE TO AN ACADEMIC CAREER: INTEGRATING SOCIAL ASPECTS IN ENGINEERING EDUCATION THROUGH ACTIVE LEARNING  Active learning certification program  INTERDISCIPLINARY EDUCATION CERTIFICATE  School of Undergraduate Education, University of Texas at Austin | October 2016  Fall 2016 |

**AWARDS**

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| Ben D. Geeslin Endowed Presidential Scholarship  Kolodzey Travel Grant  American Water Works Association Scholarship  University of Texas at Austin Legacy Fellowship  Earnest Gloyna Presidential Scholarship  Texas American Water Works Association Fellowship  Gus Fruh Memorial Fellowship | 2017-2015, 2013  2017, 2016  2016  2015  2015-2014  2014  2012-2011 |

**GRADUATE MENTEES**

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| *Sierra Jensen* | M.S. Environmental Engineering Expected 2019 |

**UNDERGRADUATE MENTEES**

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| *Eddalee Hochwalt Naumann*  *Alison Zamsky*  *Savanna K. Smith*  *Able Ingle*  *Anvita Jain*  *Kathleen L. Speights* | B.S. Chemical Engineering Expected 2020  B.S. Environmental Engineering Expected 2020  B.S. Civil Engineering Expected 2019  B.S. Civil Engineering 2017  B.S. Civil Engineering 2015  B.S. Chemical Engineering 2014 |

**PROFESSIONAL AFFILIATIONS**

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| American Water Works Association  American Chemical Society |

**PERSONAL**

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| Bicycle touring, hiking/camping, Language and history enthusiast, swing dancing |