



# Montana Biofilm Science & Technology Meeting



July 15-17, 2026



Hilton Garden Inn Bozeman  
**Draft AGENDA**

6/17/2026 10:21 AM

## Tuesday July 14

**6:00–8:30 pm**  
**Registration & Welcome Reception** Larkspur Foyer

## Wednesday July 15

**7:00–8:00 am Coffee Talk**  
*Optional discussion hour for members & CBE leadership*  
Goldenrod Ballroom

**7:30–8:00 am**  
**Registration & Continental breakfast** Larkspur Foyer

**8:00–2:55**  
**Meeting** Larkspur Ballroom

**8:00-8:15**  
**Opening Remarks**  
Matthew Fields, Director, CBE;  
Professor, Microbiology &  
Cell Biology, MSU

**8:15-8:45**  
**IA Introductions**  
Darla Goeres, Coordinator of  
Industrial Development, CBE

### **SESSION 1: Challenging Assumptions, Discovering Opportunity**

**8:45-9:00**  
**Session Introduction**  
Matthew Fields

**9:00-9:30**  
**Bias in artificial intelligence: The good, the bad, and the misunderstood**  
John Sheppard, Distinguished Professor, Gianforte School of Computing, MSU

**9:30-10:00**  
**Detecting who's there: Species identification from night skies to microscopic surfaces**  
Kathryn (Kathi) Irvine, Research Statistician, Branch Chief, USGS

**10:00-10:30 Networking Break**

**10:30-11:00**  
**Biofilm infection: Time to zoom out?**

Phil Stewart, Regents Professor,  
Chemical & Biological Eng.,  
MSU, CBE

**11:00-11:30**  
**Machine learning challenges in analyzing 3D cellular structures in biology**

Joe Picone, Professor, Electrical &  
Computer Eng., Temple Univ.

**11:30-12:00**  
**Panel**  
Session Speakers  
Moderator: Matthew Fields

### **12:00-1:30 Networking Lunch**

### **SESSION 2: Biofilms & Food Safety**

**1:30-1:35**  
**Session Introduction**  
Ghazal Vahidi, Postdoctoral  
Researcher, CBE

**1:35-2:00**  
**From interactions to systems: Multispecies biofilms in food and environmental contexts**  
Henriette Lyng Røder, Associate Professor, Food Science, University of Copenhagen

**2:00-2:25**  
**Multi-species biofilms, *Listeria monocytogenes*, food processing-built environment, environmental microbiota**  
M. Laura Rolón, Asst. Professor, Food Science & Nutrition, California Polytechnic State University \***Young Investigator Awardee**

**2:25-2:50**  
**The challenge to kill surface attached bacteria – A piece of plastic as barrier to EU-market access**  
Helmut Hirt, Senior Microbiologist, DeLaval

**2:50-2:55**  
**Closing remarks**  
Matthew Fields, Darla Goeres

### **CBE Poster Session**

**3:15–5:15**  
3<sup>rd</sup> Floor, Barnard Hall, MSU  
Schedule available onsite

**2:55-3:15**  
**Transport to CBE Laboratories**

## Thursday July 16

**7:30–8:15 am Discussion**  
*Join Al Parker, Heidi Smith and collaborators from Temple University for a discussion on the NSF-funded Biofilm Image Library grant. All input is welcome!* Larkspur Ballroom

**8:00–9:00 am**  
**Networking Continental Breakfast** Larkspur Foyer

**8:00-9:00 CBE & IA Connect**  
*Optional networking hour for attendees & CBE researchers*

**9:00–4:15**  
**Meeting** Larkspur Ballroom

**9:00-9:05**  
**Opening remarks**  
Matthew Fields, Darla Goeres

### **SESSION 3: Medical Biofilms**

**9:05-9:10**  
**Session Introduction**  
Kelly Kirker, Asst. Research Professor, Chemical & Biological Eng., MSU, CBE

**9:10-9:35**  
**A microfluidic approach to evaluating single-cell heterogeneity**  
Emma Loveday, Asst. Professor, Microbiology & Cell Biology, MSU, CBE

(Continues on next page)

**9:35-10:00**

**Biofilm physiology in the absence of oxygen**

Melanie Spero, Asst. Professor,  
Institute of Molecular Biology,  
Univ. of Oregon

**10:00-10:30 Networking Break**

**10:30-10:50**

***P. aeruginosa* & *S. aureus* physiology: A microcalorimetry perspective**

Campbell Putnam, PhD Student,  
Chemical & Biological Eng.,  
MSU, CBE

**10:50-11:15**

**Deciphering *P. aeruginosa*-*S. aureus*-host interactions & the intracellular survival using a new in vitro CF biofilm model: Implications for antibiotic evasion & infection relapse**

Maria Olivia Pereira, Asst.  
Professor, Biological  
Engineering, University of  
Minho

**11:15-11:30**

**CBE Awards & Milestones**

**11:30-11:35**

**Closing remarks**

Matthew Fields, Darla Goeres

**11:35-12:55 Networking Lunch**

**SESSION 4: Built Environment & Engineered Systems**

**12:55-1:00**

**Session Introduction**

Chelsea Heveran, Asst.  
Professor, Mechanical &  
Industrial Eng., MSU, CBE

**1:00-1:25**

**Disrupting Legionella's protected empire in premise plumbing**

Jeff Rogers, VP, Science &  
Technology, IWC Innovations

**1:25-1:50**

**Magnetic nanoparticles for biofilm removal**

Irene Andreu, Asst. Professor,  
Chemical, Biomolecular &  
Materials Eng., University of  
Rhode Island \*Young  
Investigator Awardee

**1:50-2:10 Networking Break**

**2:10-2:30**

**Viability and strength characteristics across three generations of living building materials**

Ethan Viles, Postdoctoral  
Researcher

**2:30-2:50**

**Digital light processing 3D bioprinting of engineered *E. coli* MJK2 for in situ biomineralization in PEGDA hydrogels**

Adnina Rudaiba, Masters Student,  
Civil Engineering, MSU, CBE

**SESSION 5: CDC & FDA Unpacked for Industry**

**2:50-2:55**

**Session Introduction**

Al Parker, Biostatistician, CBE;  
Associate Research Professor,  
Mathematical Science, MSU

**2:55-3:25**

**Biofilms & public health**

Joe Sexton, Team Lead, Biofilm &  
Microbial Control Lab, CDC

**3:25-3:55**

**FDA pulse check: Blink twice if you're not ok**

Brandon Kitchel, Director,  
Regulatory Affairs, BD Medical

**3:55-4:10**

**Session Discussion**

**4:10-4:20 Short Break**

**Strategic Planning Meeting for CBE Members**

**4:20-5:20**

Hilton Garden Inn

**BBQ Dinner**

**6:00-9:00 pm**

Big Yellow Barn, Bozeman

**Friday July 17**

**7:00-8:00 am Parting Thoughts**

*Optional discussion hour for members & CBE leadership*  
Goldenrod Ballroom

**8:00-8:30 am**

**Cont. breakfast** Larkspur Foyer

**8:30-11:50 am**

**Meeting** Larkspur Ballroom

**8:30-8:35**

**Opening Remarks**

Matthew Fields, Darla Goeres

**SESSION 6: Emerging Technologies in Biofilm Research**

**8:35-8:55**

**Session Introduction**

Chris Jones, PI, Standardized  
Biofilm Methods Lab, CBE

**8:55-9:25**

**Dry surface biofilms: Development of a relevant in vitro model for disinfectant challenge**

James Folsom, Sr. Research  
Microbiologist, Arxada

**9:25-9:55**

**'Phollowing' phage outbreaks within microbial communities and living animals**

Lizett de Ora Ortiz, Postdoctoral  
Researcher, MSU, CBE

**9:55-10:25 Networking Break**

**10:25-10:50**

**Rapid screening and quantification of microbial activity in dynamic, non-cultivable systems**

Molly Shreve, PhD Student,  
Microbiology & Cell Biology,  
MSU, CBE

**10:50-11:15**

**Single-cell RNA sequencing reveals transcriptional heterogeneity in *Pseudomonas aeruginosa* biofilms**

Nasibeh Arabameri, PhD  
Student, School of Life  
Sciences, UNLV

**11:15-11:40**

**Characterizing population growth dynamics in 3D printed synthetic biofilms**

Kathryn Zimlich, Postdoctoral  
Researcher, Dartmouth College

**11:40-11:50**

**Closing Remarks**

Matthew Fields, Darla Goeres

*CBE gratefully acknowledges the support from its meeting sponsors:*

**SYMCEL<sup>o</sup>**

