

■ Center for Biofilm Engineering

07/31/2017

Monday July 17

6:00–8:30 pm

Registration & welcome reception
Larkspur Foyer, Hilton Garden Inn
Bozeman

Tuesday July 18

7:30–8:00 am

**Registration & continental
breakfast**
Larkspur Foyer, Hilton Garden Inn

8:00–8:10

Introductory remarks
Larkspur Ballroom
Matthew Fields, CBE Director
Paul Sturman, CBE Industrial
Coordinator
Leticia Vega, Chair, CBE Industrial
Associates Program;
International Scientist, NASA,
Houston, TX

SESSION 1: Food Biofilms

8:10–8:40

**Biofilm formation in draught beer
dispense lines**
Kelli Buckingham-Meyer, Research
Assistant III, CBE
Lindsey Lorenz, Research Assistant
III, CBE

8:40–9:10

Biofilms in the dairy industry
Carolina Mateus, R&D Director
MQAH, DeLaval, Kansas City,
MO

9:10–9:40

**Creating a test system for the
removal of biofilms using
microfiber wipes**
Fei San Lee, Undergraduate
Student, Chemical & Biological
Engineering, MSU, CBE

9:40–10:10 Networking Break

SESSION 2: Biofilm Imaging

10:10–10:35

Live/dead staining challenges
Elinor Pulcini, Assistant Research
Professor, Chemical & Biological
Engineering, MSU, CBE

10:35–11:05

**BiyoTrap: A rapid, efficient, and
cost-effective bacteria
concentrator**
Recep Avci, Associate Research
Professor, Physics; Director,
Image & Chemical Analysis
Laboratory (ICAL), MSU

11:05–11:30

**Structuring biofilms using 3D
printing**
Jim Wilking, Assistant Professor,
Chemical & Biological
Engineering, MSU, CBE

11:30–12:00

**Imaging mass spectrometry:
A technology to advance
understanding and diagnosis of
bacterial infections**
Tim Hamerly, Postdoctoral
Associate, Infectious Disease &
Immunology, University of
Florida, Gainesville, FL

12:00–1:00

Catered lunch, Hilton Garden Inn

SESSION 3: Biofilm Methods

1:00–1:15

**Drip flow reactor training video:
Second video in the SBML
methods technology transfer
initiative**
Darla Goeres, Associate Research
Professor, Chemical & Biological
Engineering, MSU; Manager,
Standardized Biofilm Methods
Laboratory, CBE

1:15–1:40

**Understanding the development
of mixed fungal-bacterial biofilms**
Erika Espinosa-Ortiz, Postdoctoral
Research Associate, CBE

1:40–2:05

**ISO Method 846 Part C:
Evaluation of plastic surfaces for
the ability to support bacterial
growth**
Natalya Polukoff,
Undergraduate Student,
Microbiology & Immunology,
MSU, CBE

2:05–2:35

**Production and analysis of a
Bacillus subtilis biofilm with
spores using a modified colony
biofilm model**
Laura Wahlen, Research Assoc. III,
Baxter Healthcare, Chicago, IL

CBE Open House: Lab demonstrations and poster session

3:00–5:00

3rd Floor Barnard Hall (formerly
EPS), MSU
Schedule available onsite

Wednesday July 19

7:30–8:00 am

**Registration & continental
breakfast**
Larkspur Foyer, Hilton Garden Inn

SESSION 4: Biofilms in the Built Environment

8:00–8:30

Building microbiome control
Jordan Peccia, Professor, Chemical
& Environmental Engineering,
Yale University, New Haven, CT

8:30–9:00

**Mold contamination of indoor
materials for the built
environment: Shipping, storage
and preservation aspects**
Daniel Price, Director, Microbiology,
Interface Inc., Atlanta, GA

9:00–9:30

**Living lab studies on biofilms in
Finland**
Minna Keinänen-Toivola, Research
Manager, Satakunta Univ. of
Applied Sciences, Pori, Finland

9:30–10:00 Networking Break

10:00–10:45

Characterizing biofilm growth on elastomeric roof coatings subjected to ponded waters

Joseph Moore, Senior Chemist,
Dow Microbial Control,
Collegeville, PA

10:45–11:15

A multi-scale modeling framework for biofilm development

Ting Lu, Assistant Professor,
Bioengineering, University of
Illinois at Urbana-Champaign, IL

11:15–11:40

State of the CBE

Matthew Fields

11:40–11:50

Presentation of CBE awards

Matthew Fields

11:50–12:50

Catered lunch, Hilton Garden Inn

**SESSION 5:
Industrial Biofilms**

12:50–1:20

Biofilms in metalworking fluids

Christine Foreman, Associate
Professor, Chemical & Biological
Engineering, MSU, CBE

1:20–1:50

Bulk phase resource ratio alters electron transfer mechanisms in sulfate-reducing biofilms grown on metal

Greg Krantz, PhD Candidate,
Microbiology & Immunology,
MSU, CBE

1:50–2:15

Organic molecules and biofilm driven processes of metal deterioration: Exploring an uncharted territory

Iwona Beech, Research Professor,
Microbiology & Plant Biology,
University of Oklahoma,
Norman, OK

2:15–2:40

Metabolomic and genomic imaging as novel ways of investigating biofilm-influenced processes in industrial systems and in medical settings

Iwona Beech

2:40–3:05

Particle size impacts carrying-capacity for biofilm via reduction of free pore space and resources

Sara Altenburg, Fields Lab Manager,
CBE

3:05–3:30 Break

3:30–5:00

Business Meeting

Hilton Garden Inn

6:00

Dinner/Banquet

Rockin' TJ Ranch, Bozeman

**Thursday
July 20**

7:30–8:00 am

Registration & continental breakfast

Larkspur Foyer, Hilton Garden Inn

**SESSION 6:
Medical Biofilms**

8:00–8:30

Chemical and biological gradients in biofilm infections

Phil Stewart, Professor, Chemical &
Biological Engineering, MSU,
CBE

8:30–9:00

Interactions of human neutrophils with nascent *Staphylococcus aureus* biofilm

Niranjan Ghimire, Postdoctoral
Fellow, Wake Forest University,
Winston-Salem, NC

9:00–9:30

Do biofilms play a role in Lyme disease?

Garth James, Associate Research
Professor, Chemical & Biological
Engineering, MSU; Manager,
Medical Biofilms Laboratory, CBE

9:30–10:00 Networking Break

10:00–10:30

Detection and treatment of bacterial biofilms in chronic wounds

Greg Schultz, Professor, Obstetrics
& Gynecology, University of
Florida, Gainesville, FL

10:30–11:00

Perspectives, controversies, & research needs regarding perioperative antimicrobial prophylaxis for implantable medical devices

Roger Wixtrom, President,
LSCI Solutions, Springfield, VA

11:00–12:00

**Advancing biofilm removal via surgical wound lavage—
A collaborative development**

Matt Myntti, Vice President,
Research & Development,
Next Science, Jacksonville, FL
Chris Hosler, Associate Brand
Director, Zimmer Biomet
Surgical, Warsaw, IN

**12:00–12:10 pm
Meeting wrap up**