

# Center for Biofilm Engineering

06/19/06

## Monday June 19

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6:00–7:30 p.m.

**Pre-registration and  
welcome reception**  
GranTree Inn  
North 7<sup>th</sup> Ave, Bozeman

## Tuesday June 20

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7:30–8:30 a.m.

**Registration and  
continental breakfast**  
Strand Union Building (SUB)  
Ballrooms B & C

8:30–8:45

**Introductory remarks**  
SUB Ballroom D  
Paul Sturman, CBE Industrial  
Coordinator  
Mel Czechowski, Church &  
Dwight, TAC Chair  
Phil Stewart, CBE Director

### SESSION 1: **Antimicrobial Surfaces**

8:45–9:30

**Antimicrobial surfaces in  
perspective—a review**  
Ross Carlson, Assistant  
Professor of Chemical and  
Biological Engineering, CBE

9:30–10:05

**N-halamine biocidal coatings**  
Dave Worley, Professor and  
Interim Chair, Department of  
Chemistry, Auburn University,  
Auburn, Alabama

10:05–10:30

**Control of biofilm accumulation on  
chitosan-coated surfaces**  
M.M. Taimur Khan, Research  
Assistant Professor, CBE

10:30–11:00 Break

11:00–11:25

**Testing antimicrobial surfaces**  
Garth James, Medical Projects  
Manager, CBE

11:25–12:00

**Textiles and antimicrobial  
testing**  
Mark Fornalik, Specialty Materials  
Group, Kodak Research Labs

12:00–1:00

**Lunch, catered**  
SUB Ballroom C

### SPECIAL PRESENTATION

1:00–1:30

**State of the CBE**  
Phil Stewart, CBE Director

### SESSION 2: **Biofilms in Food and Food Processing**

1:30–2:00

**Session introduction:  
Biofilms in the food industry:  
Friend or foe?**  
Stewart Clark, Ph.D. Candidate,  
Microbiology, CBE

2:00–2:30

**Exploiting competitive  
microorganisms to control  
foodborne pathogens at the  
source**  
Mike Doyle, Director, Center for  
Food Safety, University of  
Georgia, Griffin, Georgia

2:30–2:50

**Biofilms on produce and  
household surfaces: Microscopic  
imaging and microbial community  
analysis**  
Rick Veeh, Senior Research  
Associate, CBE

2:50–3:20

**Biofilms in the food processing  
environments**  
Amy Wong, Professor of Food  
Microbiology, University of  
Wisconsin–Madison

3:20–3:50 Break

### SESSION 3: **Biofilm Methods**

3:50–4:15

**Session introduction:**  
Darla Goeres, Research  
Engineer, CBE  
**Log reduction calculations**  
Marty Hamilton, Professor  
Emeritus, Statistics, CBE

4:15–4:30

**Measuring the bias in log  
reduction calculations that  
result from cell wash-off  
during treatment**  
Alex Hilyard, Standard Biofilm  
Methods (SBM) Intern, CBE

4:30–4:45

**Checking the biofilm removal  
and disaggregation steps:  
A feasibility study**  
Kelli Buckingham-Meyer, Research  
Assistant, CBE

4:45–5:00

**A new standard method:  
The drip flow reactor with  
*Staphylococcus aureus***  
Jackie Whitaker, Standard Biofilm  
Methods (SBM) Intern, CBE

### Poster Session

5:10–6:30

Ballrooms B & C

### EPA Feedback Session

6:30–7:30

Ballroom D

## Wednesday June 21

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**7:30–8:30 a.m.**  
**Registration and continental breakfast**  
Strand Union Building  
Ballrooms B & C

### **SESSION 4:** **Industrial Water Treatment**

**8:30–8:40**  
**Session introduction**  
Anne Camper, Professor, Civil Engineering, CBE; Associate Dean for Research and Graduate Studies, MSU

**8:40–9:00**  
**Microbially influenced corrosion of copper**  
Mohammad Shahedur Rahman, Ph.D. Candidate, Civil Engineering, CBE

**9:00–9:20**  
**Immobilizing pathogens in a biofilm trap**  
Wes Bauman, M.S. Candidate, Civil Engineering, CBE

**9:20–9:50**  
**Inorganic particle transport in biofilms**  
Anne Camper

#### **9:50–10:20 Break**

**10:20–10:50**  
**Controlling localized corrosion in a complex cooling water system**  
Mike Dorsey, Senior Specialist, DuPont

### **SESSION 5:** **Microscopy**

**10:50–11:10**  
**Session introduction:**  
**Recently acquired equipment:**  
**The stereo microscope**  
Betsey Pitts, Research Associate/Facilities Manager, Microscopy, CBE

**11:10–11:40**  
**Using fluorescent proteins to assess biofilm growth**  
Ben Klayman, Ph.D. Candidate, Environmental Engineering, CBE

**11:40–12:10**  
**Application of AFM to bacterial investigations**  
Recep Avci, Director, Image and Chemical Analysis Laboratory, Physics Department, MSU

**12:10–1:00**  
**Lunch, catered**  
SUB Ballrooms B & C  
**REGULATORY PRESENTATION**

**1:00–1:40**  
**Regulatory methods: Recommendations for a suitable method for biofilm disinfectants**  
Stephen Tomasino, Senior Scientist, US EPA—OPP Microbiology Laboratory, Environmental Science Center

**3:15–5:15**  
**TAC Business Meeting**  
Springhill Pavilion

**6:00–8:00**  
**Dinner, catered**  
Springhill Pavilion

## Thursday June 22

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**7:30–8:30 a.m.**  
**Registration and continental breakfast**  
Strand Union Building  
Ballrooms B & C

### **SESSION 6:** **Environmental Biofilms**

**8:30–8:40**  
**Session introduction**  
Al Cunningham, Professor, Civil Engineering, CBE

**8:40–9:15**  
**Transformation of pure-culture and mixed-population biofilms with genes of value for bioremediation**  
Ron Crawford, Professor of Microbiology, University of Idaho, Moscow, Idaho

**9:15–9:45**  
**Selective removal of DNA from dead bacteria and molecular monitoring of disinfection efficacy**  
Andreas Nocker, Research Assistant Professor, CBE

**9:45–10:15**  
**Electron transport in engineered biofilms**  
Robin Gerlach, Research Assistant Professor, CBE

#### **10:15–10:45 Break**

**10:45–11:10**  
**Determinants of bacterial cell surface physicochemistry and architecture**  
Andrew Neal, Savannah River Ecology Laboratory, Aiken, South Carolina

**11:15–11:50**  
**Bacterial nanowires: Electrically conductive filaments and their implications for energy transformation and distribution in natural and engineered systems**  
Jeffrey McLean, Biological Sciences Division, Pacific Northwest National Laboratory

**11:50–12:00**  
**Session and meeting wrap-up**

**NEXT TAC**  
**February 8–9, 2007**