

# Iowa Science and Mathematics Teacher Educators Summit

*Sponsored by the Iowa Math and Science Education Partnership*

August 14, 2009 | 8AM – 4PM  
Grand View University | Des Moines, Iowa

*GOAL: To seek a common vision or standard of excellence for graduating teachers of mathematics and science across Iowa institutions of higher learning, through communication and resource sharing*

## Schedule

### August 13, 2009

5:30 to 7:30 pm RECEPTION – Embassy Suites on the River, Des Moines

### August 14, 2009

8:00 AM REGISTRATION, BREAKFAST  
WELLNESS CENTER ENTRANCE

8:30 AM WELCOME  
Jeff Weld, Director, Iowa Mathematics & Science Education Partnership  
Kent Henning, President, Grand View University  
Benjamin Allen, President, University of Northern Iowa  
WELLNESS CENTER – MAIN GYM

8:35 AM MORNING KEYNOTE  
Judy Jeffrey, Director, Iowa Department of Education  
WELLNESS CENTER – MAIN GYM

9:05 AM A RESEARCH FOUNDATION  
Robert Yager, Professor, Science Education, University of Iowa  
WELLNESS CENTER – MAIN GYM

9:35 AM RESEARCH SESSIONS – Evidence-Based Teacher Preparation

SCIENCE METHODS - WELLNESS CENTER – MAIN GYM  
Julie Gess-Newsome, Director of the Center for Science Teaching and Learning,  
Northern Arizona University

MATH METHODS – WELLNESS CENTER – 122A+122B [ROOMS ADJACENT TO CLINIC]  
Barbara Dougherty, Director of the Center for Excellence in Science, Mathematics & Engineering Education,  
Iowa State University

10:20 AM BREAK POSTER DISPLAYS: RASMUSSEN CENTER – 2<sup>nd</sup> floor gathering area

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## 10:35 AM BREAKOUT SESSION I – [ 40 minutes] RASMUSSEN CENTER

### Session 1 – Teacher Prep Standards – Math Methods

Facilitators: Jihwah Noh and Elizabeth Hughes, UNI  
Location: Rasmussen 210

### Session 2 – Teacher Prep Standards – Science Method

Facilitator: Michael Clough, ISU  
Location: Rasmussen 212

### Session 3 – Essentials of a Preparation Program

Facilitator: Cherin Lee, UNI  
Location: Rasmussen 217

### Session 4 – Minimum Content for Math – Elementary

Facilitator: Bridgette Stevens, UNI  
Location: Rasmussen 219

### Session 5 – Minimum Content for Science – Elementary

Facilitator: Joanne Olson, ISU  
Location: Rasmussen 220

### Session 6 – Panel of School District Mentors on the Prep of our 1<sup>st</sup> and 2<sup>nd</sup> Year Teachers

Facilitator: Cathy Miller, UNI  
Location: Rasmussen - CETL

## 11:20 AM BREAKOUT SESSION II – [ 30 minutes] RASMUSSEN CENTER

### Session 1 – Elementary Math Methods

Facilitator: Corey Drake, ISU  
Location: Rasmussen 210

### Session 2 – Elementary Science Methods

Facilitator: Audrey Rule, UNI  
Location: Rasmussen 212

### Session 3 – Secondary Math Methods

Facilitator: Steve Murdock, Graceland  
Location: Rasmussen 217

### Session 4 – Secondary Science Methods

Facilitator: John Dunkhase, UI  
Location: Rasmussen 219

## NOON LUNCHEON – WELLNESS CENTER – MAIN GYM

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**Keynote: "Stereotype Threat as a Barrier to Women's STEM Participation"**

Dr. Bettina Casad, Assistant Professor of Psychology,  
Psychology and Sociology Department, California State Polytechnic University, Pomona, CA

1:15 PM

**BREAKOUT SESSION III** – [Repeat of 10:35 AM, 40 minutes], RASMUSSEN CENTER

Session 1 – **Teacher Prep Standards – Math Methods**

Facilitator: Jihwah Noh and Elizabeth Hughes, UNI

Location: Rasmussen 210

Session 2 – **Teacher Prep Standards – Science Methods**

Facilitator: Michael Clough, ISU

Location: Rasmussen 212

Session 3 – **Essentials of a Preparation Program**

Facilitator: Cherin Lee, UNI

Location: Rasmussen 217

Session 4 – **Minimum Content for Math – Elementary**

Facilitator: Bridgette Stevens, UNI

Location: Rasmussen 219

Session 5 – **Minimum Content for Science – Elementary**

Facilitator: Joanne Olson, ISU

Location: Rasmussen 220

Session 6 – **Panel of School District Mentors on the Prep of our 1<sup>st</sup> and 2<sup>nd</sup> Year Teachers**

Facilitator: Cathy Miller, UNI

Location: Rasmussen – CETL

2:00 PM

**BREAKOUT SESSION IV** [ 40 minutes] - RASMUSSEN CENTER

Session 1 – **Recruitment into Teaching Programs and into Teaching in Iowa**

Facilitator: Jeff Weld, IMSEP

Location: Rasmussen 210

Session 2 – **Extant and Emerging Nontraditional (alternative) Licensure Programs in Iowa**

Facilitator: Merrie Schroeder, UNI

Location: Rasmussen 212

Session 3 – **Latest Math/Science Initiatives of the Iowa Department of Education**

Facilitator: Yvette McCulley, Judith Spitzl, Kathy McKee, IDE

Location: Rasmussen 217

Session 4 - **STEM Teaching Equity**

Facilitator: Jeanette Thomas, IDE

Location: Rasmussen - 219

2:45 PM

**BREAK/REFRESHMENTS** – **POSTER DISPLAYS**: RASMUSSEN CENTER – 2<sup>nd</sup> floor gathering area

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3:00 PM FINAL BREAKOUT [ 40 minutes] - RASMUSSEN CENTER

Session 1 -- **Math Teacher Educators: Where from Here?**

Facilitator: Bridgette Stevens, Elisabeth Hughes, Jihwah Noh, UNI  
Location: Rasmussen 219+220

Session 2 – **Science Teacher Educators: Where from Here?**

Facilitators: Michael Clough, ISU, and Cherin Lee, UNI  
Location: Rasmussen 103

3:45 PM CONCLUDING REMARKS – RASMUSSEN CENTER – 2<sup>nd</sup> floor gathering area

Cherin Lee, Science Education Program Chairperson, University of Northern Iowa

*Safe Travels Home*

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## Posters on Display

***Increasing and Maintaining Mathematical Cognitive Demand: Implementing high-quality critical thinking instructional tasks in middle grades and high school mathematics (IM2CD),***

Heather Bolles, Iowa State University, Bridgette Stevens, University of Northern Iowa

***Incorporating Creativity and Thinking Skills into a Science Unit on Flooding***

Audrey C. Rule and Jean S. Schneider, University of Northern Iowa

***Developing Pre-service Elementary Teachers' Decision-Making: A summary of studies that examine how pre-service and in-service elementary teachers diagnose and react to classroom events in science***

Joanne K. Olson, Iowa State University, Andrea J. Vande Haar, University of Northern Iowa, Crystal N. Bruxvoort, Calvin College, Grand Rapids, MI

***Using Standards-Based Curriculum Materials in Elementary Mathematics Methods Courses***

Corey Drake and Tonia Land, Iowa State University

***Structure and Efficacy of a Restructured Secondary Science Teacher Education Program***

Daniel J. Bergman, Michael P. Clough and Joanne K. Olson, Iowa State University

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## Summit Planning Committee

- Vicki Burketta, Mathematics Education, University of Iowa
- Michael Clough, Science Education, Iowa State University
- Corey Drake, Mathematics Education, Iowa State University
- John Dunkhase, Science Education, University of Iowa
- Cherin Lee, Science Education, University of Northern Iowa
- Yvette McCulley, Science Consultant, Iowa Department of Education
- Cathy Miller, Mathematics Education, University of Northern Iowa
- Steve Murdock, Science Education, Graceland University
- Tonja Richards, Iowa Mathematics & Science Education Partnership
- Paul Rider, Physics, Grand View University
- Bridgette Stevens, Mathematics Education, University of Northern Iowa
- Jeff Weld, Iowa Mathematics & Science Education Partnership