

## MSU STEM Education Alliance Fall Reception

September 15, 2017

3:00 – 5:30 p.m.

Kellogg Conference Center Lincoln Rm.

**Overview** - The STEM Alliance is composed of the Michigan State University colleges, institutes, and research groups engaged together in an effort to make MSU the premier public university for undergraduate STEM learning and research. The overall goal of the MSU STEM Education Alliance is to foster cross-college collaborations that increase student retention and success in STEM. The Fall Reception is the kick-off event for the academic year and provides an opportunity to meet and network with others involved in undergraduate STEM education and institutional efforts to promote success for STEM students.

### Agenda

- 2:30 – 3:00 p.m.      Sign in, networking
- 3:00 – 3:05            Welcome  
*R. Sekhar Chivukula*  
*Professor of Physics*  
*MSU Associate Provost for Undergraduate Education*  
*Dean of Undergraduate Studies*
- 3:05 – 3:15            Introduction  
*Joseph Krajcik*  
*Lappan-Phillips Professor of Science Education*  
*Director, CREATE for STEM Institute*  
*College of Natural Science/College of Education*
- 3:15 – 4:00            Keynote  
“Taking a scientific approach to the learning and teaching of science”  
*Carl Wieman*  
*Professor of Physics and of the Graduate School of Education*  
*Stanford University*

Guided by experimental tests of theory and practice, science and engineering have advanced rapidly in the past 500 years. Guided primarily by tradition and dogma, the learning and teaching of these subjects meanwhile has remained largely medieval. Research on how people learn is now revealing much more effective ways to learn, teach, and evaluate learning than what is in use in the traditional college class. The combination of this research with information technology is setting the stage for a new approach to teaching and learning that can provide the relevant and effective science and engineering education for all students that is needed for the 21st century. Although the focus of the talk is on undergraduate science and engineering learning and teaching, where the data is the most compelling, the underlying principles come from studies of the general development of expertise and apply widely.

- 4:00 – 4:30            Question & Answer/Discussion
- 4:30 – 5:30            Hors d'oeuvre Reception and Networking

#### **Save the dates for upcoming STEM Education Alliance meetings:**

Dates:    \* Winter Meeting - Thursday December 14, 2017

☞ Spring Meeting – Thursday April 26, 2018

Time:     11:30 a.m. – 2:00 p.m.

Place:     Spartan Rooms B&C, International Center