<u>STEP to Success – April 12, 2013</u> <u>Agenda</u>

8:00 – 8:30 a.m. – Registration and Welcome (Library Atrium)

- Opening Remarks

8:45 a.m. – 9:45 a.m. – Session 1

Workshop 1 - Classroom Innovations (Room 425)

- > "Cerberus": MassBay Supercomputer Beowulf Cluster
 - Giuseppe Sena, MassBay Community College
- **➤** Learning Community Experience in STEM Mass Bay
- Marina Bograd and Susanne Steiger-Escobar; MassBay Community College
 Workshop 2 Academic Support/ Research (Room 316)

> The Extraordinary Power of Research Based Curriculum

- Bruce Jackson, Alberto Velez, Carolyn Lanskron, and Lindsay Grumbach; Mass Bay Community College
- > Undergraduate Research at Middlesex Community College
 - Jessie Klein; Middlesex Community College

Workshop 3 - Supplementary Programs (Room 422)

- > Web-based Interactive and Adjustable e-Learning Environment for Energy Education
 - Yakov Cherner and Gary Mullett; ATeL and Springfield Technical Community College
- ➤ A First Course in Engineering Design Based on an Energy-Centered Thematic Approach
 - Yiannis Levendis and Christos Zahopoulos; Northeastern University

10:00 a.m. – 11:00 a.m. – Session 2

Workshop 1 - Classroom Innovations/PD (Room 425)

- > A "High-Tech Tools and Toys" Summer Workshop for Community College Teachers
 - Stephen McKnight; Northeastern University
- > Engineering Essentials and Design the HTT&L course at NECC
 - Michael Pelletier; Northern Essex Community College

Workshop 2 – Classroom Innovations (Room 316)

- > Department of Homeland Security Scholars
 - Chi-Yin Tse; Northeastern University
- > Developing interest in STEM among urban students in a first-year college program
 - Molly Dugan, Silvani Vejar, Peter Plourde; Northeastern University
- > STEM Speaker Series & Fly Me to Mars!
 - Tala Khudairi; Roxbury Community College

Workshop 3 — Academic Support/Supplementary Programs (Room 422)

- ➤ Enhancing Student Success with Problem Based Learning and Process Oriented Guided Inquiry Learning
 - Kimberly Stieglitz, Farida Akhter, Zineb Berdjane, Bruce Brender, Rajeswari Sundaramoorthi, and Ching Yim; Roxbury Community College
- > A STEM with a bright new humanities bloom
 - Barbara Ann Kearney; Mass Bay Community College

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11:15 a.m. - 12:15 p.m. - Session 3

Workshop 1 - Academic Support/Professional Development (Room 322)

- > Supplementary Instruction to Increase Success in Computing/STEM
 - Renee Fall, University of Massachusetts Amherst, Commonwealth Alliance for Information Technology Education (CAITE), School of Computer Science, with Erik Risinger, Greenfield Community College, Doug Wilkins, Greenfield Community College, Aparna Mahadev, Worcester State University, and Kenneth Rath, SageFox Group

Workshop 2 - Professional Development (Room 425)

- ➤ A New Culture of Learning in STEM Education
 - Jalal Ghaemghami, Randall Foote, Tom Macdonald, Lauren Chomiczewski, and Zineb Berdjane; Roxbury Community College
- > "How People Learn"
 - Christos Zahopoulos; Northeastern University

12:15 p.m. - 1:00 p.m. - Session 4

Classroom Innovations

- Open Classroom, Student Presentations, Engineering Computation Laboratory (Room 320)
 - Chitra Javdekar; MassBay Community College
- > Artbotics Workshop (Room 425)
 - Suzanne Steiger-Escobar
- > Poster Session Expo
 - Student and faculty projects Library Atrium, Hallways

1:00 p.m. – 1:45 p.m. – Lunch in the Atrium (Library Atrium)

Film – Uri Treisman (Keynote from 2013 NSF STEP conference)

1:45 p.m. – 2:30 p.m. – Discussion and Wrap-up (Library Atrium)

- National Recommendations and Next Steps for collaboration in MA
- Small Table discussions re: recommendations made for CC's/Innovation Agenda
- Report out by Table (each table produces one or two flip charts with points)
- -Wrap-up-next steps
- Final remarks

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Film: **Philip "Uri" Treisman,** Professor of Mathematics and Public Affairs, University of Texas at Austin

Title

Innovation as Ornament and the Challenge of Improvement at Scale

Abstract

Compelling economic forecasts indicate that our country will need to produce, over the next decade, one million more college graduates in STEM fields than would be expected at current rates. Fortunately, everywhere and all the time armies of responsible faculty members and administrators are working to improve their undergraduate programs with the goal of increasing the number and diversity of STEM graduates. Many of these academics recognize that the health of their disciplines depends on developing a next generation of STEM professionals that represents the full diversity of our society. Yet progress is disappointedly slow--despite the enormous energy expended on the task. How might we proceed differently so that necessary change occurs at scale? And, what new arrangements must be created to allow those working at different levels of the educational system to collaborate on meeting national and disciplinary goals? These questions and suggested answers are the heart of the talk.