

National Science Foundation Engineering Research Centers

ERC 2006 Annual Meeting

November 29-December 1, 2006

Hyatt Regency Bethesda

One Bethesda Metro Center (7400 Wisconsin Ave)

Bethesda, MD Tel: 301-657-1234

DRAFT AGENDA

As of October 24, 2006

WEDNESDAY, November 29, 2006

Annual Meeting – Day One

Student Retreat and Closed Sessions

8:30am – 3:00pm **Student Retreat –**

Organizers: U. Mass–Amherst CASA SLC (**Kathleen Rubin**, Co-Director for Education & Outreach and **Brian Donovan**, CASA SLC President)

8:00 – 8:30	Continental Breakfast
8:30 – 11:00	Morning Session (NSF & ERC staff invited for this session only)
8:30 – 8:45	CASA SLC Introductions and Welcome
8:45 – 9:00	Welcome & remarks by Lynn Preston , NSF ERC Program Leader
9:00 – 9:30	NSF: What It Does and How It Works – Bruce Kramer , NSF
9:30 – 11:00	Putting Your Degree to Work: Practical Career Strategies – Peter Fiske , V.P. Business Development, RAPT Industries
11:00 – 3:00	Roundtables: SLC Best Practices

10:00am – 3:00pm **Center Directors' & Deputy Directors' Closed Meeting –**

	<i>Co-moderators:</i> Yoram Koren (RMS) & Andre Filiatrault (MCEER)
	<i>Speakers:</i>
12:00 – 1:00	Working Lunch
11:00 – 12:00	Time with Lynn Preston, Allen Soyster, and Bruce Kramer

10:00am – 3:00pm **Administrative Directors' Closed Meeting –**

	<i>Moderator:</i> Janice Brickley (CASA)
	<i>Speakers:</i> Sue Lewis , Associate Vice Provost for Planning and Design, USC; Jennie Parker , Assistant Director, Office of Research Services, University of Oklahoma; Theresa Girardi , Grant and Contract Administrator, University of Massachusetts; Mary Atella , Senior Research Administrator Office of Sponsored Programs, Colorado State University
	<i>Topics:</i> Administering a multi-institution grant; planning for summer retreat?...
10:00 – 11:00	Time with Lynn Preston, Barbara Kenny, Darlene Suggs, and William Young
12:00 – 1:00	Working Lunch

11:00am – 3:00pm **Industrial Liaison Officers’ Closed Meeting –**

	<i>Moderator: Jerry Collins (VaNTH)</i>
	<i>Speakers: Dr. Patrick McCarthy, Professor of Chemistry, Colorado School of Mines</i>
	<i>Topic: Patenting and Licensing best practices at universities</i>
12:00 – 1:00	Working Lunch
2:00 – 3:00	Time with Lynn Preston, Barb Kenny, Deborah Jackson, Vilas Mujumdar, & Dawn Applegate

11:00am – 3:00pm **Education/Outreach Directors’ Closed Meeting –**

	<i>Co-moderators: Alene Harris (VaNTH) & Scott Ashford (PEER)</i>
12:00 – 1:00	Discussion with Lynn Preston, Mary Poats, Win Aung, & Stephanie Adams , NSF
	Southeastern AGEP (Anne Donnelly, Jane Jacobi, Alene Harris joint presentation)
	Win Aung report on Assessment study

12:00pm – 3:00pm **Research Thrust Leaders’ Closed Meeting –**

	<i>Moderator: Greg Hager (CISST)</i>
	<i>Open discussion</i>
12:00 – 1:00	Working lunch
12:30 – 1:00	Steven Currall , Professor, University College London/London Business School and Sara Jansen Perry , doctoral student, University of Houston, on study of ERC Strategic Planning
12:30 – 1:00	All NSF ERC PDs to hear Currall/Perry talk
1:00 – 2:00	Discussion with Sohi Rastegar, Bruce Kramer, & Lynn Preston

3:00pm – 3:20pm **Break –**

3:20pm – 5:00pm **Plenary Session I: Opening Session –**

*Moderator: **Lynn Preston***

3:20 – 3:30	Welcome & Meeting Plan – Lynn Preston and Court Lewis – Lynn introduces Allen Soyster, then Dr. Buckius
3:30 – 3:45	Welcoming Remarks – Richard Buckius , AD for Engineering, NSF
3:45 – 4:05	Introducing the Synthetic Biology ERC – Jay Keasling , Center Director
4:10 – 4:30	Introducing the Quality of Life Technology ERC – Takeo Kanade and Rory Cooper , Center Co-Directors
4:30 – 5:00	The Entrepreneurial Engineer – Dr. Ted Rappaport , Director, Wireless Networking and Communications Group, UT-Austin
5:00 – 5:10	Q&A with Dr. Rappaport
5:10 – 5:40	Northeastern’s New Gordon Engineering Leadership Program – Michael Silevitch (CenSSIS)

5:45pm – 7:00pm **Welcome Reception for All**

– Featuring the screening of a series of demonstrations of IMSC’s Immersipresence technology

[NOTE: Speakers and panelists listed in red have not yet been confirmed]

THURSDAY, November 30, 2006

Annual Meeting – Day Two

THEME FOR THE DAY: Innovating and Educating in the Global Context

7:00am – 5:30pm Registration and Attendee Services

7:00am – 8:00am Breakfast and Networking –

8:00am – 10:00am **Plenary Session II: NSF Session**

Moderator: **Allen Soyster**, EEC Division Director

8:00 – 8:05	Welcome & Plan for the Day – Court Lewis
8:05 – 8:25	NSF & ERC Program Update – Lynn Preston
8:25 – 8:45	Engineering Research Center Programs Worldwide: A Survey and Findings Relevant to ERCs – Bhavya Lal , Science & Technology Policy Institute
8:45 – 9:05	Introducing the ERC on Mid-Infrared Technologies for Health and the Environment – Claire Gmachl , Center Director
9:10 – 9:45	Flat World: View from a Practitioner – Vivek Paul , Partner, Texas Pacific Group (formerly President & CEO, Wipro Technologies)

9:45am – 10:15am **Break**

10:15am – 12:00pm **Breakout Session I – Empowering Innovation and Creativity**

Building Entrepreneurial Engineering Leaders for the Global Environment <i>Co-moderators:</i> Amr Elnashai (MAE) & Fred Lee (CPES) <i>Topics:</i> Profile of the “Global Engineer”	CD/DDs, EDs, F/TLs, SLCs, IND, NSF PD	<i>Speakers:</i> Gary Downey , Professor of S&T in Society, Va Tech; Michael Zhang , Director, System Development Center, Intel, Shanghai; Michael Silevitch , CenSSIS; Michael McCorquodale , CTO, Mobius Microsystems
Working with Industry to Bridge the Gap Between Discovery and Commercialization <i>Co-moderators:</i> John Cristiano (Center for Engineering Education and Practice, UMich) and Carl Rust (GaTech) <i>Topics:</i> Managing IP in a global team environment;	CD/DDs, ILOs, F/TLs, IND, ADs, NSF PD	<i>Speakers:</i> Kesh Narayanan (NSF Div. of Industrial Innovation & Partnerships); Barbara Boyan , Deputy Director, GTEC, on univ-ind “translational” research project; Mary Ann Jelinek , College of William & Mary business school; Vivek Paul , Texas Pacific Group; Jeffrey Weedman, V.P. , External Business Development, Proctor & Gamble

12:15pm – 1:45pm **Lunch –**
Unassigned seating

1:00pm – 1:45pm *Speaker:* **Dr. William Haseltine**, founder & ex-CEO of Human Genome Sciences, Inc., now setting up a virtual global pharmaceutical company

Scientific and Engineering Entrepreneurship in the Global Context

- Introduction by **Allen Soyster**, EEC Division Director
- Allotted time includes Q&A

2:00pm – 3:30pm **Breakout Session II: Impact of Globalization on ERCs**

<p>Educating for Global Innovation <i>Moderator: Beth Tranter (CPES)</i> <i>Topics: Inculcating leadership, communication, international teamwork, innovativeness</i></p>	<p>CD/DDs, EDs, F/TLs, SLC, NSF PD</p>	<p><i>Speakers: Michael Malone, Director of UMass Entrepreneurial Education program; Jorge Trabal (CASA) Student-led Research Testbeds: The CASA Model; Gary Downey, Professor, Va Tech</i></p>
<p>New Communication and “Collaboratory” Technologies: Workshop with Demos <i>Moderator: Joy Pauschke, NSF</i></p>	<p>CD/DDs, F/TLs, EDs, ILOs, ADs, SLCs, NSF PD</p>	<p><i>Speakers: Thomas Finholt, Univ. of Michigan, web conferencing (e.g., Sakai) and web instrumentation (e.g., Teragrid); Gerhard Klimeck and Michael McLennan, Network for Computational Nanotechnology, Purdue University, NanoHUB</i></p>
<p>Engaging Effectively with Industrial Partners in the Global Arena <i>Moderator: Teresa Shaw (CPES)</i></p>	<p>CD/DDs, F/TLs, ILOs, IND, NSF PD</p>	<p><i>Panelists: Carl Rust (GaTech); Peter Barbosa, Manager, Corporate Research, ABB Switzerland Ltd.; Milan Jovanovic, V.P. for R&D, Power Electronics Laboratory, Delta Products Corporation</i></p>

3:30pm – 4:00pm **Break**

4:00pm – 5:30pm **Breakout Session III – Attracting Diverse Students to the Engineering Pathway**

<p>Bridging the Gap Between National Needs and Local Implementation in K-12 STEM Education <i>Co-moderators: Claire Duggan (CenSSIS) and Robbie Brinton (BMES)</i> <i>Topics: RETs’ experiences; course development for K-12; strengthening elementary science teacher capabilities; linkage with colleges of education; broadening the pool through diversity; government role; partnerships</i></p>	<p>Open to all</p>	<p><i>Possible Speakers: Cary Sneider, Boston Museum of Science; Matthew Corcoran, NU/BU RET teacher; Anthony Petrosino, Assistant Professor, College of Education, U. Texas-Austin; Leigh Abts, Executive Director, Center for Education and Outreach, Johns Hopkins School of Engineering</i></p>
<p>Effectively Engaging Undergraduates in the ERC <i>Co-moderators: Michael Celaya (EUV) & Sandra Cruz-Pol (CASA)</i></p>	<p>Open to all</p>	<p><i>Panelists: include SLC student</i></p>
<p>Creating Diverse Multicultural Teams to Enhance the Educational Experience</p>	<p>Open to all</p>	<p><i>Speaker: Panelists: include SLC student</i></p>

<i>Co-moderators:</i> Jorge Rocca (EUV) & Anthony Johnson (MIRTHE) <i>Topics:</i> How to meld domestic and foreign students (including underrepresented groups) into diverse multicultural ERC teams, with cross-cultural mentoring, to improve assimilation of foreign students and retention in the U.S.		
ADs' Discussion with NSF on the Data Collection & Reporting System <i>Moderator:</i> Barbara Kenny , NSF	All ADs	<i>Presenters:</i>

Dinner on your own

FRIDAY, December 1, 2006

Annual Meeting – Day Three

7:00am – 2:45pm Registration & Attendee Services –

7:00am – 8:00am Breakfast and Networking –

8:00am – 9:15am **Plenary Session III:**
Moderator: **Lynn Preston**

8:00 – 8:05	Welcome & Plan for Day – Court Lewis
8:05 – 8:25	Student Retreat Reporting-out – Brian Donovan , President, CASA SLC
8:30 – 8:50	Introducing the ERC for Structured Organic Composites for Pharmaceutical, Nutraceutical, and Agrochemical Applications – Fernando Muzzio , Center Director
8:55 – 9:15	Introducing the ERC in Compact and Efficient Fluid Power – Kim Stelson , Center Director

9:15am – 9:45am **Break**

9:45am – 11:45am **Breakout Session IV** — Cross-center Issues by Tech Cluster

Bioengineering Centers Discussion Section – <i>Co-moderators:</i> Tom Harris (VaNTH) & Sohi Rastegar , NSF PD <i>Topic:</i> Sustainability for Bioengineering ERCs	All staff, students, industry	<i>Panel:</i>
Manufacturing & Processing Centers Discussion Section – <i>Co-moderators:</i> John Kennedy (CAEFF) & Bruce Kramer , NSF PD <i>Topic:</i> Working with Industry Associations	All staff, students, industry	<i>Panel:</i> Mike Gust , ILO, UMinn CCEFP; Linda Western , Exec. Director, National Fluid Power Association
Earthquake Engineering	All staff, students,	<i>Panel:</i>

Centers Discussion Section – <i>Co-moderators: Jack Moehle (PEER) & Vilas Mujumdar, NSF PD</i> <i>Topic:</i>	industry	
Micro/Optoelectronic/IT Centers Discussion Section: Creative Collaboratories (C ²) <i>Co-moderators: Adam Powell (IMSC) & Deborah Jackson, NSF PD</i> <i>Topic: Remote collaboration best practices to enhance creativity</i>	All staff, students, industry	<i>Speakers: Chris Kyriakakis, Dep. Director, IMSC, with a video on “cultural mishaps”; Thomas Finholt, Univ. of Michigan, on principles of virtual collaboration; Janice Brickley, CASA AD on their remote conferencing/ collaboration systems, and Michael Silevitch, Director, CenSSIS, soliciting ideas for communication media for their new Engineering Leadership Program</i>

11:45am – 12:15pm **Lunch** (self-serve buffet lunch and move to breakout room)

[An informal “Into Washington DC” networking/field trip will be organized for SLC students on Friday afternoon. The Retreat organizers will provide details when available.]

12:15pm – 1:45pm **Breakout Session V: How To Succeed as an ERC: Lessons Learned**

Center Directors, Deputy Directors & other Center-wide Leadership Workshop <i>Moderator: David McLaughlin (CASA) and Khalil Najafi (WIMS)</i>	All centers CD/DDs, NSF’s Lynn Preston, Joy Pauschke, Vilas Mujumdar	<i>Panelists:</i> <i>Speakers: Steven Currall, Professor, University College London/London Business School and Sara Jansen Perry, doctoral student, University of Houston, on study of ERC Strategic Planning; Fernando Muzzio, Center Director, C-SOC, on cross-site strategic planning; David McLaughlin on 4th-year ERC perspective; Khalil Najafi on 7th-year ERC perspective; Yoram Koren, Center Director, RMS, on 10th-year ERC perspective</i>
Research Managers Workshop <i>Moderator: Pat Stayton (UWEB)</i>	All centers F/TLs, NSF’s Sohi Rastegar, Steve Nelson	<i>Panelists: Bob Guldberg, GTEC; Greg Dierlein, PEER; Henry Kapteyn, EUV ERC;</i>
Administrative Managers/Directors Workshop <i>Moderator: Darlene Wright (PEER)</i>	All centers ADs, NSF’s Barbara Kenny	<i>Panelists: Janice Brickley (CASA); Janiece Harrison (VaNTH); Ann Craig (Virginia Tech)</i>
Education & Outreach Directors	All centers EDs,	<i>Panel:</i>

Workshop <i>Moderator: Anne Donnelly (PERC)</i>	SLC, NSF's Dawn Applegate, Stephanie Adams, Mary Poats, Win Aung, Judy Raper	
Industrial Liaison Officers Workshop <i>Moderator: Erik Sander (PERC)</i> <i>Topic: What does it take to be a successful ILO?</i>	All centers ILOs, IND, NSF's Bruce Kramer, Soo-Siang Lim, Deborah Jackson, Rajinder Khosla	<i>Panelists: Andy Branca (UWEB); Joe Giachino (WIMS); Brenda Philips (CASA)</i>

2:00pm – 2:15pm **Plenary Session IV — Wrap-up**

2:00 – 2:15	Meeting Feedback & Action Items – Lynn Preston and Court Lewis
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2:15pm **Adjourn**

2:30pm – 4:00pm **Post-Meeting Session for the Five New ERCs.** All staff of the five new centers will attend a post-meeting session with NSF program management staff and "veteran" ERC staff representatives to discuss any issues and answer any questions the new ERC might have. There are **two parallel sessions**, as described below.

— **All staff of 5 new ERCs except ADs** meet with Lynn Preston, Allen Soyster, ERC PDs, Mary Poats, Win Aung, Dave McLaughlin, Beth Tranter, Erik Sander. Lynn is moderator.

— **Administrative Directors and Financial Managers from all 5 new ERCs** meet with the evaluation and data collection team from NSF: Barbara Kenny, Charlie Zeigler, Tim Kashmer, and QRC's Sean Teehan. Karen Richardson (AD, Univ. of Michigan WIMS ERC) will serve as moderator.