

National Science Foundation Engineering Research Centers

ERC 2012 Annual Meeting

November 13-16, 2012

Hyatt Regency Bethesda

One Bethesda Metro Center (7400 Wisconsin Ave.)

Bethesda, MD Tel: 301-657-1234

MEETING AGENDA

TUESDAY, November 13, 2012

- 8:30am – 5:30pm E&O Directors’ Conclave (*Organizers: Mary Poats, Carole Read, NSF*)
Focus: Role of innovation in all ERCs; outlining the revised chapter on Education Best Practices with assignments; opportunity to network
- 3:00pm – 7:00pm Admin Directors Financial Subgroup meeting (*Pre-meeting organizer: Barb Kenny, NSF. Chair, Tonia McCarley, CBiRC ERC*)
Focus: Developing a standard spreadsheet format for ERC money reporting tables
- 5:00pm – 8:00pm ILOs’ Mini-Retreat (*Organizer: Deborah Jackson, NSF; Co-chairs: Seth Crossno, FREEDM; and Bernadeta Wysocka, MIRTHE*)
Focus: Entrepreneurship, center sustainability
 — Includes light dinner served in-room

WEDNESDAY, November 14, 2012

Annual Meeting – Day One

New Center Orientation, NSF Session, and Open Workshops

- 7:30am – 5:30pm Registration and Attendee Services
- 7:30am – 8:30am Breakfast and Networking
- 8:30am – 10:15am **“Perfect Pitch” Student Competition** [All meeting attendees welcome to attend (optional)]

	<i>Co-moderators:</i> Deborah Jackson (NSF) and Portia Taylor (former QoLT SLC president and now Fellow, Social Security Administration) <i>Judges:</i> Edward Clancy , Advanced Cooling Technology Applications; Ayman Fawaz , Siemens Luiz Da Silva , IntelaMetrix; Mike Mueller , Consultant; Marco Rubin , Exoventure; Mick Stadler , Cerion Energy;
8:30 – 8:40	Welcoming Remarks and Instructions – Deborah Jackson
8:40 – 10:15	Student pitches (17 @ 90 seconds + 4 min scoring)
10:15 – 2:00	Judging time [judges only]

- 8:30am – 10:15am **New Center Orientation – New-ERC Directors/Deputy Directors** [Staff of existing ERCs welcome to attend (optional)]

	<i>Co-moderators:</i> Richard Luthy (ReNUWIt), Yilu Liu (CURENT)
8:30 – 8:35	Welcoming Remarks and Introductions –
8:35 – 8:50	Drs. Greg Carman , Roger Bonnezeze , and Veena Misra introduce their 3 new 2012 ERCs
8:50 – 10:05	Directors of four 2011 ERCs on experiences and lessons learned in the

	first year of starting up an ERC. Topics to include: Leadership and team-building; Strategic planning; Operations; Integrating research into innovation and education <ul style="list-style-type: none"> • Richard Luthy (ReNUWIt) • Christiana Honsberg (QESST) • Kevin Tomsevic (CURENT) • Thomas Daniel (CSNE)
10:05– 10:15	Discussion and Wrap-Up

8:30am – 10:15am **New Center Orientation – New-ERC Administrative Directors/Financial Managers** [Staff of existing ERCs are welcome to attend (optional)]

	<i>Co-moderators:</i> Lois Deve (RMB), Jill Weinberg (CSNE)
8:30 – 8:35	Welcoming Remarks and Introductions – Jill Weinberg
8:35 – 8:50	New ADs Introductions – Lois Dalton Deve
8:50 – 9:20	ADs from two ERCs recount experiences and lessons learned – Lois Deve and Jill Weinberg
9:20 – 9:30	NSF Perspective – Marshall Horner (NSF)
9:30 – 10:15	Open Discussion

8:30am – 10:15am **New Center Orientation – New-ERC Industrial Liaison Officers** [Staff of existing ERCs are welcome to attend (optional)]

	<i>Co-moderators:</i> Bernadeta Wysocka (MIRTHE), Seth Crossno (FREEDM)
8:30 – 8:40	Welcoming Remarks and Introductions
8:40 – 9:10	What NSF expects of Gen-3 ERCs and ILOs – Erik Sander (former ERC ILO and Founding Director, U. of Florida Engineering Innovation Institute)
9:10 – 9:50	“Speed Dating” one-on-one Q&A – <i>Panelists:</i> Peter Keeling (CBiRC), Rad Roberts (CSNE), Joseph Montemarano (MIRTHE), Seth Crossno (FREEDM), Bernadeta Wysocka (MIRTHE), Erik Sander as resource
9:50 – 10:15	Open group discussion & wrap-up

8:30am – 10:15am **New Center Orientation – New-ERC University Education Program Directors** [Staff of existing ERCs are welcome to attend (optional)]

	<i>Co-moderators:</i> Penny Jeffrey (FREEDM), Chien-fei Chen (CURENT)
8:30 – 8:40	Welcoming Remarks and Introductions – Penny Jeffrey and Chien-fei Chen
8:40 – 9:10	Overview of strategic planning for University Education programs (distribute notecards for best practices in strategic planning) – Penny Jeffrey and Chien-fei Chen
9:10 – 9:30	Implementing the Center-specific Hypothesis (Design Paradigm) on Educating Creative and Innovative Engineers – Penny Jeffrey and Chien-fei Chen with Dr. Gigi Ragusa (BMES)
9:30 – 9:45	Discuss ideas from notecards (All)
9:45 – 10:10	Design strategic planning process map intended for distribution to all ERCs (All) – Dr. Dan Ding and Dr. Reid Simmons (QoLT)
10:10 – 10:15	Wrap-up – Penny Jeffrey and Chien-fei Chen

8:30am –10:15am **New Center Orientation – New-ERC Pre-college Education Program Directors** [Staff of existing ERCs are welcome to attend (optional)]

	<i>Co-moderators:</i> Lisa Grable (FREEDM), Joe Coccozza (BMES)
8:30 – 8:45	Welcoming Remarks and Quick Introductions
8:45 – 9:45	Building Vibrant Pre-College Programs: What Works and What Doesn't... Discussion and Questions from new Centers. Sharing of Precollege E&O survey results. <ul style="list-style-type: none"> • <u>Partnerships</u>: Practices that make strong partnerships with K-12 schools • <u>Teacher Recruitment</u>: To get teacher buy-in for your program. • <u>High school students</u>: To recruit students for your program. • <u>Assessment</u>: How to Make It More Effective Yet (Relatively) Painless • <u>Reporting</u>: The Must-Haves for Your Annual Report and Site Visit Presentation and much more to consider....
9:45 – 10:00	New ERCs: Reflection and planning Pre-2012 ERCs: Networking and break
10:00 – 10:15	New Centers report: What have you heard that you might use for your precollege program? What have you heard that you had not considered before?

8:30am –10:15am **New Center Orientation – New-ERC Research Thrust Leaders** [Staff of existing ERCs are welcome to attend (optional)]

	<i>Co-moderators:</i> James Smith (MIRTHE), Robert Davis (CBiRC)
8:30 – 8:40	Welcoming Remarks and Introductions – James Smith
8:40 – 9:00	Overview and Lessons Learned – Review Best Practices chapter (led by James Smith)
9:00 – 9:20	Thrust Leader's Role in Strategic Planning – Robert Davis
9:20 – 9:40	Testbeds and Systems Integration – James Smith
9:40 – 10:15	Open discussion

8:30am – 10:15am **New Center Orientation – New-ERC Students** [Students & staff of existing ERCs welcome to attend (optional)]

	<i>Co-moderators:</i> Satish Singh (RMB), Gopi Krishna Vijaya (QESST)
8:30 – 8:45	Welcoming Remarks and Introductions – Co-moderators
8:45 – 9:10	What is the role of the SLC in a successful ERC? “The few, the proud, the SLC” (Matthew Fraser, QESST) – includes 10 min Q&A
9:10 – 9:40	SLC Management 101 – SWOT Analysis, Budgets, Reports, etc. (Shivayogi Hiremath, QoLT) – includes 10 min Q&A
9:40 – 10:05	Effectively Communicating ERC Activities and Accomplishments: SLC newsletters and websites (Da-Tren Chou, RMB) – includes 10 min Q&A
10:05 – 10:15	Open discussion with presenters

10:15am – 10:45am **Break**

10:45am – 12:00pm **Plenary Session I: NSF Session**

Moderator: Lynn Preston, NSF

10:45 – 10:50	Welcome & Meeting Plan – Lynn Preston & Court Lewis
10:50 – 11:15	Welcome from the Division Director – Dr. Theresa Maldonado
11:15 – 12:00	NSF & ERC Program Update including Introduction of New Centers and Reflections on Graduating Centers – Lynn Preston

12:00pm – 1:45pm **Lunch** – Open seating

1:00pm – 1:45pm *Speaker: Dr. Tina Seelig* (Exec. Director, EPICenter) on “Innovation and Creativity”

Introduction by **Dr. Theresa Maldonado**, NSF

— Allotted time includes 10 min Q&A

1:45pm – 2:15pm **Break**

2:15pm – 3:45pm **Breakout Session I: Open Discussion Workshops on Selected Topics**

<i>Facilitators: Jack Whalen (BMES), Court Lewis (NSF)</i> <i>Topic: Sustaining an ERC after graduation</i> <i>Subtopics: 1) Timing and coordination of activities (when to start, roles in planning, etc.). 2) Reviewing programs critically to prioritize what to keep and what to drop in the transition to graduation. 3) Strategic planning to identify and commit post-graduation stakeholders (e.g. university admin, industry partners, faculty and staff, partner institutions, donors, etc.)</i>	CD/DDs, ILOs, FTLs, E&Os, DIV, SLC	No speakers <i>But: Michael Silevitch</i> (Director of the graduated Gordon-CenSSIS, Northeastern University) will phone in opening remarks <i>Main scribe: Brad Bohlmann (CCEFP)</i> <i>Additional scribes: Harvey Borovetz (RMB), Joe Montemarano (MIRTHE)</i>
<i>Facilitators: Nasser Peyghambarian (CIAN), Doug Hausner (CSOPS)</i> <i>Topic: Facilitating stronger student/industry engagement</i> <i>Subtopics: (1) Activities internal within the ERC (e.g., student profile book for industry partners, SLC lecture series; (2) ERC–IAB direct interactions (e.g., student Industry mentorship program, IAB Education Working Group); (3) External activities and</i>	ILOs, E&Os, CD/DDs, IND, SLC	No speakers <i>Main scribe: Wayne Book (CCEFP)</i> <i>Additional scribes: Greg Carman (TANMS), Da-Tren Chou (RMB)</i>

<p>interactions with the professional community and the public (e.g., student participation at ERC trade show exhibits, professional society participation and networking)</p>		
<p>Facilitators: Lisa Wissbaum (CCEFP), Richard Luthy (ReNUWIt)</p> <p><i>Topic:</i> How to improve internal center communication and data-sharing</p> <p><i>Subtopics:</i> (1) Center data collection/management options, including the "Project Center" (Dave Beck sits in); (2) Identify Center barriers to effective communications; (3) Brainstorm ERC organizational structure(s) in anticipation of sustainability; (4) Share best technologies for multi-institutional sharing (digital & communication technologies such as Google, Adobe, SharePoint, Web Conferencing, etc.)</p>	<p>ADs, CD/DDs, FTLs</p>	<p>No speakers</p> <p><i>Main scribe: Tonia McCarley (CBiRC)</i></p> <p><i>Additional scribes: Alan Kost (CIAN), Ray Hughes (CURENT), Eric Chudler (CSNE)</i></p>
<p>Facilitators: Mary Goldberg (QoLT), Carole Read (NSF)</p> <p><i>Topic:</i> The ERC Education Roadmap</p> <p><i>Subtopics:</i> by type of program: (1) RET, (2) REU, (3) Young Scholars, (4) University education. For each, (a) relate your education/outreach program to your guiding hypothesis (or if the ERC is Gen-2, how to make it integrated with the research and mission of the center); and (b) strategies to set up the program for sustainability</p>	<p>E&Os, FTLs, DIV, CD/DDs, SLC</p>	<p>No speakers</p> <p><i>Main scribe: Alyssa Burger (CCEFP)</i></p> <p><i>Additional scribes: Ken Connor (Smart Lighting), Adah Leshem (CBiRC), Mary Goldberg (QoLT)</i></p>
<p>Facilitators: Peter Keeling (CBiRC), Deborah Jackson (NSF)</p> <p><i>Topic:</i> Nurturing the Innovation Ecosystem: Commercialization Pathways</p> <p><i>Subtopics:</i> (1) Opportunity Recognition (discuss and agree on proposals to help faculty and students identify opportunities for commercialization); (2) Embracing Risk (discuss and</p>	<p>ILOs, CD/DDs, FTLs, E&Os, SLCs</p>	<p>No speakers</p> <p><i>Main scribe: Apoorva Bajaj (CASA)</i></p> <p><i>Additional scribes: Eric Knapp (CASA), Rory Cooper (QoLT)</i></p>

agree on proposals to address risk in the context of commercialization and industry members; (3) Finding Funding (discuss and agree on proposals to address early stage funding to support commercialization)		
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3:45pm – 4:15pm **Break**

4:15pm – 5:30pm **Plenary Session II: “ERCs: Maximum Impact” (#1 of 2 sessions)**
Moderator: Carole Read, NSF

4:15 – 4:50	Brief, high-impact “Who We Are and What We Do” presentations from the 10 ERCs in the Energy, Sustainability & Infrastructure and Manufacturing clusters: 1 new NERC (7 min) and 9 existing ERCs (3 min each) <i>Order: NASCENT, Smart Lighting, ReNUWIt, QESST, FREEDM, CURENT, CCEFP, CBiRC, SynBERC, CSOPS</i>
4:50 – 5:30 (into reception)	Informal networking with 10 presenting centers (“ Open House ” tables) and their posters (presented by students)

5:30pm – 7:00pm **Welcome Reception for All**

THURSDAY, November 15, 2012

Annual Meeting – Day Two
Closed Meetings and Student Retreat

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

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

8:00am – 9:30am **Plenary Session III: Improving ERC Diversity**
Moderator: Theresa Maldonado, EEC Division Director, NSF

8:00 – 8:10	Plan for the Day – Court Lewis
8:10 – 8:30	Report on an ERC Diversity Study – Theresa Maldonado & Brooke Coley (AAAS Fellow, NSF/ENG)
8:30 – 9:30	Panel: Toward Greater Diversity in ERCs <i>Panelists: Mr. Enrique Ainsworth</i> (Director, UCLA Center for Excellence for Engineering Diversity); <i>Ms. Diane Matt</i> (Exec. Director, WEPAN); <i>Dr. Amir Mirmiran</i> (Dean, College of Engineering and Computing, Florida International University) – Audience Q&A (15 minutes)

9:30am – 10:00am **Break**

10:00am – 2:00pm **Student Retreat**
Organizers: Eric Shiue and Aditya Kunjapur, SynBERC SLC (Kate Spohr, E&O Director)

10:00 – 12:00	<i>Morning Session (NSF PDs are invited to attend the entire Retreat)</i>
10:00 – 10:05	SLC Introductions and Welcome
10:05 – 10:15	Welcome & remarks by Lynn Preston , NSF ERC Program Leader
10:15 – 11:00	Continuing new-ERC SLC orientation: Panel Q&A [panel TBD]
11:00 – 11:15	Break

11:15 – 12:15	Draft revisions to Student Leadership Council Best Practices Chapter
12:15 – 1:00	Working Lunch – Designing the Student Lounge on the New ERC Association Website – Court Lewis (NSF communications consultant)
1:00 – 2:00	Innovation and Entrepreneurship – Albert Mach , PhD, Biomedical Engineering, UCLA, winner of the 2011 Collegiate Inventors Competition; and Marco Rubin (Managing Partner, Exoventure, Inc.)

10:00am – 2:00pm **Center Directors' & Deputy Directors' Closed Meeting**

	<i>Co-moderators:</i> Fernando Muzzio (CSOPS), Jim Osborn (QoLT)
10:00 – 10:15	Welcoming remarks and introductions, agenda overview
10:15 – 10:45	Discussion of topics to be addressed with NSF
10:45 – 11:15	Plan to Update the ERC Leadership Best Practices chapter — Mr. Jim Williams (Consultant, SciTech Communications)
11:15 – 12:00	Time with Lynn Preston and Theresa Maldonado
12:00 – 1:00	Working lunch – A method for carrying out systems integration in an ERC – Alex Huang (Director, FREEDM Systems Center) & Mr. Steve Pullins (CEO, Horizon Energy)
1:00 – 1:20	Break
1:20 – 1:40	Discussion: avoiding burnout of leadership, faculty, students, staff – Fernando Muzzio
1:40 – 2:00	Discussion: strategies and planning for self-sufficiency – Jim Osborn

10:00am – 2:00pm **Administrative Directors' Closed Meeting**

	<i>Co-moderators:</i> Tonia McCarley (CBiRC), Diane Veros (Smart Lighting)
10:00 – 10:15	Welcoming remarks and introductions, agenda overview
10:15-11:15	<i>Possible topics:</i> REU program administration; ERC data template; residuals and reporting
11:15-12:00	<i>Tentative:</i> Continue organizing Best Practices Ch. 6 revision via Wiki
12:00 – 1:15	Working lunch: The ERC Project Center: A new approach to ERC data collection and management – Dave Beck , Beck Creative
1:15-2:00	Time with Lynn Preston, Theresa Maldonado, Shalika Walton, Marshall Horner, Gwen Hardenbergh, and Kim Bub & Maria Valerio (DGA)

10:00am – 2:00pm **Industrial Liaison Officers' Closed Meeting**

	<i>Co-moderators:</i> John Mitchell (QESST), Robert Bower (EUV), Brad Bohlmann (CCEFP)
10:00 – 10:15	Self-introductions, agenda overview
10:15 – 10:30	Quick review of questions for NSF and preparation for visit
10:30 – 11:10	Time with Lynn Preston, Theresa Maldonado, and Deborah Jackson
11:10 – 11:45	Open discussion
11:45 – 12:00	Break
12:00 – 1:00	Working lunch – <i>Speaker:</i> Speaker and Presentation on Leveraging External Funding (Susan Ward , President of ITECS Innovative Consulting)
1:00 – 2:00	<i>Speaker:</i> Utilizing the SBIR/STTR program to recruit small businesses into ERCs (Sharon Ballard , President/CEO, EnableVentures, Inc.)

10:00am – 2:00pm **Diversity and Education/Outreach Program Directors' Closed Meeting**

	<i>Co-moderators:</i> Delia Saenz (QESST), Brooke Coley (AAAS Fellow)
10:00 – 10:10	Welcoming remarks and introductions, agenda overview
10:10-11:45	ERC Diversity Panel – Frances Williams (CIAN), Devdas Pai (RMB) & Paula Sturdevant-Rees (CASA)
11:45 – 1:00	Working lunch – Results of diversity SWOT survey and overall analysis (Brooke Coley)
12:15 – 1:00	Time with Theresa Maldonado , Lynn Preston , Deborah Jackson , Carole Read , Mary Poats , Esther Bolding & Bruce Kramer , and Keith Roper , NSF
1:00 – 2:00	Work on Diversity Best Practices chapter – led by Brooke Coley

10:00am – 2:00pm **Research Thrust Leaders' Closed Meeting**

	<i>Co-moderators:</i> Thomas Little (Smart Lighting), Maria Tamargo (MIRTHE)
10:00 – 10:15	Welcoming remarks and introductions, agenda overview
10:15 – 10:45	Brainstorming/prioritization/SWOT or equivalent
10:45 – 12:00	Breakouts on identified challenges
12:00 – 1:00	Working lunch – reporting on breakouts
1:00 – 2:00	Time with Dominique Dagenais , Keith Roper , Leon Esterowitz & Carole Read (NSF PDs)

2:00pm – 2:30pm **Break**

2:30pm – 4:00pm **Breakout Session II: Cross-function Discussion Sections**

<i>Co-moderators:</i> Claire Gmachl (MIRTHE), Kaarin Goncz (EUV) <i>Topic:</i> Sustaining education (especially precollege) programs after graduation	CD/DDs, E&Os, DPDs, FTLs, SLCs, NSF PD (DPD=Diversity Program Director)	<i>Speakers:</i> Claire Duggan (K-12 Outreach Director, Gordon-CenSSIS ERC), Claire Gmachl , Kaarin Goncz <i>Scribe:</i> Kate Spohr (SynBERC)
<i>Co-moderators:</i> Kevin Tomsovic (CURENT), Tom Daniel (CSNE) <i>Topic:</i> Fostering Social Acceptance of Technology	CD/DDs, FTLs, NSF PD	<i>Introductory remarks:</i> Dr. Sara Goering (Medical Ethics and Philosophy, U. Washington), Kevin Tomsovic and Tom Daniel <i>Panel:</i> Richard Luthy (ReNUWit), Rich Schulz (QoLT), Brenda Philips (CASA), Jay Keasling (SynBERC-MIT) <i>Scribe:</i> Kevin Costa (SynBERC)
<i>Co-moderators:</i> Peter Seoane (RMB), Tim Day (Daylight Solutions–MIRTHE) <i>Topic:</i> IAB Involvement in ERCs: Assessing and Strengthening the Role (is the role of the IAB still effective? is the SWOT still	ILOs, IND, CD/DDs, FTLs, NSF PD	<i>Speakers:</i> [IAB chairs from 13 ERCs will be in attendance] Overview of strengths and successes in IAB collaboration identified by ERCs in survey

effective? industry's role in education for innovation; metrics for their involvement; improving communication with industrial partners to facilitate collaboration)		<i>Scribes:</i> Sylvia Mioc (Smart Lighting) and Jorge Rocca (EUV)
<i>Co-moderators:</i> Rogelio Sullivan (FREEDM), Delia Saenz (QESST) <i>Topic:</i> Barriers to improving diversity at ERCs and ways to overcome them; raising the visibility of this issue in the ERC	DPDs, CD/DDs, E&Os, ADs, FTLs, SLCs, NSF PD	<i>Speakers:</i> Brooke Coley (NSF) – Impacts of NSF's Graduate Research Diversity Supplements; Tracey E. Ray, PhD (Executive Director of STEM Advancement, North Carolina State University); Daphne Rainey-Wittich, PhD (Executive Director of STEM Advancement, North Carolina A&T); Anthony Johnson, PhD (Director, Center for Advanced Photonics, Univ. of Maryland-Baltimore County) <i>Scribe:</i> Roxanne Zellin (MIRTHE)

4:00pm – 4:15pm **Break**

4:15pm – 5:30pm **Plenary Session IV: “ERCs: Maximum Impact” (#2 of 2 sessions)**
Moderator: **Deborah Jackson, NSF**

4:15 – 4:50	Brief, high-impact “Who We Are and What We Do” presentations from the 10 ERCs in the Bioengineering & Health Care and Micro/Optoelectronics clusters: 2 new NERCs (7 min each) and 8 existing ERCs (3 min each) <i>Order:</i> ASSIST, QoLT, CSNE, RMB, BMES, TANMS, CIAN, EUV, MIRTHE, CASA
4:50 – 5:30	Informal networking with 10 presenting centers (“ Open House ” tables) and their posters (presented by students)

Dinner on your own

FRIDAY, November 16, 2012

Annual Meeting – Day Three

THEME:

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

8:00am – 9:30am **Breakout Session III: [organized by tech cluster]**

<p><i>Co-moderators:</i> Christiana Honsberg (QESST) & Lynn Preston (NSF) <i>Topics:</i> critical issues in testbed management: - Leveraging the testbeds as a interface with industry - Funding structure for testbeds - Promoting safety in the testbeds - Integration of technical staff supporting testbeds into Center community and university personnel structure - How does the applied research demonstration of a testbed fit into student education and degree programs?</p>	<p>Energy, Sustainability & Infrastructure (all staff of 5 centers: FREEDM, Smart Lighting, QESST, CURENT, ReNUWIt)</p>	<p><i>Speakers:</i> Each ERC presents testbed quad chart <i>Scribe:</i> Mariesa Crow (FREEDM)</p>
<p><i>Co-moderators:</i> Brent Shanks (CBiRC) & Carole Read (NSF) <i>Topic:</i> Center’s role in the manufacturing value chain, esp. vis-a-vis member firms</p>	<p>Manufacturing (all staff of 5 centers: CCEFP, SynBERC, CSOPS, CBiRC, NASCENT)</p>	<p><i>Speaker:</i> Brent Shanks (CBiRC example) <i>Scribe:</i> Raj Dave (CSOPS)</p>
<p><i>Co-moderators:</i> Jag Sankar (RMB) & Keith Roper (NSF) <i>Topic:</i> Connecting with the wider world in a bigger way (media, education, the community, etc.); International collaboration; FDA standards-setting; biomedical data privacy issues</p>	<p>Biotechnology and Health Care cluster (all staff of 5 centers: QoLT, RMB, BMES, CSNE, ASSIST)</p>	<p><i>Speakers:</i> Keith Roper (intro); Kristen Sabol (QoLT’s successful media strategy); Jag Sankar (overview of ERC-RMB’s international research and education partnerships); CSNE (security of confidential bioinformation) <i>Scribe:</i> William Wagner (RMB)</p>
<p><i>Co-moderators:</i> David McLaughlin (CASA) & Deborah Jackson (NSF) <i>Topic:</i> Integrating more fully with industrial partners to advance commercialization</p>	<p>Microelectronics, Sensing, and Information Technology (all staff of 5 centers: CIAN, EUV, CASA, MIRTHE, TANMS)</p>	<p><i>Speakers:</i> David McLaughlin (CASA-DFW collaboration); Claire Gmachl (MIRTHE/Daylight Systems Collaboration); Lloyd LaCombe (CIAN-Gigoptix Collaboration); Henry Kapteyn (EUV-KMLabs Collaboration) <i>Scribe:</i> Carmen Menoni (EUV)</p>

9:30am – 10:00am **Break**

10:00am –12:15pm **Plenary Session V: Spotlight on Students**

Moderator: Carole Read, NSF

10:00 – 10:20	ERC Students: The Heart of a Center – Lynn Preston
10:20 – 10:40	Student Retreat Reporting-out – Eric Shiue , SynBERC SLC
10:40– 11:00	Student System-level Testbed #1 – Light and health circadian rhythm testbed at the Smart Lighting ERC (Jiaxiang Zhang , Ph.D. student, Rensselaer Polytechnic Institute)
11:00 – 11:20	Student System-level Testbed #2 – Off-the-grid radar student-run CASA testbed (Jorge Trabal , PhD candidate, U. Mass-Amherst and Jose Ortiz , M.S. student, UPRM)
11:20 – 11:40	Student System-level Testbed #3 – Biodegradability testbed for revolutionizing metallic biomaterials at the RMB ERC (Leon White , Ph.D. Student, NCAT) and Hector Carmona (REU, Cal State-LA)
11:40 – 11:50	Farewell Remarks – Dr. Tom Peterson , ENG AD, NSF
11:50 – 12:10	“Perfect Pitch” prize winner presentation & awards announced by Tom Peterson
12:10 – 12:15	Perfect Pitch 1 st prize winner presents his/her Pitch
12:15 – 12:30	Photo opportunity for winners

12:15pm **Lunch** (self-serve box lunch, available “to go”)

12:30pm – 1:00pm **Plenary Session VI: Wrap-up**

12:30 – 1:00	Meeting Feedback & Action Items – Lynn Preston and Court Lewis
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1:00pm **Adjourn**