Collaborative Research: Using the DISCCRS* Model to Prepare a New Generation of Interdisciplinary, International, Inclusive Researchers

* DISsertations Initiative for the Advancement of Climate Change ReSearch

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2019 American Meteorological Society Annual Meeting
28th Symposium on Education 7.2 Wed. Jan 9 10:30
Phoenix, AZ

Focus
• Climate Change & Impacts
• Recent Ph.D. graduates
• Interdisciplinary, collaborative Research
  Select for diversity (discipline, techniques, ethnicity, institution, international, System Science....)
• Interest in Academic Research Careers

Mechanisms
• 8 Week-long Symposia 2003-2015
• Web-based resources http://disccrs.org
• Weekly electronic newsletter

2002 – 2016

National Science Foundation
National Aeronautics & Space Administration

Co-sponsoring Professional Societies
Announce symposium to members through publications, e-mail and meeting flyers

AAG Association of American Geographers; AERE Association of Environmental and Resource Economics; AGU American Geophysical Union; AMS American Meteorological Society; ASLO American Society of Limnology and Oceanography; ESA Ecological Society of America; ESS-ISA Environmental Studies Section of the International Studies Association; STEP/APS Science, Technology & Environmental Politics (STEP) section, American Political Science Association; TOS The Oceanography Society; and USSEE U.S. Society for Ecological Economics

DISCCRS

Research & “Soft” Skills
• Physical, Biological, Social Scientists interested in crossing the natural-social-science divide
• Communication
• Interpersonal and team skills
DISCCRS Website
http://disccrs.org

**Program description**
- Program description
- Application materials
- Climate change links
- Career-development resources
- Newsletter Archives

**DISCCRS Registration Form**
- Name
- Contact Info
- PhD Dissertation Citation & Abstract
- Key Words
- Primary & Secondary areas of Expertise
- Job Sector, Institution, Position
- Demographic Information

**Public, Fully Searchable Ph.D. Dissertation Registry**
- Any Ph.D. grad can register
- ~ 2,000 registered since 2002
- ~ 50% registered dissertations earned outside U.S.
- > 50 countries represented

**DISCCRS Weekly E-Newsletter**
- Newspaper Articles
- Forum
- Professional resources
- Job postings
- Funding opportunities

Provides time-sensitive information, new opportunities & resources

> 1,000 Subscribers
**15 Years of Tracking & Assessment DISCCRS Symposia**

- Formative and Summative
- Surveys 1 – 14 years post symposia
- Periodic address update requests
- Long-term engagement with alums

**25 years** total for **19 Week-long Symposia**
- 8 DISCCRS Climate
- 8 DIALOG  Limnology & Oceanography
- 1 DIACES  Land-Water Interface
- 2 NGPR  Polar

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**DATABASE**

**Filemaker Pro**
- 19 Symposia 1993 – 2015
- ~ 800 Symposium Alumni

8 DISCCRS
8 DIALOG Limnology and Oceanography
1 DIACES Land-Water Interface
2 NGPR Polar
Five most highly rated Symp. Components

4.6 Informal Networking with participants (3.9 - 5.0)
4.6 Mentor Interactions (4.4 - 4.6)
4.4 Team Training (4.0 - 4.8)
4.4 Communication Training (3.9 - 4.8)
3.9 Interactions with Agency representatives, Proposal Development (3.5-4.7)

54% respondents reported that they have maintained professional connections with at least two (54%), or in some cases >5 (21%), scholars post symposium.
43% reported ongoing or completed research projects, coauthored papers, abstracts, and proposals, co-organized conferences and special sessions, and cross-recruitment of graduate students and postdocs with other DISCCRS scholars.

PLANS for Future: Expand Focus

- Earth System, Resilience, Sustainability (rather than strict focus on climate change)
- Interactions and Action across Sectors (academic, govt, non-profit, policy rather than academic only)
- Undergraduate, Graduate, Post-Ph.D. (interdisciplinary research and skills training should begin early!)
- Agents for change (research should be more closely tied to local/regional/national/global action)

References re. DISCCRS


Despite the focus on academic career interest, many past participants have gone on to work in non-academic sectors, particularly government, with a large proportion in NOAA. Even more could be identified through a call for early career researchers interested in careers beyond academia.

Despite the focus on academic careers, many DISCCRS alumni have gone on to work in other sectors, particularly government.

NOAA is a significant employer for researchers interested in Earth System Science; a program such as DISCCRS to support networking and training for early career researchers in this area would support its mission.

Earth System Science

- Climate Adaptation and Mitigation
- Weather-Ready Nation
- Healthy Oceans
- Resilient Coastal Communities and Economies

The breadth of NOAA’s mission and its linkages across the natural and social sciences fit well with training efforts targeting system science and sustainability.
NOAA Next Generation Strategic Plan

NOAA Mission: Science, Service, and Stewardship
"Human health, prosperity, and well-being depend upon the health & resilience of coupled natural and social ecosystems"

Vision of the Future: Resilient Ecosystems, Communities, and Economies

Social Science Goals:
1. Define and measure NOAA impact on Society;
2. Use NOAA's products and services strengthen Societal Decision-Making;
3. Institutionalize Social Science to Further Mission

NOAA offices already facilitate local, regional and national activities with diverse partners

NOAA Cooperative Science Centers

The Center for Earth System Sciences and Remote Sensing Technologies (NOAA-CREST) has expressed interest in pursuing related activities.

Contact Dr. Shakila Merchant, Assistant Director NOAA/CREST Center: smerchant@ccny.cuny.edu for details.

NOAA Cooperative Science Centers provide a mechanism to develop training programs such as DISCCRS

Center for Coastal and Marine Ecosystems (CCME)
Florida A&M University
- Baltimore-Cookman U
- Cal State U Monterey Bay
- Jackson State U
- Texas A&M U-Corpus Christi
- U Texas at Rio Grande Valley

NOAA Center for Atmospheric Science and Meteorology (NCAS-M)
Howard University
- Fort Valley State U
- Jackson State U
- Pennsylvania State U
- San Diego State U
- San Jose State U
- U Albany – State U of New York
- Tuskegee U
- U Maryland – Baltimore County
- U Maryland – College Park
- Universidad Metropolitana
- U Puerto Rico – Mayaguez
- U Texas – El Paso

Center for Earth System Sciences and Remote Sensing Technologies (NOAA-CREST)
City College of the City U of New York
- Hampton University
- University of Maryland, Baltimore County
- University of Puerto Rico, Mayaguez
- San Diego State University
- University of Texas, El Paso

NOAA Living Marine Resources Cooperative Science Center (LMRSC)
U Maryland, Eastern Shore
- Delaware State U
- Hampton U
- Oregon State U
- Savannah State U
- U Maryland Center for Environmental Science
- Institute of Marine and Environmental Technology
- Miami Rosenstiel School of Marine and Atmospheric Sciences