DISCCRS II Symposium Mentors

On the following 4 pages, DISCCRS Program Assistant Jennifer Miles has put together background information on each of the four DIALOG II Symposium Mentors. These pages include a short bio, thoughts on interdisciplinarity, and advice to those embarking on interdisciplinary careers. Each has also recommended two papers and these will be included in the Program book you will receive on site. Due to copyright issues we were not able post them on line.

L-R: Ed Miles, Jorge Sarmiento, Lisa Dilling and Leigh Raymond

Everyone who is at the DISCCRS symposium is there in both a participant and mentor capacity. This is a wonderful opportunity to get feedback from your peers (the 36 of you), your near-peers (Lisa Dilling and Leigh Raymond) and successfully established professionals with many years of experience with climate-change issues and professional development in an interdisciplinary context. Ed Miles and Jorge Sarmiento have been specifically invited to serve as mentors in the wealth-of-experience category, but several others will be around as well and can mentor on issues related to their professional experiences (Pam Matson and others associated with the Yaqui Valley Project, Ron Mitchell, Sue Weiler, Chris Olex, Ashley Simons….)

In addition to their role as DISCCRS II Mentors, Jorge Sarmiento and Ed Miles have been asked to provide overviews on the history/status/future of climate change and impacts from a natural-science (Sarmiento) and social-science (Miles) perspective. Lisa Dilling and Leigh Raymond were selected to provide perspectives on professional development as a sort of “view from the trenches.” In addition to their “formal” presentations, all four will be around most of the week to participate in panel and small-group discussions on science, society, and professional development, and to interact with you one-on-one and in small groups.

Please see the following 4 pages for more about Ed, Jorge, Lisa and Leigh
Edward L. Miles
Mentor

http://www.sma.washington.edu/faculty/e_miles.html
http://www.cses.washington.edu/
http://www.cses.washington.edu/cig/

University of Washington
• Bloedel Professor of Marine Studies and Public Affairs, School of Marine Affairs
• Joint appointment with the Evans School of Public Affairs
• Adjunct Professor of Fisheries
• Senior Fellow in the Joint Institute for the Study of Atmosphere and Oceans (JISAO)
• Co-Director of the Center for Science in the Earth System (CSES), JISAO.

Ed specializes in international law and organization; science, technology, and international relations; marine policy and ocean management; and the impacts of climate variability and climate change. He has been a leader on scientific and policy issues relating to the Earth’s Oceans for over three decades, serving in roles ranging from Chairman of the Ocean Policy Committee at the National Academy of Sciences/National Research Council (1974-79) and President of the Law of the Sea Institute at the University of Hawaii (1972-81 and 1985-93). He became a leader on climate change science and policy during the 1990s, and was Lead Author for Marine Policy in WG II-B (Oceans and Large Lakes) of the Intergovernmental Panel on Climate Change's 1995 Second Assessment Report. Currently, in addition to his faculty positions at the University of Washington, Ed serves as Co-Director of the Center for Science in the Earth System (CSES), and head of the Climate Impacts Group (CIG), an interdisciplinary research group studying the impacts of natural climate variability and global climate change on the Pacific Northwest.

One paper by Miles:

One "must read" paper on climate change:

Advice to those wishing to pursue an interdisciplinary career:
It is necessary to be deeply grounded in two and preferably three fields in which at least one is a social science and one is a physical or biological science. This kind of learning is a life's work.

On Interdisciplinarity:
After completing his doctoral studies at the Lamont-Doherty Geological Observatory of Columbia University in 1978, Jorge went to the Geophysical Fluid Dynamics Laboratory of the National Oceanic and Atmospheric Administration on the Princeton University campus. He joined the Princeton University faculty in 1980, and was appointed Director of its Atmospheric and Oceanic Sciences Program, continuing in that position until 1990. Jorge's primary research interests are in the oceanic cycles of climatically important chemicals such as carbon dioxide, and in the use of chemical tracers to study ocean circulation. He has published widely on ocean tracers and the ocean carbon cycle, its history, its ongoing and potential future perturbations by mankind, and its relationship to climate change. Ongoing research includes the use of ocean general circulation models to estimate uptake of anthropogenic CO₂, and the use of atmospheric general circulation models constrained with atmospheric CO₂ observations to estimate transport of CO₂ in the atmosphere. He is working in conjunction with ocean biologists to develop ecosystem models for predicting photosynthetic uptake of carbon in the surface ocean, as well as remineralization of organic matter in the deep ocean.

One paper by Jorge:


Advice to those wishing to pursue an interdisciplinary career:
Things that worked for me: develop collaborations with colleagues, students and postdocs; broaden your perspective by teaching and reading the literature; get away from your daily obligations, your e-mail, and your phone on a regular basis to write a paper or teach yourself about a new field; and always be aware of how your research fits into the big picture.

On Interdisciplinarity:
As a scientist working on inderdisciplinary problems, it is critical to have some field in which you are a recognized expert such as a measurement technique, a long term monitoring program, a natural system that you are dedicated to understanding, or a modeling capability.
Lisa graduated from the University of California at Santa Barbara with a Ph.D. in Biology, after which she joined the National Oceanic and Atmospheric Administration (NOAA). At NOAA, Lisa developed a program in integrated carbon cycle research for the Climate and Global Change Program, and also helped to develop a national interagency program to study the integrated carbon cycle that links together relevant research in 6 Federal agencies for the U.S. Global Change Research Program (now the U.S. Climate Change Science Program). She then spent two years as a scientist with the Environmental and Societal Impacts group of the National Center for Atmospheric Research. Her current research at CIRES focuses on the use of climate information (particularly the carbon cycle) in decision making.

One paper by Lisa:

One “must read” paper on climate change: I’m going to reinterpret this question slightly and suggest one “must read” paper on creating “usable” climate information: Lemos, M. C., and B. J. Morehouse. 2005. The co-production of science and policy in integrated climate assessments. Global Environmental Change 15:57-68

Advice to those wishing to pursue an interdisciplinary career:
Even though you are interested in broad problems, maintain depth of knowledge in one or two areas so that you have a base from which to contribute expertise. On the other hand, don’t be afraid to go for problem areas you are unfamiliar with. Don’t try to become expert in every field that you need for interdisciplinary work—obtain the necessary expertise through collaborations.

On Interdisciplinarity:
The emphasis on being “interdisciplinary” is growing although institutions still need to catch up—there are “growing pains”. Beyond even interdisciplinary science, it is important to consider also the application of knowledge to improve societal outcomes—how can we improve the conduct of science so that it is more usable, and more relevant to societal needs?
Leigh Raymond
Mid-Career Mentor

Purdue University
• Assistant Professor, Department of Political Science
• Associate Director of the Purdue Climate Change Research Center

Leigh received his Ph.D. in Environmental Science, Policy, & Management, from the University of California at Berkeley, and after completing his doctoral studies became a Lecturer and Associate Chair of the Environmental Studies Program at the University of Chicago. In 2002, he joined the Purdue University faculty and in addition, he has recently become Associate Director of the Purdue Climate Change Research Center. His research and teaching focuses on environmental policy and property rights. More generally, he is interested in the influence of normative values and beliefs on political behavior. His climate-related research focuses primarily on the creation and implementation of market-based policies to reduce climate change, including work on the AGBM process leading up to the Kyoto Protocol, as well as a new project studying the allocation of emissions allowances within the EU Emissions Trading System. He also works on issues of land acquisition for conservation and endangered species protection on private lands. Along with climate modeler and EAS Prof. Matt Huber, Dr. Raymond is creating a new, interdisciplinary class on “Models in Climate Change Science and Policy” to be offered for the first time in spring 2006.

Single paper authored Leigh:

One "must read" paper on climate change:

Advice to those wishing to pursue an interdisciplinary career:
Being interdisciplinary brings important professional rewards and costs. It requires a combination of academic knowledge beyond one's field, combined (more importantly, perhaps) with an ability to communicate effectively with experts in other disciplines having radically different norms, cultures, and epistemologies. Those who can do these things well, however, seem to me to be in growing demand, even within the quasi-medieval world of academic disciplines.