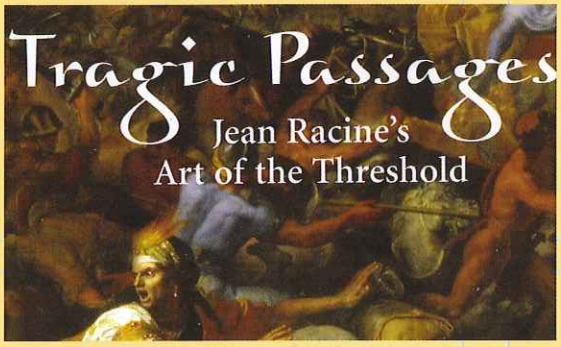
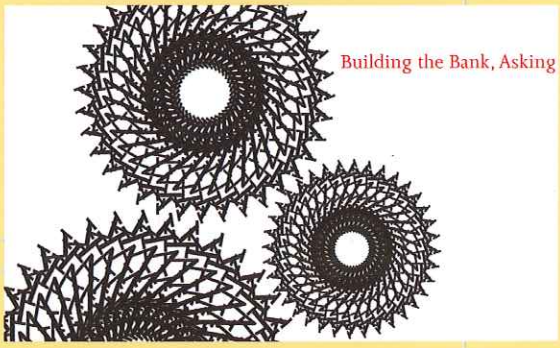
2007-2008
Annual Report

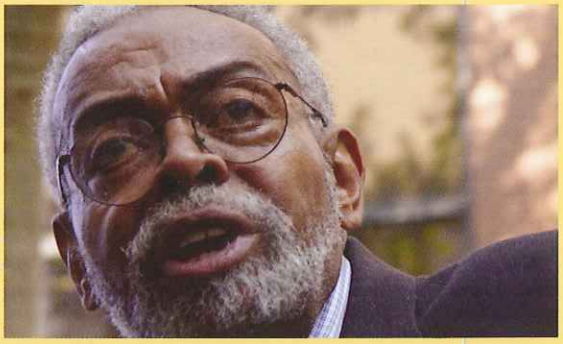
Obermann

Celebrating 30 Years





"I appreciated the top quality of the seminar and the warm atmosphere of these days in Iowa City. It has been, for me, a real source for deep scientific thinking."

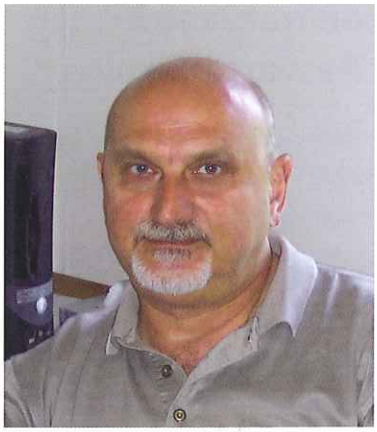


The University of Iowa Obermann Center for Advanced Studies

The University of Iowa

Interdisciplinary Research Grants

These grants support small collaborative teams working for a month during the summer at the Obermann Center. This summer's grants were funded by the Office of the Vice President for Research, the Graduate College and the C. Esco and Avalon L. Obermann Fund. With their distinctive emphasis on collaborative work, the Interdisciplinary Research Grants were the first of their kind in the nation.



Top to bottom: Marian Muste (IIHR-Hydroscience and Engineering); Ioana Popescu (Hydroinformatics & Knowledge Management Department, UNESCO-IHE Institute for Water Education, Delft, the Netherlands); Caspar Hewett (Institute for Research on Environment and Sustainability, Newcastle University, UK)

The Upper Mississippi River Basin: Toward the Next Generation of Environmental Observatories

Harnessing the vast amount of knowledge relative to water availability, quality and ecosystems sustainability in the Upper Mississippi River Basin (UMRB) was the focus of an interdisciplinary research project led by Marian Muste. "The river basin is at a critical juncture with increasing amounts of chemicals flowing downstream and oxygen depletion in the Gulf of Mexico. The protection of people and the environment require new methods of data collecting and specialized analytical tools," said Muste.

The collaborators conducted several watershed studies designed to assist in long range decision-making. The team evaluated the research problems and discussed the societal issues related to water availability, quality, security, integrity of the aquatic ecosystem, and the socio-economics of watersheds. A white paper was produced by the team, "Water Sciences for Engineering and Management of a River Basin." They organized a two-day international planning and design workshop involving more than forty faculty and researchers from six Midwestern universities along with federal and state agency representatives who manage the UMRB. They submitted "Instigating the UMRBO Process" for publication to the *Proceedings of Institution of Civil Engineers Water Management*. Lastly, they drafted a proposal "Designing and Optimizing Digital Observatories through International Cyber Infrastructure," for submission to the National Science Foundation.

Digital observatories enable improved understanding of the complex human-water dynamics through trans-boundary collaborative research, education and knowledge transfer.

"Broader impacts of this work will continue for many years as it will provide a novel prototype infrastructure," said Muste. He noted that international collaboration and innovative methodologies have strong appeal to a newer generation of students and professionals.