

<p><b><u>CO-HEMIS:</u></b></p> <p>November 13-15, 1991 Mayagüez, Puerto Rico</p>	<p>Update...August 8, 1991.</p> <p>Vol. 1, No. 1</p>
<p>Sponsors: National Science Foundation &amp; University of Puerto Rico</p>	
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This newsletter includes up-to-date information on the latest developments related to the forthcoming Hemispherical Cooperation Conference on Engineering and Applied Science Research (Co-Hemis).

The latest version of the schedule is enclosed. We have reduced the number of working days to three, each day followed by socialization activities. The only activity scheduled for Saturday November 16th is a relaxing day of boating with the option of going to a beach. Our next newsletter will deal with details on reservations and airline scheduling. Remember that Co-Hemis will send pre-paid airline tickets to the person selected by the respective national research agencies for the trip from each capital city to Mayagüez and will cover hotel and meals for the duration of the conference.

### **Warm welcome to the possibility of a Hemispherical Center**

The initiative of creating a center which would facilitate joint efforts directed towards research and technological education from a location in bilingual, bicultural Puerto Rico has met with positive responses throughout. Undoubtedly, the present situation favors activities dealing with international cooperation in scientific and technical matters. On the other hand, the pervasive feeling for the role of technology in development and competitiveness with respect to other regions in the globe has pushed technological advances and divulgation to a degree which trascends into the field of financial institutions. (See *El BID*, April, 1991, pp.4-7.)

We expect that the appropriateness of the timing produces the support and participation needed for this idea to go beyond our original expectations for the benefit of all peoples in the hemisphere.

## **Scope of the term "applied sciences"**

The term "applied sciences" has been narrowed down within the context of the conference and the future center. The Hemispherical Cooperation Conference on Engineering and Applied Science Research will cover fields related to research and education in engineering and in those branches of science which converge with some field of engineering.

## **Participation in Co-Hemis has been broadened**

In addition to those persons selected by the national research institutions (NSF counterparts) of the participating countries, we will be expecting delegates and speakers from regional development banks and from organizations which sponsor joint research programs. We look forward to the presence, among others, of the Interamerican Development Bank (IDB), the World Bank, the Division of Scientific and Technological Affairs of the Organization of American States (OAS), Office of Scientific Affairs of the United Nations. The following research agencies are also expected to participate: National Institute for the Standardization of Technology (NIST), Environmental Protection Agency (EPA), U.S. Geological Service (USGS), National Oceanographic and Atmospheric Administration (NOAA) and National Science Foundation (NSF) from the United States, and Canada's National Science and Engineering Research Council (NSERC).

## **Countries expected**

We expect the presence of the following countries, most of which have confirmed and named their delegates: Argentina, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Ecuador, Guatemala, Honduras, Jamaica, Mexico, Paraguay, Peru, Dominican Republic, Trinidad-Tobago, United States, Uruguay and Venezuela.

## **Workshop on existing programs by sponsors of joint research**

The research organizations named above will constitute a panel and make a series of presentations followed by a question and answer period as part of the conference workshops. The topics to be covered in the presentations will be the following:

- priorities and levels of funding which the organization assigns to different joint research projects within the hemisphere.
- the requisites and limitations which apply and how to start a project at present within its programs.

- examples of on-going programs and projects.
- benefits derived by persons who obtain grants for joint research as well as their countries and institutions.
- benefits derived by the granting organization and its country from joint research as well as their countries and institutions.
- the contributions which the organization could make to the center and the benefits which it could derive from it.
- regional education and research needs which would benefit most from hemispherical cooperation.

### **Additional designated participants would be exempt from paying the registration fee**

Those one or two additional persons designated by the respective national research agencies, other than the one-per-country to be sponsored by Co-Hemis, will not be required to pay registration. The fee will be required only for those persons whom we sponsor and to observers; it will amount to \$100 and \$70 respectively. Payment shall be made to *Co-Hemis*, and it can be either mailed in or made upon registration on November 13th.

### **New deadline for papers and resumés**

The participant's resumés and the papers to be presented by the different countries which were requested in the official invitations to the national research agencies should be received in Mayagüez before September 1st.

### **Presentations**

Each delegate will have 15 minutes for presenting the key points in his paper in the initial plenary meetings. After the last presentation in a session of two to six speakers, there will follow a short question and answer period addressed to all the session's speakers.

After discussing the ideas and alternative plans in separate workshops, each covering specific topics related to the future center, the participants will meet in a final plenary session for considering the recommendations made by each workshop. Out of this session will come a blueprint for the future center.

All plenary sessions will have simultaneous translation.

## Guests:

The following persons will address plenary sessions:

Vitelmo Bertero: world-known Latin American from the field of seismic engineering and Director of the University of California at Berkeley's Earthquake Engineering Research Institute (EERI).

Rafael Brás: Puerto Rican engineering educator, presently Director of MIT's Parsons Laboratory (related to global change); a former faculty member of our School of Engineering and with great experience in international technological cooperation.

Alberto Pignotti: world-known Argentinean physicist dedicated to applied science research; he has participated in joint projects sponsored by the *National Science Foundation*.

Rafael Lorán: computer expert from the University of Puerto Rico's President's Office, presently participating in an OAS project for establishing a hemispherical computer network.

We have invited officials who are interested in the objectives of the Conference and who may be able to contribute to the funding of the future center in order for them to hear first-hand testimony on the needs and benefits involved and the impact which an effective center would have on the development and economy of our hemisphere. Among these are: Congressmen sponsoring a bill seeking to promote technological cooperation in the hemisphere, José Serrano, the Puerto Rican-born U.S. Representative from the Bronx, Jaime Fuster, Puerto Rico's Resident Commissioner in Congress, and John Bowen, from the US State Department. We are also expecting executive officials from the government of Puerto Rico and our university's central administration. These persons would be with us on the opening day of Co-Hemis.

## Hotel Alternative

The Campus Hotel, which will be available free of charge for participants, is a clean, adequate facility. Its fans will provide sufficient evening comfort *in lieu* of air conditioning, but there are no private bathrooms.

Those participants who prefer to pay their own expenses at the Mayagüez Hilton may do so. The opening day activities will take place at the hotel's facilities and we will provide transportation in subsequent days. We will help with reservations if we are notified before November 1st.

Conference attendees will be awarded a special price of US\$98 plus 9% tax per night for single occupancy.

### **Request for information and publications**

We hereby ask agencies and organizations related to research and education which receive this newsletter to mail us information on their respective activities, especially those on an international level. Eventually we expect to publish a bulletin which will keep our hemisphere's technological community abreast of international and joint projects and programs.

## **SUMMARY**

The CoHemis Center completed two years of existence with partial NSF sponsorship. This support, heavily complemented with funds, personnel, and facilities provided by the University of Puerto Rico (UPR), enabled a newborn Center to carry on significant activities, submit proposals for future initiatives, network with US and Latin American universities and research centers that actively pursue hemispheric cooperation, expand its agenda for improving its service to the hemisphere, and become the *de facto* arm of the University for implementing North-South links and activities related with technology. Continued UPR funding, together with the collaboration of cooperating institutions and NSF sponsorship of specific activities, have permitted the CoHemis Center to carry on and increase its level of service beyond NSF institutional funding. The government of Puerto Rico has been backing the Center's activities since its creation through two different administrations.

CoHemis was founded in November, 1991 at the UPR Mayaguez Campus (UPRM) by delegates from thirteen countries of the Americas under the sponsorship of the National Science Foundation and with the participation of representatives from the US State Department and the Organization of American States. Its mission is to facilitate, support, and conduct collaborative applied research, technology assessment, and human resources development programs to serve the needs of the Americas with the participation of engineers and scientists from the different countries of the hemisphere.

In 1992 CoHemis began to form a consortium of institutions to make the Center more effective and attractive. The CoHemis Consortium is a set of bilateral agreements of each member with UPRM for implementing the above mission. Sandia and Los Alamos National Laboratories, Universidad Simon Bolivar (Venezuela), Colorado State University, Georgia Tech, and the University of Florida (Gainesville) have joined this Consortium. The Universidad de Chile and Universidad Nacional Autonoma de Mexico, as well as Oak Ridge National Laboratories, are about to join. Five other Latin American institutions have been invited. This network, with its hub in Puerto Rico, constitutes a unique pool of resources actively pursuing North-South collaboration in technology.

The externally-sponsored research and assessment activity, continued education programs, and international workshops and conferences produced by the CoHemis Center and its Consortium result in many forms of benefits for the Americas. The subjects treated, such as energy, environment, science and technology policy, and Technology Assessment, are vital for all countries in the Americas. The Center has been successfully leveraging its resources in several ways: through the Consortium; by collaborating with other UPR research centers and programs; and by resorting to agencies in PR, US, and international sources, such as INDUNIV, USAID, OAS, and PNUMA. Aware that Technology Assessment, Monitoring, and Forecasting (TA) is an indispensable decision-support tool which is presently sub-utilized in Puerto Rico and Latin America, CoHemis is initiating TA activities in Puerto Rico to eventually extend them to the Caribbean and Latin America.

The international profile which the UPR Mayaguez Campus derives from CoHemis activities will multiply the hemispheric demand for UPRM's graduate programs. This increased demand will sustain doctoral programs and top research in engineering and applied science that could not be justified for the scale of Puerto Rico alone and which will also benefit the rest of the hemisphere. This will boost Puerto Rican high-tech competitiveness and enhance and expand US minority graduate education in science and engineering. The graduate assistantships for Latin American and Caribbean countries and the participation of their joint researchers and professionals in CoHemis research and training activities will promote sustainable development and enhance the human resources of the region. This Center's excellent 2.5-year record demonstrates its flexibility, efficiency, and effectiveness for attaining these goals.

## INTRODUCTION

### BACKGROUND: CREATION OF THE CENTER

In February, 1991 the National Science Foundation's Large Structures and Building Systems Program (Engineering Division) granted \$99,939 to the University of Puerto Rico's Mayaguez Campus (UPRM) to organize a hemispheric conference for planning a center for promoting joint research activities in the Americas. The original grant to Dr. Luis Pumarada-O'Neill (Principal Investigator) and Dr. Carlos I. Pesquera (Co-PI) through Program Director Dr. John B. Scalzi covered a period of two years. It included follow-up activities such as a quarterly bilingual newsletter and writing proposals for funding the conference recommendations. The grant was later extended one more year until December 1993, and expanded by \$70,319 to cover student assistantships, simultaneous translation, travel, and bilingual proceedings.



*The Principal Investigators of the CoHemis Conference, Dr. Carlos I. Pesquera (left) and Dr. Luis Pumarada (right), with Dr. John B. Scalzi, NSF Program Director for Large Structures and Building Systems. Dr. Pesquera is now the PR Secretary of Transportation and Public Works, but collaborates with the Center as an adviser.*

The conference was held in Mayaguez on November, 1991. Most of the existing national research organizations in the Americas sent delegates and/or submitted papers. The US had participants from the academic, government and private sectors. North American research-sponsoring agencies, such as National Institute of Standard Technology (NIST), Department of Energy (DOE), Energy Environmental Protection Agency (EPA), and National Science and Engineering Research Center (NSERC-Canada), the US State Department, the