

CAMPUS WATCH

Building a global physics bridge

Scientists from the United States and the developing world collaborate through Iowa State's unique institute

On the first floor of the Physics Building at Iowa State is the headquarters of an organization that is only the second of its type in the world.

It is the International Institute of Theoretical and Applied Physics, and its goal is to enable scientists from developing countries to learn about advanced research and teaching through cooperation with United States scientists.

IITAP is a joint venture between the United Nations Educational, Scientific and Cultural Organization (UNESCO) and Iowa State University. At less than a year old, IITAP signed in November its first corporate partnership, with United Technologies Corp., of Hartford, Conn. United Technologies is funding IITAP with between \$50,000 and \$100,000 a year for the next three years.

"We have worked together (with United Technologies) to bring scientists from the former Soviet Union to the United States," said Alan J. Sommerer, IITAP program coordinator. "A lot of times the expertise in the Soviet Union has a different slant from what has been developed here. It is a benefit to research to collaborate with those people in kind of a complementary way. The former Soviet Union is pretty poor right now... so they are dependent on U.S. organizations to get them here."

Though IITAP is an institute of physics, it focuses on six different "thrust areas": applied science, environmental science, computers and communication, fundamental science, material science and biophysics. Each thrust area has a scientist on campus who acts as a coordinator. Many of IITAP's personnel are volunteers from Ames Lab and Iowa State.

"In all cases, IITAP's interest is to build international bridges, particularly with developing countries," Sommerer said. "We want to develop their scientific infrastructure and bring them into the global scientific community."

One of the tools IITAP uses is the sponsorship of scientific meetings and workshops. An example is the upcoming "Stellar Seismology with the Whole Earth Telescope," from Apr. 27 to May 5.

The Whole Earth Telescope is a network of observa-

tories distributed around the world, so that at any time a star can be observed by at least two astronomers. When astronomers view a periodic star, they wish to be able to observe it constantly for days. However, the earth's rotation gives each astronomer only hours per day to study the star.

"It just so happens that some of the best places in the world to view stars are in these developing countries. The other scientists would be getting together for meetings anyway, but now we can get these astronomers from developing countries to meet with experts who can bring them up to speed. It is a win-win situation for everyone," Sommerer said.

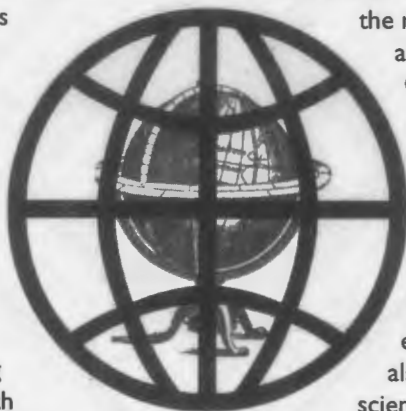
Sommerer said IITAP also wants to be able to help students from developing countries come to the United States for further education. He said that in these countries, the universities often have no master's degree programs, and students who want one may not have the funds to come to the United States. That is where funding from corporations like United Technology and from nonprofit organizations becomes important.

IITAP director professor James Vary said IITAP is "aggressively pursuing contacts with Fortune 500 companies with a high-tech interest. It is naturally beneficial to work with those types of companies."

Short-term events such as workshops receive much of their funding from programs like UNESCO and the International Science Foundation.

Some of these workshops take place in the developing countries. In October, IITAP held the International Conference on Development of Science and Technology in Central America in San Salvador, El Salvador. One of the results of the conference is that Iowa State astronomer Philip Appleton and Ficke Observatory manager Joseph Eitter went to the National University of Honduras in February. The two helped bring the university's new observatory on-line.

Sommerer said that with increased funding and more time, IITAP will expand its projects to include more programs for such areas as biophysics and environmental science. Sommerer said he also foresees a time when IITAP-sponsored scientists will visit developing nations' universities to teach at workshops and summer schools.



- Mark Berry