



The NFSAT Newsletter serves the Armenian scientific community and its friends and supporters worldwide by providing updates of NFSAT activities and programs in the field of science and technology development in Armenia.

The National Foundation of Science and Advanced Technologies is an independent, non-governmental and non-profit organization established in 1997.

NFSAT's mission is to accelerate the development of the scientific and technological potential of Armenia through competitive grants.

*Dear colleagues,
Below you will find our Newsletter № 8, October 2008.*

In This Issue

*NFSAT's Instrumentation for Scientific Infrastructure Program (ISI), University Centers of Excellence Program (UCEP) and Commercialization of Products/Results Support Program (CPSP)
Grantee Dr. Samvel Gevorgyan, who returned in Armenia from Japan and the winner of the Asian semifinal of the Global Security Challenge-2008.*



*NFSAT's "Commercialization of Products/Results Support Program"
and
Reversing Brain Drain in Armenia*

I. NFSAT's "Commercialization of Products/Results Support Program-2005".

Continuing its efforts begun in 2003, NFSAT has succeeded in obtaining generous financial support from the U.S. Civilian Research & Development Foundation (CRDF; www.crdf.org) in 2005 to start its original technology development program—the Commercialization of Product/Results Support Program (CPSP), which is intended to support Armenia's economic revival through the "pushing" of research results obtained by Armenian scientists and engineers into the international market. On a competitive basis the NFSAT has supported 16 new technologies, which are the result of recent research and have sound market potential. Detailed descriptions of these new technologies may be found on NFSAT's Web site: <http://www.nfsat.am/programs.php?prid=9>.

A new absolute-position sensor of nano-scale movement—developed by Dr. Samvel Gevorgyan (center in photo) and his team from the Yerevan State University—is one of these 16 technologies supported by the NFSAT in framework of NFSAT's "Commercialization of Product/Result Support Program". The team is experienced in the field of strategic planning, marketing and application of such new technologies as the single-layer flat-coil-oscillator (see photo below), in the generation of a series of products. The team developed a technology platform, that may be applied to various segments of the economy, such as medicine, the military market, global and homeland security, scientific instrumentation, micro- and nano-electronics, the industrial market, research and development tools, etc.



Precision Sensors/Instrumentation Inc. (PSI) was later created to transition this remarkable technology platform into products from their prototype phase to production models. PSI's management team is composed of the Chief Technologist (Scientific Leader), Dr. Samvel Gevorgyan (NFSAT's ISI (2004), CPSP (2005) and UCEP (2007-2009) grantee, see: www.nfsat.am) and Chief Executive Officer (CEO), Levon P. Thorose from California, USA.

PSI Inc. submitted a proposal—entitled "Novel Earthquake Detector and Real-time Decision Making Software"—to the "Global Security Challenge" international technology/business plan competition (www.globalsecuritychallenge.com), and it was chosen out of several hundred as one of five Asian semifinalists.) The technology described in the proposal support the enhanced prediction of earthquakes and detection of armed activity in zero visibility settings and is based on the single-layer flat-coil-oscillator technology supported by NFSAT. The PSI was subsequently invited to participate in the competition's Asian semifinals, which took place in Singapore on September 26, 2008.*



**Levon Thorose (CEO of Armenian PSI)
during the presentation in Singapore**

**Global Security Challenge (GSC) runs the leading international business plan competition to find and select the most promising security technology start-ups in the world. The mission of the GSC is to stimulate technological innovations that make airports, cities and enterprises safer without encroaching on civil liberties. More details are available at: www.globalsecuritychallenge.com.*



Lucy Steinert (Programme director, Global Security Challenge, UK) presents to **Dr. Levon Thorose** (CEO of Armenian PSI) the prize



Lucy Steinert (Programme director, Global Security Challenge, UK); **Samvel Gevorgyan** (Chief Technologist of Armenian PSI); **Jolia Tan** (Programme director of Asian Semi-Finalists, Global Security Challenge, Singapore) and **Levon Thorose** (CEO of Armenian PSI)

*The international jury (composed of: **RADM Joseph Leong** from Singapore's Ministry of Defence, **Todd Brethauer** from the Technical Support Working Group of the U.S. Department of Defense, **Tan Peng Yam** from Singapore's Defence Science Technology Agency, **Pierre Hennes** from Upstream Ventures, **Eddie Chau** from Brandtology, **Dr. Tohru Kishi** from Japan's National Research Institute of Police Science and **Prof. Wong Poh Kam** from the Business Angel Network-SEA) selected the two most promising security startups in Asia; the developers will go to London to compete in the grand final for a chance to win \$500,000, and to receive mentorship by leading venture capital funds—to be used to successfully start and develop a new company.*

One of the finalists is "Precision Sensors/Instrumentation Inc." from Armenia.

***Our Congratulations to
PSI Team and
Good Wishes for Grand Final in London!!!***

2. Reversing Brain Drain in Armenia with NFSAT's Help



Dr. Samvel Gevorgyan (on photo), received his M.Sc. in Solid State Physics from the Moscow Physical-Engineering University in 1977. He continued his professional activity in Armenia - Yerevan Physics Institute (YerPhI) and Institute of Physical Researches (IPR) of NAS. He obtained his Ph.D. degree in Physical Electronics in 1989. In spite of the fact that in 1998 he became the head of the laboratory of “Superconducting Detectors’ Physics” of the Institute of Physical Researches of the NAS he left Armenia and worked in Japan for four years at the Research Institute of Superconductivity, Kyushu University, Graduate School of Information Science & Electrical Engineering (ISEE), Fukuoka.

Dr. Gevorgyan returned to Armenia in 2002; one of the reasons of his return was the changed conditions in Armenia that were favorable for fair activity in the field of science and technology. As he says, “the perspective to receive research grants from NFSAT and so to have the opportunity to work in the homeland was the immediate cause of my returning back to Armenia and I have not made a mistake.”

The first award (about \$150,000) received from NFSAT by Dr. Gevorgyan was in the framework of the Instrumentation for Scientific Infrastructure Program (ISI-III, award # 01-04) in 2004.

In 2007 Dr. Gevorgyan's team won the award under NFSAT's University Centers of Excellence Program competition. Within the framework of these awards he created a well-equipped and almost completely modernized laboratory at Yerevan State University, composed primarily of young researchers and M.Sc and Ph.D. students.

In addition to everyday research and administrative activity Dr. Gevorgyan is very active and enthusiastic in the field of application of the achievements of science to production. In 2005 Dr. Gevorgyan was one of 16 participants of NFSAT's Commercialization of Products/Results Support Program (CPSP). The knowledge received from this NFSAT program gave him the self-reliance necessary to participate in the world-level competition “Global Security Challenge-2008” and became the winner of the Asian semifinal. The grand final of this world-level competition will take place on November 13 and NFSAT team and his friends would like to say to Dr. Samvel Gevorgyan:

Good luck !!!!!

*Best regards,
NFSAT team*