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## World-Renowned Physics Team to Join Chapman Faculty

### **Computational Science and Physics Team Coming to Chapman from George Mason University**

**Team Includes Yakir Aharonov, Ph.D., Wolf Prize Winner and Co-Discoverer of the Aharonov-Bohm Effect, One of the Cornerstones of Modern Physics; and Menas Kafatos, Ph.D., University Professor and Former Dean of the School of Computational Sciences at GMU**

**Jeff Tollaksen, Ph.D., Keun Hang Yang, Ph.D. and Hesham Al-Askary, Ph.D. team to establish Chapmans new Department of Physics, Computational Science and Engineering and the Center of Excellence in the areas of applied and fundamental science**

**University Will Create Two New Colleges: College of Science and Wilkinson College of Humanities and Social Science**

**Orange, Calif., May 1, 2008** Chapman University confirmed today that its new computational science and physics team the universitys first will include five nationally renowned scientists from George Mason University. They include Yakir Aharonov, Ph.D., winner of the 1998 Wolf Prize, co-discoverer of one of the cornerstones of modern physics, the Aharonov-Bohm Effect, and considered one of the most highly regarded scientists today; and Menas Kafatos, Ph.D., leader of the team, who has an extensive administrative international reputation, research record and interdisciplinary experience in astrophysics, Earth system science, hazards and global change, and computational science. The team, which will become the foundation of Chapmans new Department of Physics, Computational Science and Engineering, also includes Jeff Tollaksen, Ph.D., Keun Hang Yang, Ph.D. and Hesham Al-Askary, Ph.D. The appointments are effective beginning in fall 2008.

More team members will be announced soon the eventual team will probably end up numbering between seven and nine instructional faculty and several research faculty members. Dr. Kafatos has been named Chapmans Vice Chancellor for Special Projects as well as director of the new Center for Excellence (details below).

Effective June 1, Chapman University will create two new colleges: the College of Science, which will house the new Department of Physics, Computational Science and Engineering as well as the already established biological sciences, chemistry, mathematics and computer science, physical therapy and psychology departments and the food science program; and Wilkinson College of Humanities and Social Sciences, which will house the departments of English, languages, religious studies, philosophy, communication studies, history, political science and sociology as well as Chapmans Albert Schweitzer Institute and Rodgers Center for

Holocaust Education. Janeen Hill, Ph.D., will serve as interim dean of the College of Science, and Roberta Lessor, Ph.D., will serve as dean of Wilkinson College. These two colleges join the already established schools and colleges within Chapman: the Argyros School of Business and Economics, Dodge College of Film and Media Arts, College of Performing Arts, School of Education and School of Law.

### ***A true genius and a stellar team***

These are scientists of the first magnitude, said Daniele Struppa, Ph.D., chancellor of Chapman University, of the new computational science and physics team. Aharonov is a true genius, and you won't hear me use that word easily; he is Einstein quality, and I am not overstating the case. We are delighted and proud to be welcoming them all to Chapman, and we cannot stress how much this will positively affect our students. To have scientists of this caliber working with our undergraduate and graduate students will be very exciting. Having this group as the foundation of our new Department of Physics, Computational Science and Engineering is a true honor indeed.

Chapman President James L. Doti, Ph.D., said, The strength of every university is measured by its faculty, and a great university is built on the shoulders of its faculty. The addition of this renowned team of scholars will propel Chapman's science program to an academic level approaching that of the nation's most elite research institutions. But unlike larger institutions, Chapman's advantage is in its focus on small classes and individualized attention. These distinguished scientists will not only be carrying out some of the most important research in physics today, but they will be sharing their immense knowledge directly with those they teach.

This is the second team of researchers that Chapman has acquired from George Mason University, where Dr. Struppa was formerly dean of the College of Arts and Sciences. Last year, Chapman attracted a distinguished team of GMU scholars in economic science, headed by Nobel laureate Vernon L. Smith, Ph.D., to establish its new Economic Science Institute, a multidisciplinary unit that straddles the Argyros School of Business and Economics, the Chapman School of Law and Wilkinson College of Letters and Sciences.

Dr. Struppa added that the two new Chapman colleges are being created for some very specific reasons. On the one hand, the sciences at Chapman are now in a position to achieve national preeminence with this acquisition of this world-class new team of researchers, and that can best be achieved with a structure focused on science, he said. On the other hand, we want to build on Chapman's distinguished liberal arts heritage, and the Wilkinson College of Humanities and Social Science will be the structure that allows us to focus on that heritage. It will carry on the historic name of Wilkinson to honor the service and legacy of our late alumnus and trustee Harmon Wilkinson, whose daughter Karen continues to serve on our Board of Trustees. The official naming of the College of Science will be announced at a later date, Struppa said.

### ***Wide-ranging research***

The new Department of Physics, Computational Science and Engineering will be self-contained but as is always the case at Chapman there are no barriers between disciplines, and it is likely that the new computational science and physics team will be involved in research projects spanning such fields as climate change and hazards, quantum mechanics, computational

neuroscience, information science, supercomputing, earth observing, quantum coherence, environmental science and cosmology. They will also identify and offer support to new fields evolving in mathematics and the social, biological, computational, economic and physical sciences.

The teams focus is on computational science in general, and by joining the Chapman faculty they will immediately promote Chapman to national prominence in two particular niche areas: applications to earth observations and earth system science, and quantum computing.

Of great interest to California and our local community is the focus on earth observations, with specific applications in regional hazards and their connection to climate change, said Dr. Struppa. They are experts in the wide application of hazards that concern Californians, such as forest fires, earthquakes, tsunamis and typhoons as well as modeling of the environment. In particular, Kafatos and the team moving to Chapman have a long history of working with the media as well as local, state and federal agencies on the occurrence of fire, flood, hurricanes and other natural disasters and emergencies. This teams expertise would be perfect to work with our local constituencies on disaster forecasting, prevention and management.

More specifically, the team can map the spread of smoke during wildfires, have developed coupling of observations to modeling to follow hazards, download and analyze earth observation data daily from NASA satellites for Google Earth, and have invented hyper-capable devices that speed up information processing for the U.S. military.

***A new department, a new Center of Excellence and new degrees***

Upon arrival at Chapman, the team will immediately create the Department of Physics, Computational Science and Engineering and develop a new Center of Excellence with two research units that focus on Quantum Studies and Earth Observing. A new undergraduate degree in physics, with concentrations in computational science, climate and hazards, and engineering, will be created, with prospects of putting in place graduate programs within four years.

Chapmans prestigious new Center of Excellence will be established with the ambitious goal of being the number one center of its kind in the world. Its mission will be:

To attract the top scientists in the world and stimulate collaborations and synergy: Computational science is by its very nature interdisciplinary and allows teams of experts to work together, said Dr. Kafatos;

To work on applied science areas of concern to society and California in particular, such as hazards research, adaptation to climate change and earth observing;

To communicate the relevance and importance of earth science and quantum studies to the broader public through a lecture series and other outreach efforts; and

To provide a focal point for institutions, state and national governments and industry around the world for the advancement and funding of applied and fundamental science, such as computational science fields and the foundations and applications of quantum mechanics.

The nation views California as being on the cutting edge of the future, said President Doti. Innovation and growth in this state have propelled the national economy, and Californias issues are the worlds issues: natural disasters, energy solutions, economic challenges. Whether in emerging technology, biotechnology, marine resources, real estate development, travel and tourism, entertainment or agriculture, the research produced at Chapman will transcend local, national and even international borders. The establishment of our new Department of Physics, Computational Science and Engineering and the corresponding Center of Excellence at Chapman University has enormous, unlimited potential that we've only just begun to realize.