

MACHINING CENTER, INC.

Andrei N. Slavin, Chair
Department of Physics
Oakland University Rochester, MI 48309

Dear Andrei,

Machining Center, Incorporated is precision machining supplier located in Brighton, MI, serving the automotive, racing, construction, off road, aerospace, and energy industries for more than 30 years. Our main customers, such as Caterpillar, John Deere, Chrysler, Tognum, GE Oil & Gas, and Honda, are significant players in our local, national, and global economies.

The tough economic times of the last few years inflicted a double effect to our industry and our State of Michigan. Firstly we suffered the consequences of the downturn, resulting in the loss of jobs and businesses, and forcing a huge exodus of people to other states and/or industries. The second effect of the past economic crisis is the lack of current human resources, necessary to cope with the fast upturn of our economy! I know this is a good problem to have; however, we are struggling to find people who are prepared and willing to take on the challenges of the future.

The purpose of this letter is to strongly support your proposal for a Ph.D. Program in Applied and Computational Physics at Oakland University. I am confident that the preparation of your Ph.D. graduates will bring to our industry and our State the much needed influx of individuals who can "think outside the box." Such individuals will help in the solution of current problems, and will definitely play a major role in developing the path to a better future.

Sincerely,



Dante M. Ballario
Vice President & COO

Andrei N. Slavin, Chair
Department of Physics
Oakland University
Rochester, MI 48309

February 2, 2012

Dear Dr. Slavin,

The Department of Defense presented the Science, Technology, Engineering and Mathematics (STEM) Education and Outreach Strategic Plan for 2010–2014. The plan lays out our vision to develop a diverse, world-class STEM talent pool for DoD that will also benefit the Nation. DoD has a long history of supporting STEM initiatives at local, regional, and national levels. At military installations and DoD laboratories, our scientists and engineers—military and civilian—support science, mentor our scholarship and fellowship recipients, and partner with science and math educators.

A STEM-literate citizenry is critical if the Nation is to compete more effectively in the global marketplace. The production of foreign STEM talent is growing exponentially, and U.S. institutions of higher education are facing greater competition for talent. Those challenges affect U.S. security interests, domestically and internationally, and they affect DoD's ability to optimize discovery and innovation.

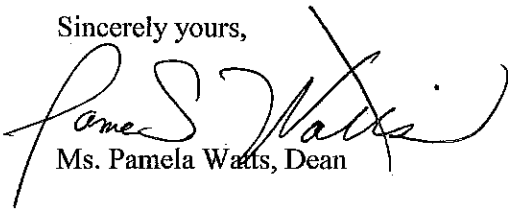
The National Defense Education Act, signed into law in 1958, authorized DoD to increase the flow of talent into science and engineering, fund enrollment into higher education, and enhance public understanding of science and technology. The act came on the heels of the Soviet Union's launch of the Sputnik I satellite and the resulting commitment by the United States to regain dominance over its Cold War adversary in scientific and technological disciplines.

Foreign nations have expanded their educational capabilities to the point that they are surpassing U.S. In 2005 China granted nearly four times as many engineering degrees as the United States. In addition, a comparison of college graduation rates for all fields among the Organization for Economic Co-operation and Development (OECD) member countries showed that the US fell from first place in 1995 to fourteenth in 2007. The bottom line is that other countries are producing many more scientists and engineers than the United States.

Therefore we believe that the development of a new Ph.D. Program in Applied and Computational Physics in the State of Michigan will benefit the progress of advanced technologies and help the automotive and defense industry in creation of next generation advanced automotive and combat vehicle systems.

Given the present need for qualified engineers and scientists, we can only feel encouraged considering the development of such a potentially important resource as Applied and Computational Physics Ph.D. Program.

Sincerely yours,



Ms. Pamela Watts, Dean

TARDEC University



Val Novosad, PhD
Principal Investigator

Materials Science Division
Argonne National Laboratory
9700 South Cass Avenue -Bldg. 223
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January 31, 2012

Andrei N. Slavin
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Re: Ph.D. Program in Applied and Computational Physics

Dear Prof. A. N. Slavin,

It is my pleasure to endorse a new Ph.D. Program (in Applied and Computational Physics) at the Physics Department of the Oakland University.

Today's scientist must be prepared to deal with a rapid evolution of technological concepts, a highly interconnected world, and complex problems that require interdisciplinary approaches to advance fundamental science or to address pressing needs of modern society. The proposed Ph.D. Program with unique cross-cutting options will provide students with the means to integrate and synthesize disciplinary depth with breadth of interests, visions, and skills for successful interdisciplinary research careers in industry or academia.

The Faculty at the Physics Department of the Oakland University are world-class scientists. They pursue high-quality research projects funded by major federal agencies, including NSF, NIH, US ARMY, DARPA, etc. Thus, PhD students in the new Program, after passing a qualifying examination, could be supported by the research grants of the Physics Faculty. Physics Department at Oakland has an adequate number of experimental laboratories and computational facilities. Interdisciplinary research opportunities exist through participating Faculty from other departments across the Oakland campus. Furthermore, additional training as well as the employment opportunities for the graduates of the proposed PhD Program exist within my home institution, Argonne National Laboratory, one of the U.S. Department of Energy's oldest and largest national laboratories for science and engineering research located just 25 miles southwest of Chicago. Argonne hosts a number of large scientific user facilities are available through peer review process, including Advanced Photon Source, Center for Nanoscale Materials, Electron Microscopy Center and Argonne Leadership Computing Facility.

In conclusion, the proposed PhD program encompasses a balanced interdisciplinary research and educational opportunities for students and faculty. I find this proposal to be very timely, well-planned and targeting achievable goals. Owing to significant accomplishments, professional and personal qualities of the Faculty members, I am convinced that this program will undoubtedly further strengthen already impressive academic and research standings of the Oakland University

Please do not hesitate to contact me if you have any further questions.

Sincerely,


V. Novosad, PhD

Materials Science Division / Argonne

A U.S. Department of Energy laboratory managed by UChicago Argonne, LLC