

## The University of Wisconsin-Milwaukee Department of Physics Summer 2005 Research Experience Program for Physics Majors

***Deadline: offers will be made on a rolling basis beginning Feb 1, 2005. You should mail your complete application to us as soon as possible.***

Please mail completed applications directly to: Dr Robert L Wood, REU Administration, Dept. of Physics, University of Wisconsin-Milwaukee, PO Box 413, Milwaukee WI 53201. Incomplete applications will NOT be considered.

### SECTION 1

NAME: _____			<input type="checkbox"/> MALE	<input type="checkbox"/> FEMALE
PRESENT COLLEGE OR UNIVERSITY: _____				
MAJOR FIELD OF STUDY	CURRENT YEAR OF STUDY	EXPECTED GRADUATION DATE		
	1    2    3    4			
COLLEGE ADDRESS: _____ _____		HOME ADDRESS: _____ _____		
E-MAIL _____		_____		
COLLEGE PHONE: _____		HOME PHONE: _____		
DATE OF BIRTH: _____		PLACE OF BIRTH: _____		
CITIZENSHIP (MUST BE US CITIZEN OR PERMANENT RESIDENT)				
<input type="checkbox"/> U.S. <input type="checkbox"/> OTHER _____ <input type="checkbox"/> U.S. PERMANENT RESIDENT <span style="margin-left: 200px;">(COUNTRY)</span>				
SOCIAL SECURITY NUMBER _____				
ETHNICITY: (OPTIONAL)				
<input type="checkbox"/> AFRICAN-AMERICAN <input type="checkbox"/> ASIAN-AMERICAN <input type="checkbox"/> CAUCASIAN <input type="checkbox"/> HISPANIC <input type="checkbox"/> NATIVE AMERICAN <input type="checkbox"/> OTHER				
OTHER ACADEMIC INFORMATION				
OVERALL GPA		GPA IN PHYSICS AND MATH-RELATED SUBJECTS		
PREVIOUS COLLEGES/UNIVERSITIES ATTENDED				
HAVE YOU PARTICIPATED IN AN REU PROGRAM BEFORE?		IF SO, WHEN?		
(NOTE: if you have previously participated in an REU program, your application will be strengthened by asking a former faculty mentor from that program to write one of your letters of support.				
WHERE?				

Please make four choices, numbering them 1 through 4 (1 is your first choice), from the available projects below. Please make sure that you satisfy any pre-requisites that the faculty mentors have specified for work in their groups.

- Theoretical condensed matter: superconductivity and electronic structure calculations. ([Dan Agterberg](#) and [Michael Weinert](#))
- Gravitational wave astronomy and the analysis of data from the Laser Interferometer Gravitational Wave Observatory (LIGO). ([Patrick Brady](#), [Jolien Creighton](#), [John Friedman](#), [Alan Wiseman](#))
- General Relativity, astrophysics, cosmology, numerical relativity. ([John Friedman](#), [Leonard Parker](#), [Alan Wiseman](#))
- Atomic resolution electron microscopy of polar oxide nanostructures. ([Marija Gajdardziska-Josifovska](#))
- Magnetism and superconductivity, floating zone growth of single crystals, low temperature techniques and ultrasonic propagation in solids. ([Prasenjit Guptasarma](#) and [Debashis Dasgupta](#))
- Low energy electron diffraction (LEED), reflection high energy electron diffraction (RHEED), and scanning tunneling microscopy. ([Lian Li](#))
- Molecular beam epitaxy and nanomaterials. ([Lian Li](#))
- Photonic technology development and applications in studies of the physical properties of proteins. Imaging of protein distribution and interactions inside living cells. ([Valerica Raicu](#))
- Fractals concepts and applications in theoretical modeling of dielectric and mechanical relaxation in biological molecules and cells. ([Valerica Raicu](#))
- Theory of medical imaging and electron microscopy, x-ray and electron diffraction and crystallography. ([Dilano Saldin](#))
- Nanophotonic and Biophotonics. Optical spectroscopy and laser physics. Ultrafast lasers and nonlinear optics. ([Vlad Yakovlev](#))

**Detailed description (with reference to supporting documents such as letters of support and transcript) of how you satisfy the pre-requisites for the projects you have chosen.**

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**Relevant work experience (employer, type of work, dates of employment, brief details of previous participation in an REU or other summer program):**

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**Computer experience (please be as specific as possible; list types of computer used and those programming languages and operating systems with which you are familiar):**

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## **SECTION 2**

**Please include a personal statement of *not fewer than 200 words* describing your academic and research goals and how participation in the University of Wisconsin-Milwaukee REU program would help you attain those goals**

**To complete your application, you must arrange to have a recent transcript and two completed recommendations (forms attached) sent directly to the program administrator. Please note that if you have previously participated in an REU program, your supervisor/mentor from that program **MUST** write one of your supporting letters.**

**The University of Wisconsin-Milwaukee: Department of Physics**  
**2005 Summer Research Experience Program for Physics Majors**  
***Letter of Recommendation***

Name of applicant \_\_\_\_\_

In accordance with the provisions of the Federal Education and Privacy Act of 1974, enrolled students have the right to see their letters of recommendation unless they have explicitly waived that right.

*Check one:* I  waive my right of access to this recommendation ♦ I  do not waive my right of access to this recommendation

\_\_\_\_\_  
 (Signature of applicant)

\_\_\_\_\_  
 (Date)

\_\_\_\_\_  
 Name of faculty respondent (Please print)

\_\_\_\_\_  
 College or university

\_\_\_\_\_  
 Department

\_\_\_\_\_  
 Title or position

Note to respondent: we thank you for your candid evaluation of the candidate named above. We are interested in how long and in what capacity you have known the applicant; in your impressions of the candidate's initiative, intellectual abilities, and resourcefulness; and any other specific qualities which you feel are important indicators of his/her potential for further study and research leading to a career in physics.

\_\_\_\_\_  
 (Signature of respondent)

\_\_\_\_\_  
 (Date)

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 (Date)

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