COLUMBIA UNIVERSITY

IN THE CITY OF NEW YORK

DEPARTMENT OF APPLIED PHYSICS AND APPLIED MATHEMATICS

July 13, 2012

To: Graduate Students in the Department of Applied Physics and Applied Mathematics

On behalf of the faculty and staff of the Department of Applied Physics and Applied Mathematics (APAM), I'd like to welcome you to the start of a new academic year.

We have scheduled times when you can meet with faculty advisors who will help you with the logistics of registration and program approvals. Please take the time to read the information below and plan to arrive at the Departmental office at the specified times.

All new AM, AP, & MSE doctoral and doctoral-track students must attend the APAM Department Orientation at 9:00 a.m. on Wednesday, August 29, in room 214 Mudd. The orientation session will be led by Professor Michael Mauel, the APAM doctoral student first year and general advisor. MS students (who are not in the Medical Physics Program) will have an opportunity to meet with their advisors at 11:30 a.m. All new Medical Physics graduate students meet with their advisor following the Medical Physics Orientation which begins at 1:30 p.m. on Wednesday, August 29, in room 214 Mudd.

Continuing students who did not register last April may register on-line from July 30 - August 10 AND August 28 - August 30. Before being allowed to register, each student must see an advisor to have his/her program approved, signed and submitted to the APAM Department staff.

Faculty advisors will be available to meet with students on **Wednesday, August 29.**

DOCTORAL*--First year *PhD* and *MS/PhD-Track students in:

Applied Physics (***AP***) *see Prof Mauel (11:30am-2:50pm, 213 Mudd)*

Applied Mathematics (***AM***) *see Prof Sobel (11:30am-2:50pm, 217 Mudd)*

Materials Science and Engineering (***MSE***) *see Prof Marianetti (11:30am 2:50pm, 1106B Mudd)*

Continuing students may arrange to have their programs approved during the summer. To avoid late fees and have program approval before classes begin, it is important to meet with an advisor sometime before August 30.

Your liaison in the APAM office is the Student Services Coordinator, Montserrat Fernandez-Pinkley. New students should contact Montserrat (and not the advisor) with any questions before registration day. Before seeing your advisor, check in the APAM office (200 Mudd) to make sure the location of the advisor meeting has not changed.

New Students are required to attend the events of the School of Engineering and Applied Sciences (SEAS) Orientation from Tuesday, August 28 through Friday, August 30 (RSVP at http://www.surveymonkey.com/s/Fall2012_NewGraduateStudentOrientation.) Please consult the new student check-list at the following link if you haven't already http://engineering.columbia.edu/files/engineering/new-student-checklist.pdf.

200 Seeley W. Mudd Building Mail Code 4701 500 West 120th Street New York, NY 10027 212-854-4457 Fax 212-854-8257

International graduate students are also required to attend the International Students and Scholars Office (ISSO) orientation, which will be held on Friday, August 24, the schedule can be found at http://www.columbia.edu/cu/isso/incoming/New_International_Student_Orientation_Program.pdf

Classes begin on Tuesday, September 4. A list of courses offered by the Department during the fall semester is enclosed, along with a list of the faculty. You may also be interested in courses offered by other departments. If you have any questions, the staff in the Department office will be happy to help you. The Department telephone number is 212-854-4457.

Finally, I would like to invite you to a welcoming party for faculty, students, and staff on Tuesday, September 11, at 3:30 p.m. in Room 200 Mudd. Subsequently, an informal afternoon tea for all students will be held every Friday that classes are in session at 3:00 p.m. In addition to our Friday teas, APAM has also instituted an APAM Friday Social (Happy) Hour that takes place approximately once a month at 4:30 p.m. during the academic year, featuring free beer and snacks, the first of which is scheduled for Friday, August 31. I look forward to meeting with all of you, see you soon.

Postscript

English Proficiency:

Language proficiency is the responsibility of the student. English communication skills are of critical importance to your current and future academic and/or professional career.

NYC Fire Department Certificate of Fitness and Laboratory Safety Training:

All second year and later non-theory graduate students who are doing experimental research and do not have a NYC Fire Department Certificate of Fitness Card MUST take and pass the Certificate of Fitness Exam by the last day of October in the Fall term. The Certificate of Fitness must be renewed every 3 years. In addition, all second year and later non-theory graduate students who are doing experimental research and have not yet received the initial training session specific to their lab activities must attend a safety training session each Fall term.

Ethics Requirement:

All doctoral and doctoral-track students must attend the professional and research ethics seminar given in May in their first and second year. **In addition**, all **NEW** doctoral and doctoral-track students must take and pass the on-line ethics course before the end of their first fall term (details will be provided during orientation).

Housing:

Students who have been assigned to University housing should have already been informed and given instructions directly by the Housing Office. If you have not heard by now, please contact Jonathan Stark in the Office of Graduate Student Services (phone: 212-854-8930; email: jrs2139@columbia.edu).

Students who have elected to view a university apartment (not a dorm room), rather than accept an assignment by mail, will participate in a lottery process through the Office of University Apartment Housing (UAH).

TA Assignments:

Those doctoral students holding Columbia TA appointments will receive their TA assignment on Wednesday, August 29 during orientation. Professor Noyan and Montserrat will address questions about your TA assignment. All TAs must attend the TA orientation session hosted by Professor Spiegelman on Wednesday, August 29 at 3:15 p.m. in 214 Mudd.

FAFSA:

U.S. Citizens and Permanent Residents holding a Columbia TA appointment MUST complete the 2012-2013 FAFSA prior to the start of the fall term, other graduate students desiring financial aid must also complete the 2012-2013 FAFSA prior to the start of the fall term (you can apply online at www.fafsa.ed.gov). The school code to be used on the form is E00120. Unfortunately, at this time, Departmental Financial Aid is not available for Master of Science students. For alternative funding sources, please consult the following website http://engineering.columbia.edu/financial-aid-2

Immunizations:

New York State requires that all Columbia students taking 6 or more points show proof of immunity to measles, mumps and rubella. Documentation must be presented to the Columbia Health Services by July 30.

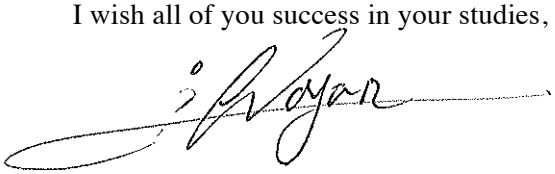
Meningococcal Meningitis Vaccination Decision: New York State public health law requires that college and university students receive information from their institutions about meningococcal meningitis and the vaccine that protects against most strains of the disease that can occur on university campuses. Columbia students must make an informed decision about being vaccinated and certify their decision online https://ssol.columbia.edu/ssv/crt/menIntro.html. Full instructions are given online, and the process takes two to three minutes. Students must formally indicate their decision about being vaccinated before they will be permitted to register for classes.

General Assistance:

After arriving in New York, new students are encouraged to contact one of the continuing graduate students listed below for answers to questions–-academic or otherwise, directions, or friendly advice.

FIELD	NAME	E-MAIL
APPLIED MATHEMATICS	Mike Jenkinson	mjj2122@columbia.edu
APPLIED PHYSICS	Chris Stoafer	ccs2142@columbia.edu
ATMOSPHERIC SCIENCE	John Dwyer	jgd2102@columbia.edu
MATERIALS SCIENCE	Mikhail Treger	mat2170@columbia.edu

I wish all of you success in your studies,



Ismail C. Noyan
Chair, Department of Applied Physics and Applied Mathematics
Professor, Materials Science and Engineering

COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

DEPARTMENT OF APPLIED PHYSICS AND APPLIED MATHEMATICS

July 2012

To: New Supported TA/GRA Graduate Students

Fr: Applied Physics & Applied Mathematics Department

Re: Forms To Be Filled Out IN ORDER TO GET PAID

BEFORE YOU ARRIVE:

FAFSA: U.S. Citizens and Permanent Residents holding a Columbia TA/GRA appointment MUST complete the 2012-2013 FAFSA **BEFORE** the start of the fall term (you can apply online at www.fafsa.ed.gov). The school code to be used on the form is E00120. **NO STIPEND PAYMENTS WILL BE PROCESSED FOR ANY STUDENTS (US CITIZENS OR PERMANENT RESIDENTS) WHO DO NOT HAVE A FAFSA ON FILE.**

ONCE YOU ARRIVE:

We have prepared a folder for each of you with forms that must be completed during orientation. These forms must be completed in order for you to be paid.

All students must complete the following:

1. I-9 work eligibility form
2. W4 withholding form for US Federal income tax
3. NY State/City IT-2104 form
4. Personal information on the top half of the nomination form
5. CU Invention Agreement form
6. Direct Deposit form (online once you are in the system)

Please complete the top portion of the I-9 (employment eligibility) form online at http://hr.columbia.edu/wac/workplace/i-9. Then you must go in person with your supporting documents to 210 Kent Hall. **Columbia's I-9 Service Center in 210 Kent Hall will verify employment eligibility and complete the rest of the form. For this form you must present:**

either

A. Your passport (International students must also bring valid I-20,Visa and I-94 card)

or

B. Your SS card AND your driver's license

Once the I-9 form is completed by the Service Center, please ask for a printout and bring the form back to the APAM office.

International students claiming tax exemption under tax treaty provisions must complete forms #8233, which you will be given during orientation.

International students must check-in with ISSO as soon as they arrive. International students **must** also apply for a Social Security Number. If you arrive before orientation, please also check-in at the Department office to immediately start your SSN request process. SSN forms can be picked up from Dina Amin and then taken to the ISSO after which they can then be taken to the SS administration office. Social Security Number application receipts must be presented to Dina Amin when turning in these forms. We cannot complete your paper work without a SSN application receipt.

As soon as you receive your Social Security Card, please make a copy of it (both sides) and give it to Dina Amin. You cannot remain on the payroll without submitting your Social Security Number.

200 Seeley W. Mudd Building Mail Code 4701 500 West 120th Street New York, NY 10027 212-854-4458 Fax 212-854-8257

$TA/GRA/Fellow Stipend Information$

TA Payment Information: The total $ amount you will be paid from September 1, 2012 through May 31, 2013 is $23,750. You will be paid a salary when/if you join a research group during the summer months in semimonthly checks in June, July and August 2013.

BREAKDOWN OF PAYMENTS for TAs:

STIPEND

You will be receiving **two lump sum payments through your student account**:

Fall 2012 approximately $7,556
Note: This payment is processed **by late September/early October.**

Spring 2013 approximately $10,194
Note: Payment to be processed when classes resume in **late January/early-to-mid February.**

Stipend checks will be in 210 KENT HALL. Go to any window in the bursar's office and show your ID in order to receive the check. You may opt to have your stipend directly deposited to your bank account. Students wishing to have their stipends directly deposited should fill out a Direct Deposit Authorization form through SSOL.

SALARY

In addition to your two lump sum payments, you will receive **$3,000 each semester, distributed biweekly and paid as salary checks in the amount of approximately $333.33 each (before taxes) from September through May**. This check is to be picked up from the Department Business Office (Room 201A).

You may also opt to have your salary checks directly deposited to your bank account. As soon as you open an account or if you have an existing account, you can apply for direct deposit online at www.my.columbia.edu

Between the two stipend payments ($17,750) and eighteen biweekly payments ($6,000) your total income for the nine-month academic year totals $23,750.

GRA Payment Information: Your entire stipend ($31,667) will be paid to you as salary and distributed in semimonthly checks in the amount of approximately $1,319.45 each (before taxes.) You may also opt to have your salary checks directly deposited to your bank account. As soon as you open an account or if you have an existing account, you can apply for direct deposit online at www.my.columbia.edu.

Fellowship Payment Information: If your fellowship is administered through Columbia, your entire stipend (amounts vary, depending on award) will be distributed in **lump sum payments through your student account** each semester. Stipend checks will be in 210 KENT HALL. Go to any window in the bursar's office and show your ID in order to receive the check. You may opt to have your stipend directly deposited to your bank account. Students wishing to have their stipends directly deposited should fill out a Direct Deposit Authorization form through SSOL.

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DEPARTMENT OF APPLIED PHYSICS AND APPLIED MATHEMATICS

DEPARTMENT POLICY ON THE NEW YORK CITY FIRE DEPARTMENT CERTIFICATE OF FITNESS REQUIREMENT AND LABORATORY SAFETY TRAINING

NYC Fire Department Certificate of Fitness

All 2nd year and later non-theory APAM graduate students who are doing any experimental research and do not yet have a NYC Fire Department Certificate of Fitness card MUST take and pass the Certificate of Fitness Exam by the last day of October. The Certificate of Fitness must be renewed every 3 years.

There are two ways to obtain a Certificate of Fitness:

- In person at FDNY headquarters
- a Self-Certification program given here at CU

Please visit the Environment Health and Safety website for any additional requirements.

The Certificate of Fitness test is given on site:

Morningside - every Tuesday @ 2 pm, 419 West 119th Street
CUMC - every Wednesday @ 12 noon, in EHS Suite #63 (Building 601 West 168th Street)

Certificate of Fitness Renewals:

If your Certificate of Fitness is expired for more than 1 year, you will be required to retake the C-14 test. If you have any questions, please contact the EH&S office 1 at (212) 854-8749 (Morningside) or (212) 305-6780 (CUMC) http://ehs.columbia.edu/index.html

Laboratory Safety Training

All 2nd year and later non-theory APAM graduate students who are doing any experimental research and have not yet received the initial training session specific to their laboratory activities MUST attend a safety training session each Fall term. This training is beyond the laboratory fire safety required after 1st year orientation. Please visit the EH&S website for safety training schedules

In addition, any student requiring refresher training has the option each Fall term of attending a classroom session or going on-line, which includes a post-test administered by RASCAL @https://www.rascal.columbia.edu.

If you have any questions, please contact the EH&S office 1 at (212)854-8749 (Morningside) or (212)305-6780 (CUMC) http://ehs.columbia.edu/index.html

Department of Applied Physics and Applied Mathematics, Columbia University
Course Schedule - Fall 2012

Course Number	Title	Instructor	Time	Room
ENGI E1102	Art of Engineering	APAM Faculty	F 10:00-12:00	301 Pupin
APPH E3200x	Mechanics: Fund & Apps	Cole	MW 10:10-11:25	
APPH E4008x	Intro. Atmospheric Sci	Polvani	R 10:10-12:40	
APPH E4010x	Intro. Nuclear Sci.	Ostrow	T 7:00-9:30	214 Mudd
APPH E4100x	Quant. Phys. Matter	Venkataraman	TR 10:10-11:25	
APPH E4110x	Modern Optics	NOT GIVEN	-	-
CHAP E4120x	Statistical Mechanics	O'Shaughnessy	T 7:00-9:30	
APPH E4130x	Physics/Solar Energy	Chen	TR 1:10-2:25	
APPH E4200x	Physics of Fluids	Mauel	TR 1:10-2:25	
APPH E4300x	Applied Electrodynamics	Navratil	MW 2:40-3:55	
APPH E4330x	Radiobiology/ Med. Phys	Zaider	W 7:00-9:30	
APPH E4500x	Health Physics	Christman	R 7:00-9:30	214 Mudd
APPH E4600x	Funda/Dosimetry	Meli	R 4:10-6:40	214 Mudd
APBM E4650x	Anatomy/Phys&Engr.	Staff	TR 4:10-5:25	UPTOWN
	Enrollment cap 24; priorities: #1 = MedPhyics graduate; #2 = BioMed graduate			
APPH E4710x	Rad Instru/Meas Lab *($50 lab fee)*	Arbo	M 5-9	214 M/174 ET
APPH E4901x	Sem: Problems/AP	Mauel	MW 11:40-12:55	
APPH E4903x	Sem: Problems/AP	Mauel	MW 11:40-12:55	
APPH E4990x	Special Topics/AP	Amols	R 12:30-2:30	214 Mudd
	"Special Topics in Radiation Therapy"			
APPH E6081x	Solid State Physics I	Pinczuk	MW 1:10-2:25	
APPH E6085x	*Comp/Elec Struc Cpx Matls*	*Marianetti*	*TR 5:40-6:55*	
APPH E6101x	Plasma Physics, I	Volpe	MW 1:10-2:25	
APPH E6110x	Laser Interact/Matter	NOT GIVEN	-	-
APPH E6333x	Radiation Therapy Pract	Wuu	Varies	UPTOWN
APPH E6340x	Diagnostic Radiology Pract	Nickoloff	Varies	UPTOWN
APPH E6365x	Nuclear Medicine Pract	Esser	Varies	UPTOWN
APPH E6380x	Health Physics Pract	Christman	Varies	UPTOWN
APPH E9142x	AP Seminar	NOT GIVEN	-	-
APAM E3105x	Programming Methods	NOT GIVEN	-	-
APMA E3101x	Linear Algebra	Duchene	TR 11:40-12:55	
APMA E4101x	Intro. Dyn Sys	Weinstein	MW 8:40-9:55am	
APMA E4150x	Applied Funct Analysis	Bal	M 10:10-12:40	
APMA E4200x	Partial Diff. Eqs.	Bal	M 4:10-6:40	
APMA E4204x	Funct/Complex Var.	TBA	M 7:00-9:30	
APMA E4301x	Num Meth/PDEs	Spiegelman	TR 11:40-12:55	
AMCS E4302x	Parallel Sci Comp	NOT GIVEN	-	-
APMA E4901x	Sem: Problems/AM	NOT GIVEN	-	-
APMA E4903x	Sem: Problems/AM	NOT GIVEN	-	-
APMA E4990x	Special Topics/AM	NOT GIVEN	-	-
APMA E6209x	Approximation Thry	NOT GIVEN	-	-
APMA E6302x	Numerical Analysis/PDEs	TBA	MW 8:40-9:55am	
APMA E6901x	Special Topics/AM	NOT GIVEN	-	-
APMA E9810x	SEAS Coll. in Climate Sci.	Polvani	R 2:45-3:45	214 Mudd

Rev 7/6/2012

APMA E9815x	Geophys Fld Dynm Sem	NOT GIVEN	-	-
MSAE E3103x	Elem. Mat. Sci. & Eng.	Noyan	TR 10:10-11:25	
MSAE E3111x	Thermo/KineticTheory	Billlinge	TR 2:40-3:55	
MSAE E4101x	Struc. Analysis of Mat.	Chan	MW 2:40-3:55	
MSAE E4206x	E&M Prop of Solids	Bailey	TR 10:10-11:25	
MSAE E4250x	Ceramics & Composites	TBA	TR 8:40-9:55am	
MSAE E4990x	Special Topics/MSE	TBA	TBA	-
MSAE E6081x	*Solid State Physics I*	*Pinczuk*	*MW 1:10-2:25*	
MSAE E6085x	Comp/Elec Struc Cpx Matls	Marianetti	TR 5:40-6:55	
MSAE E8235x	Selected topics/Mat Sci	NOT GIVEN	-	-
MSAE E9000x	MSE Colloquium	MSE Faculty	F 2-3:00	214 Mudd

APPH E3900x	Undergraduate Research in Applied Physics	
APMA E3900x	Undergraduate Research in Applied Mathematics	
MSAE E3900x	Undergraduate Research in Materials Science	
APAM E6650x	Research Project	
		APAM E9301x Doctoral Research
APMA E9101x	Research I	APAM E9800x Doctoral Research Instr.
		APAM E9900x Doctoral Dissertation
MSAE E3156x	Design Project	MSAE E9301x Doctoral Research
MSAE E4301x	Materials Science Laboratory	MSAE E9309x Doctoral Research Proposal
MSAE E6273x	Materials Science Reports	MSAE E9800x Doctoral Research Instr.
		MSAE E9900x Doctoral Dissertation

APAM Doctoral Grad Calendar
2012-2013

Fall 2012

August 24	ISSO Orientation
August 29	APAM Department Orientation and TA Basic Training
August 31	1st APAM FRIDAY! (Last Fridays of the month during Fall semester)
September 4	First Day of Classes
September 11	APAM Welcome Party!
October TBA	Chat with the Chair
October 31	Deadline to have received NYC Fire Department Certificate of Fitness for all non-theory 2nd year grad. students, must re-certify every 3 years.
November 1	General deadline to have taken the oral exam for the first time for 3rd year students who passed the written quals in their 2nd year.
December 2	Advisor search form due for all 1st year students
December 7	APAM Holiday Party!
December 10	Last Day of Classes; Deadline to have taken online course on Responsible Conduct in Research for 1st year students
December 14-21	Final Examinations

University Holidays

September 3 Labor Day

November 5 Academic Holiday

November 6 University Holiday

November 22 Thanksgiving

November 23 University Holiday

Spring 2013

January 22	First Day of Classes
February 1	1st SPRING APAM FRIDAY! (First Fridays of the month during Spring semester) General deadline to have passed the oral exam for 3rd year students who passed the written quals in their 2nd year.
March 1	General deadline to have taken the oral exam for the first time for 2nd year students (who passed the written quals in their 1st year) and the thesis proposal for the first time for ALL 3rd year students.
March TBA	Chat with the Chair
March 29	APAM Department Open House for prospective doctoral students
May 1	General deadline to have passed the oral exam for 2nd year students (who passed the written quals in their 1st year) and the thesis proposal for ALL 3rd year students.
May 6	Last Day of Classes
May 9	Deadline to submit FINAL summer and future research plans to Department for 1st year doctoral students
May 10	Professional and Research Ethics Seminar (REQUIRED FOR 1ST AND 2ND YEAR DOCTORAL STUDENTS)
May 10-17	Final Examinations
May TBA	SEAS Class Day
May TBA	PhD Convocation
May 20	Simon Prize Reception
May 22	Commencement and APAM Reception
May 23-24	Doctoral Qualifying Examination (2 Days)
May 28	Doctoral Qualifying Examination results (afternoon)
End of May/June	Academic review of doctoral students

January 21 Martin Luther King Jr. Day

March 18-22 Spring Break

May 27 Memorial Day

DEPARTMENT of APPLIED PHYSICS and APPLIED MATHEMATICS

at COLUMBIA UNIVERSITY

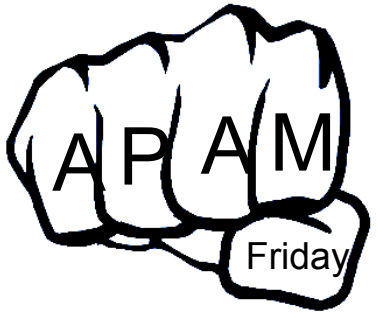
FACULTY	AREAS OF RESEARCH
WILLIAM E. BAILEY	nanoscale magnetic films and heterostructures, materials issues in spin-polarized transport, materials engineering of magnetic dynamics
GUILLAUME BAL	applied mathematics, partial differential equations with random coefficients, theory of inverse problems
KATAYUN BARMAK	processing and structure (crystal structure and microstructure) relationships to electrical and magnetic properties of metal films; developing transmission electron microscopy automated orientation imaging techniques that can be applied to the study of nanostructured materials; use of differential scanning calorimetry for the study solid state reactions and phase transformations in thin films
DANIEL BIENSTOCK	applied mathematics, methodology and high-performance implementation of optimization algorithms, applications of optimization: preventing national-scale blackouts, emergency management, approximate solution of massively large optimization problems, higher-dimensional reformulation techniques for integer programming, robust optimization
SIMON J.L. BILLINGE	nanoscale structure-property relationships in functional nanomaterials studied using novel x-ray and neutron scattering techniques coupled with advanced computing; solving the nanostructure problem
ALLEN H. BOOZER	plasma theory, theory of magnetic confinement for fusion energy, nonlinear dynamics
MARK A. CANE (DEES)	climate dynamics; impacts of climate on society; climate forecasting; physical oceanography; geophysical fluid dynamics; computational fluid dynamics
VITTORIO M. CANUTO (Adj.)	fluid dynamics, turbulence theory, ocean and atmospheric mixing processes
BARBARA E. CARLSON (Adj.)	radiative transfer modeling, analysis and interpretation of remote sensing data, cloud physics, and tropospheric chemistry
SIU-WAI CHAN	nanoparticles, electronic ceramics, grain boundaries and interfaces, oxide thin films
C. K. CHU (Emeritus)	applied mathematics
ANDREW J. COLE	plasma physics and nuclear fusion; particular focus on symmetry-breaking magnetic perturbations and their effect on plasma rotation in magnetically-confined fusion plasmas
ANTHONY DEL GENIO (Adj.)	dynamics of planetary atmospheres, parameterization of clouds and cumulus convection, climate change, general circulation
VINCENT DUCÊENE	partial differential equations, fluid mechanics, hyperbolic equations, Schrödinger operator, mathematical physics, numerical simulations
DIRK R. ENGLUND (EE)	quantum optics in photonic nanostructures; photonic crystal optoelectronic devices and networks; quantum information and metrology; nonlinear optics; electron and nuclear spin-dynamics in solid state systems
MORTON B. FRIEDMAN (CE)	applied mathematics and mechanics, numerical analysis, parallel computing
TIMOTHY M. HALL (Adj.)	atmosphere and ocean dynamics, transport of geophysical tracers, ocean carbon uptake
IRVING P. HERMAN	nanocrystals, optical spectroscopy of nanostructured materials, laser diagnostics of thin film processing, mechanical properties of nanomaterials

JAMES S. IM	laser-induced crystallization of thin films, phase transformations and nucleation in condensed systems
DAVID E. KEYES (Adj.)	applied and computational mathematics for PDEs, computational science, parallel numerical algorithms, parallel performance analysis, PDE-constrained optimization
PHILIP KIM	experimental condensed matter physics, physical properties and applications of nanoscale low-dimensional materials; quantum thermal transport phenomena in 1-dimensional nanoscaled materials, mesoscopic thermoelectricity and thermoelectric applications of nanoscale materials, quantum transport in novel 2-dimensional materials, mesoscopic electron transport and thermodynamic processes for sensors and electric devices
CHRIS A. MARIANETTI	predicting materials properties from first-principles computations; materials with energy related applications; density-functional theory; dynamical mean-field theory; transition-metal oxides; actinides, energy storage and conversion materials
THOMAS C. MARSHALL (Emeritus)	accelerator concepts, relativistic beams and radiation, free-electron lasers
MICHAEL E. MAUEL	plasma physics, waves and instabilities, fusion and equilibrium control; space physics; plasma processing, international energy policy
RON L. MILLER (Adj.)	climate dynamics, aerosols and climate
GERALD A. NAVRATIL	plasma physics, plasma diagnostics, fusion energy science
I. CEVDET NOYAN	characterization and modeling of mechanical and micromechanical deformation; residual stress analysis and nondestructive testing; x-ray and neutron diffraction, microdiffraction analysis
RICHARD M. OSGOOD, JR. (EE)	nanoscale optical and electronic phenomena (experimental and computational), femtosecond lasers and laser probing, low-dimensional physics, integrated optics, nanofabrication and materials growth
THOMAS S. PEDERSEN (Adj.)	plasma physics, magnetic confinement, fusion energy, plasma turbulence, non-neutral plasmas, positron-electron plasmas
ARON PINCZUK	spectroscopy of semiconductors and insulators, quantum structures, systems of reduced dimensions, atomic layers of graphene, electron quantum fluids
LORENZO M. POLVANI	atmospheric and climate dynamics, geophysical fluid dynamics, numerical methods for weather and climate modeling, planetary atmospheres
MALVIN A. RUDERMAN (Physics)	theoretical astrophysics, neutron stars, pulsars, early universe, cosmic gamma rays
STEVEN A. SABBAGH (Adj.)	plasma physics, experimental MHD equilibrium reconstruction and stability analysis, passive and active global MHD mode stabilization physics, plasma rotation in toroidal devices
CHRISTOPHER H. SCHOLZ (DEES)	experimental and theoretical rock mechanics, especially friction, fracture and hydraulic transport properties, nonlinear systems, mechanics of earthquakes and faulting
AMIYA K. SEN (EE)	plasma physics, fluctuations and anomalous transport in plasmas, control of plasma instabilities, plasma transport
TIFFANY SHAW (DEES)	advection-diffusion of a passive scalar, Hamiltonian geophysical fluid dynamics, multiple scale asymptotics, wave-mean flow interaction
ADAM H. SOBEL	atmospheric science, geophysical fluid dynamics, tropical meteorology, climate dynamics
MARC W. SPIEGELMAN	coupled fluid/solid mechanics, reactive fluid flow, solid earth and magma dynamics, scientific computation/modeling
HORST STORMER	semiconductors, electronic transport, lower-dimensional physics, transport in nanostructures

LATHA VENKATARAMAN	single-molecule transport, single-molecule-force spectroscopy, electron transport in nanowires, scanning tunneling microscopy and spectroscopy.
FRANCESCO A. VOLPE	plasma physics and magnetic confinement fusion (tokamaks and stellarators) both experimentally and via numerical modelling, with emphasis on: (1) microwave heating, current drive and diagnostics and (2) magnetohydrodynamic instabilities and their control
WEN I. WANG (EE)	heterostructure devices and physics, materials properties, molecular beam epitaxy
MICHAEL I. WEINSTEIN	applied mathematics, partial differential equations and analysis, waves in nonlinear, inhomogeneous and random media; dynamical systems; multi-scale phenomena, applications to nonlinear optics, mathematical physics; fluid dynamics; geosciences.
CHRIS H. WIGGINS	applied mathematics, mathematical biology, biopolymer dynamics, soft condensed matter, genetic networks and network inference, machine learning
CHENG-SHIE WUU (P&S)	microdosimetry, biophysical modeling, dosimetry of brachytherapy, gel dosimetry, second cancers induced by radiotherapy, medical physics

7/2012

APAM Friday Announcement



Please take the following survey:

Are you a new student?
Are you unsure what APAM is all about and how super sweet we are?
Do you want to experience the mind-blowingly awesome event that is "APAM Friday?'
Do you still need to learn what APAM Friday even is?
Do you want to get awesome?

If you answered "Yes" to any of the above questions, answered "No" to any of them, or didn't even read them, you *need* to clear your calendar for **Friday, August 31st**, the semester's first APAM Friday.

According to the Oxford English Dictionary:

APAM Friday (ā' păm frī' dā) *noun*:
1. the departmental social hour that occurs one Friday every month for the Applied Physics and Applied Math Department at Columbia University
2. informal gathering of students, faculty, and administrators in room 200 Mudd
3. an event organized by grad students with free beer, snacks, and other delightful beverages to promote awesomeness
4. a time to meet and socialize with people within the Department, as well as get awesome
5. the talk of the town among the entire University as being the premiere jammy thrown by anybody, ever, in the history of the world.

Details
What: APAM Friday
Where: Room 200 Mudd
When: Friday, August 31st, 4:30 pm
Who: YOU and the rest of APAM
Why: Because if you are reading this, then you are a new student, and you want to meet everyone in the department. Seriously, let's throw down.