March Meeting 2012

Session Index

B18. Focus Session: Nanostructures and Metamaterials, Growth, Structure, and Characterization -- Metamaterials with Gain and Active
B19. Invited Session: One Hundred Fifty Years of Maxwell's Equations (1862-2012)
B20. Invited Session: Astronomy's Detectors and Physics Education
B21. Focus Session: Search for New Superconductors: Methodologies and New Materials
B22. Focus Session: Fe-based Superconductors- ARPES and Fermi Surfaces
B23. Superconductivity Theory I: Cluster DMFT, t-J model, renormalization group
B24. Electronic Structure: Theory and Spectra
B25. Focus Session: Simulation of Matter at Extreme Conditions - Shock-Induced Chemistry
B26. Focus Session: Physics of Energy Storage Materials - Advanced Materials
B27. Invited Session: Magneto-Electric and Magneto-Optical Properties of Topological Insulators
B28. Focus Session: Dopants and Defects in Semiconductors - Nitrides
B29. Focus Session: Quantum Optics with Superconducting Circuits: Many-Body Physics, Phase Transitions, & Bistability
B30. Quantum Error Correction and Quantum Control
B31. Topological Insulators: Semimetals and Interactions
B32. Focus Session: Dielectric, Ferroelectric, and Piezoelectric Oxides - Relaxors, Nanostructures, and Morphotropic Phase Boundary
B34. Focus Session: Impact of Ultrafast Lasers II: Multidimensional Methods
B35. General Theory
B36. Focus Session: New Energy II
B37. SPS Undergraduate Research I
B39. Electronic Structure: Calculations I
B40. Focus Session: Cytoskeleton and Biomechanics - Entanglement and Crosslinking
B41. Lipid Bilayers and Biological Membranes
B42. Focus Session: BioChip Physics-Detection and Transport
B43. Invited Session: Physical Mechanisms of Cell Growth
B44. Focus Session: Translocation through Nanopores - Measurements and Theoretical Models
B45. Focus Session: Thin Film Block Copolymers - Swelling and Ordering
B46. Invited Session: Industrial Applications of Advanced Polymer-Based Nanomaterials
B47. Focus Session: Jamming, Glass Transition, and Gelation in Colloids and Soft Matter Systems
B48. Electrically and Optically Active Polymers
B49. Focus Session: Long-time, Entangled Dynamics in Polymers - Rods, Rings, Fibers, Particle Tracking
B50. Focus Session: Nano to Mesoscale Structures in Ordered Systems: Liquid Crystalline Structure and Interactions
B51. Focus Session: Evolutionary Systems Biology I - Evolutionary Dynamics and Rugged Fitness Landscapes
B52. Granular Media: Flow and Structure
B53. Disordered and Glassy Systems II
B54. Focus Session: Complex and co-evolving networks - Modeling Social and Biological Networks

Session C
C1. Poster Session I (2:00-5:00PM)

Session D
D1. Focus Session: High Magnetic Fields, THz Spectroscopy, MRI
D2. Invited Session: Harnessing Local Atomic Structure to Control Magnetic Interactions in Complex Oxides
D3. Invited Session: Stripe Order and Fermi-Surface Reconstruction in Cuprate Superconductors
D4. Long-range Interacting Rydberg and Dipolar Gases
D5. Vanadium Oxides; Metal-insulator Transitions
D6. Focus Session: Graphene Devices - Bolometers and Optical Response
D7. Quantum Hall Effect in Mono-, Bi- and Trilayer Graphene
D8. Organo-metallics: Magnetic and other Properties
D9. Magnetic Devices and Applications
D10. Invited Session: Advancements in Computational Physics using NSF's TeraGrid/XSEDE Resources
D11. Focus Session: Graphene Structure, Stacking, Interactions: Mesoscopics
D12. Graphene Transport: Disorder Scattering
D13. Focus Session: Magnetic Nanostructures-Characterization (Scanning Probe, X-ray and Neutron)
D14. Focus Session: Spins in Carbon - Spins in Graphene
D15. Focus Session: Spins in Metals - Ultra Fast Dynamics
D16. Strongly Correlated Numerics and Theory
D17. Focus Session: Surfaces and Interfaces in Nonoxide Nanostructures: Growth, Structure, and Characterization - Growth Dynamics
D18. Focus Session: Nanostructures and Metamaterials, Growth, Structure, and Characterization -- What is a good conductor for Metamaterials and Plasmonics
D19. Invited Session: Novel Phases in Strongly Correlated Iridates
D20. Invited Session: Advanced Electromagnetic Imaging and Remote Sensing: From DC to Daylight
D21. Multiband Superconductivity, mostly MgB2
D22. Focus Session: Fe-based Superconductors - Crystal Growth, Structure, and Properties of K_xFe_1-ySe Phases
D23. Metals Theory Oxides Interfaces
D24. Bionanotechnology and Nanostructured Sensors
D25. Focus Session: Matter at Extreme Conditions - New Experimental Capabilities
D26. Focus Session: Physics of Energy Storage Materials - Catalysis and H2 Storage
D27. Invited Session: Materials for Energy Applications
D28. Focus Session: Dopants and Defects in Semiconductors - Oxides and Interfaces
D29. Focus Session: Qubits in Diamond II
D30. Focus Session: Quantum Information for Quantum Foundations - Entanglement and Causal Structure
D31. Focus Session: Topological Insulators: Synthesis & Characterization - Thin Films
D32. Focus Session: Dielectric, Ferroelectric, and Piezoelectric Oxides - Lattice Dynamics
D33. Physics of Batteries and Fuel Cells
D34. Focus Session: Nano I -- Clusters
D35. Focus Session: DFT II: Molecular Conductance; Charge Transfer
D36. Focus Session: Environment I: Aerosols and Aqueous Solutions
D37. SPS Undergraduate Research II

J12. Focus Session: Graphene: Growth, Mechanical Exfoliation, and Properties - Strain and Structure
J13. Focus Session: Magnetic Nanostructures - Thin Films, Surfaces and Interfaces
J14. Focus Session: Spins in Semiconductors - Spin-Orbit Coupled Electrons and Holes in Semiconductors
J15. Focus Session: Spins in Metals - Spin Transport in Novel Devices and Structures
J16. Vanadium Dioxide; Nano and Devices
J17. Focus Session: Surfaces and Interfaces in Nonoxide Nanostructures: Growth, Structure, and Characterization - Organic/Inorganic Interfaces & Quantum Dots
J18. Focus Session: Nanostructures and Metamaterials, Growth, Structure, and Characterization -- New Fabrication Techniques
J19. Invited Session: Strongly Interacting Cold Fermi Gases
J20. Invited Session: Sexual and Gender Diversity Issues in Physics
J21. Focus Session: Search for New Superconductors: New Theories and Experiments
J22. Focus Session: Fe-based Superconductors - Nodal and Nodeless Superconductivity
J23. Phase Changes, Metals, PC Memories
J24. Focus Session: Dopants and Defects in Semiconductors - Si and III-V
J25. Focus Session: Simulation of Matter at Extreme Conditions: Shock Compression and Other High-Strain-Rate Phenomena
J26. Focus Session: What is Computational Physics?
J27. Invited Session: International Energy Perspectives
J28. Focus Session: Frontiers in Computational Thermodynamics of Materials
J29. Focus Session: Quantum Information for Quantum Foundations - Informational Principles and Fundamental Structures
J30. Open Quantum Systems and Decoherence
J31. Focus Session: Topological Insulators: Synthesis and Characterization - Transport
J32. Focus Session: Dielectric, Ferroelectric, and Piezoelectric Oxides - Domain Structures and Switching
J34. Focus Session: Impact of Ultrafast Lasers III: Biophysics
J35. Liquids
J36. Focus Session: New Energy III
J37. SPS Undergraduate Research IV
J39. Exciton, Polariton, and Electron Dynamics in two-dimensional semiconductor structures
J40. Multi-cellular Processes and Development
J41. Vortex Dynamics, Turbulence and Geophysical Flows
J42. Focus Session: Stochastic Population Dynamics I - Cyclic competition and population stability
J43. Invited Session: Stochastic Geometry and Conformal Invariance in Non-Equilibrium and Disordered Systems
J44. Focus Session: Dynamics of Polymers: Phenomena Due to Confinement I
J45. Padden Award Symposium
J46. Invited Session: Electrostatic Interactions in Polymeric and Biological Systems
J48. Focus Session: Gelation and Glass Transition in Colloids and Soft Matter Systems II
J49. Focus Session: Crystallization in Single-, Multicomponent, and Hybrid Systems I
J50. Focus Session: Translocation through Nanopores - Novel Devices and Computational Approaches
J51. Liquid Crystals: Smectic, Ferroelectric, Nanocomposites and DNA
J52. Focus Session: Extreme Mechanics - Plates
J53. Disordered Systems: Jamming
J54. Focus Session: Complex and Co-evolving Networks - Empirical Studies of Social Networks

Session K
K1. Poster Session II (2:00-5:00PM)

Session L
L1. Focus Session: Imaging and Modifying Materials at the Limits of Space and Time Resolution
L2. Invited Session: Andrei Sakharov Prize Session
L3. Invited Session: Fermiology of Electron and Hole Doped Cuprates - A Guide to High Temperature Superconductivity
L4. Focus Session: Numerical Methods for Studying Nonequilibrium Many-Body Dynamics; DMRG, DMFT, Truncated Wigner Approximation, Exact Diagonalization
L5. Focus Session: Interfaces in Complex Oxides - Nickelates
L6. Focus Session: van der Waals Bonding in Advanced Materials - Metal Oxide Frameworks & Active Materials
L7. Carbon Nanotube Hybrid Structures - Properties, Synthesis, Characterization
L8. Focus Session: Frustrated Magnetism - 1D
L9. Focus Session: Complex Bulk Oxides: Theoretical techniques for oxides
L10. Invited Session: Quantum Optics in Condensed Matter
L11. Focus Session: Graphene Structure, Stacking, Interactions: Magnetism and Interactions
L12. Focus Session: Graphene: Growth, Mechanical Exfoliation, and Properties - Growth on Single Crystals
L13. Focus Session: Low-Dimensional and Molecular Magnetism - 1D Magnetism/Single-Chain Magnets - Experiment
L14. Focus Session: Spins in Semiconductors - Magnetic Semiconductors II
L15. Focus Session: Spins in Metals - Resonance Phenomena I, Spin Wave Excitation and Spin Torque Oscillators
L16. Heavy Fermions - Theory and Experiment
L17. Focus Session: Thermoelectrics - Electronic Structure and Transport
L18. Focus Session: Electron, Ion, and Exciton Transport in Nanostructures - Quantum Dots and Related Structures
L19. Invited Session: Spin Liquids with Disorder
L20. Invited Session: STEM Outreach to Underrepresented Communities
L21. Superconductivity: Mostly Mesoscopics & Low-d
L22. Focus Session: Fe-based Superconductors: -- Inelastic Neutron Scattering and Magnetic Excitations
L23. Focus Session: Fe-based Superconductors - First Principles, Models, and Spectroscopy
L24. Focus Session: Dopants and Defects in Semiconductors - Chalcogenides, Oxides, and Ternaries
L25. Focus Session: Simulation of Matter at Extreme Conditions - Warm Dense Matter
L26. Focus Session: Friction, Fracture and Deformation Across Length Scales - Dislocations and Fracture
L27. Invited Session: Quantum Design of Low-Dimensional Materials Structures for Enhanced Solar Energy Conversion
L28. Electricity-to-Light Conversion: Solid State Lighting
L29. Focus Session: Semiconductor Qubits - Single and Multi-Qubit Demonstrations
L30. Focus Session: Topologically Protected Qubits I
L31. Focus Session: Topological Insulators: Synthesis and Transport - Magnetism
L32. Focus Session: Dielectric, Ferroelectric, and Piezoelectric Oxides - Mechanisms of Ferroelectricity
L33. Invited Session: Frontiers of Granular Physics
L34. Focus Session: Impact of Ultrafast Lasers IV: Applications I

V49. Focus Session: Organic Electronics and Photonics - Solar Cells and Light Emitting Devices
V50. Structure and Properties of Copolymers
V52. Focus Session: Extreme Mechanics - Biological Systems and Structures
V53. Wet and Cohesive Granular Materials
V54. Superconductivity: Magnetic Field Effects Including Vortex Related Phenomena (Theory)

Session W
W1. Photonic Systems and Entanglement Generation
W2. Invited Session: Instrumentation and Measurement Science for Energy Research: PV and Batteries
W3. Invited Session: Fractional Topological Insulators
W4. Strongly Interacting Fermi Gases
W5. Thin Film Growth and Processing
W6. Focus Session: Carbon Nanotube Synthesis, Structure and Defects
W7. Focus Session: Graphene Devices - Mechanical Effects
W8. Focus Session: Frustrated Magnetism - Pyrochlore lattice
W9. Focus Session: Complex Bulk Oxides: Multiferroics
W10. Invited Session: Novel Bose-Einstein Condensates: Photons, Excitons, Magnons, Rydberg Atoms, and Polar Molecules
W11. Focus Session: Graphene Structure, Stacking, Interactions: Local Probes and Microscopy
W12. Focus Session: Graphene: Growth, Mechanical Exfoliation, and Properties - Exfoliation and Doping
W13. Focus Session: Low-Dimensional and Molecular Magnetism - Metallorganics and Spincrossover Molecular Magnets
W14. Focus Session: Spins in Semiconductors - Ferromagnetism and Spin Dynamics in Semiconductors
W15. Focus Session: Spins in Metals - Domain Wall, Vortex, Magnonic Based Devices
W16. Quantum Criticality
W17. Optics of Semiconductor Nanowires
W18. Focus Session: Interfaces in Complex Oxides - Devices and Nanostructures
W19. Invited Session: Spin Coupling and Kondo Screening in Individual Magnetic Spins
W20. Invited Session: Nuclear Power, One Year After Fukushima
W21. Focus Session: Search for New Superconductors- Electron-Phonon Coupling
W22. Focus Session: Fe-based Superconductivity - Magnetism in AxFe(1-y)Se2
W23. Focus Session: Fe-based Superconductors - AFeAs and RFeAsO Families
W24. Integer Quantum Hall Effect
W25. Focus Session: Modeling of Rare Events: Methods and Applications I
W26. Focus Session: What is Computational Physics? New Technologies and Their Application
W27. Invited Session: Electrons, Spins, and Collective Modes in Nanofilms
W29. Focus Session: Superconducting Qubits: Resonators and Loss Mechanisms
W30. Quantum Entanglement
W31. Focus Session: Topological Insulators: Synthesis & Characterization - Quantum Transport & Nanostructures
W32. Focus Session: Dielectric, Ferroelectric, and Piezoelectric Oxides - Bandgaps, Surfaces, Oxides on Semiconductors
W33. Physics of Hydrogen Production, Storage, Delivery
W34. Focus Session: Nano V: Nanoscale Materials and Properties II
W35. Focus Session: DFT VIII: Time-Dependent Processes II: Excitations
W37. Topological Insulators: Fractionalization
W39. Focus Session: Materials and Functional Structures for Biological Interfaces: Cells
W40. Focus Session: Single Molecule Biological Physics - Nucleic acids and Proteins
W41. Focus Session: Quantum Coherence in Biological Systems
W42. Focus Session: The Physics of Genome Folding I: Fractal Globules and Condensed Polymer States
W43. Invited Session: Physical Mechanisms of Collective Microbial Dynamics
W44. Focus Session: Interparticle Interactions in Polymer Nanocomposites - Mechanical, Electrical, and Optical Properties
W45. Focus Session: Soft Matter Physics of Heterogeneous Membranes - Theory and Simulation
W46. Invited Session: Silicon Spin Qubits: Relaxation and Decoherence
W47. Focus Session: Polymers for Energy Storage and Conversion - Fundamentals of Ion Transport
W48. New Experimental, Theoretical, and Computational Methods in Polymer and Soft Matter Physics
W49. Focus Session: Organic Electronics and Photonics - Thin Film Transistors
W50. Focus Session: Micro and Nano Fluidics I: Devices and Applications
W52. Focus Session: Extreme Mechanics - Fluid-Structure Interactions and Swelling
W53. Focus Session: Common Features of Soft Materials: Polymers, Colloids and Granular Media I

Session X
X1. Focus Session: Advances in Scanned Probe Microscopy IV: New Instrumentation & Techniques
X2. Invited Session: History of Metrology and Today's Frontiers of Measurement
X3. Invited Session: Full Counting Statistics, Fluctuation Theorems, and Many-Body Entanglement
X4. Focus Session: Quantum Quench Dynamics in Cold Atom Systems
X5. Structure and Formation of Oxide Surfaces and Interfaces
X6. Carbon Nanotube Optics II: Absorption and Raman Spectroscopy
X7. Electronic, Structural and Chemical Properties of Non-Carbon Nanotubes and Nanowires
X8. Focus Session: Frustrated Magnetism - Theory
X9. Focus Session: Complex Bulk Oxides: Magnetic Phase Transitions
X10. Invited Session: Thermal Properties and Electron-Phonon Coupling from First Principles
X11. Focus Session: Graphene Structure, Stacking, Interactions: Twisting, Stretching, Folding, Wrinkling
X12. Focus Session: Graphene: Growth, Mechanical Exfoliation, and Properties - Morphology and Interactions
X13. Focus Session: Magnetic Nanostructures-Hard Magnetic Materials and Magnetocaloric Materials
X14. Focus Session: Spins in Semiconductors - Spin-Orbit Interaction and Relaxation in Si and Ge
X15. Focus Session: Spin and Dynamics in Metal, Resonance Phenomena II: FMR in Magnetic Nanostructures
X16. Manganites: Perovskite and Bilayer
X17. Focus Session: Nanostructures and Metamaterials, Growth, Structure, and Characterization -- Improved Materials and Applications II
X18. Growth and Properties of Nanoparticles and Nanowires
X19. Invited Session: Two Dimensional Electron Systems at Oxide Interfaces
X20. Invited Session: Physics of Color Reflective Displays
X21. Fluctuation Phenomena (noise, nonequilibrium effects, localization effects)
X22. Focus Session: Fe-based Superconductors - Exchange Coupling Theory