A1: **Computational Discovery and Design of Novel Materials I**  Room: 260
A1.7 Kondor, Risi: TBD - Computational Discovery and Design of Novel Materials.  9:12AM

A5: **Tracking, Localization and Inference: Methods and Applications**  Room: 264
A5.1 Calderon, Christopher: Leveraging Time Series Analysis and Machine Learning to Quantify Intra and Inter Trajectory Heterogeneity in Particle Tracking Experiments.  8:00AM
A5.4 Darzacq, Xavier: Single molecule transcription factor dynamics in the syncytial Drosophila embryo.  9:00AM
A5.7 Fei, Jingyi: Determination of in vivo regulation kinetics of small non-coding RNA in bacteria.  10:00AM

A7: **Computational Physics at the Petascale and Beyond I**  Room: 266
A7.4 Marzari, Nicola: Here and now: the intersection of computational science, quantum-mechanical simulations, and materials science.  8:36AM

A9: **Symposium Honoring Ed Kramer - Mechanics and Dynamics**  Room: 268
A9.1 Fredrickson, Glenn: Chasing Extreme Polymer Morphologies with Ed.  8:00AM

A13: **Non-Equilibrium Physics with Ultracold Atoms I**  Room: 272
A13.1 Grimm, Rudolf: Ultrafast many-body interferometry of impurities coupled to a Fermi sea.  8:00AM

A14: **Jamming of Particulate Matter I**  Room: 273
A14.1 Corwin, Eric: Standing on the shores of jamming: Structure and local rigidity in packings below the jamming transition.  8:00AM

A16: **New Mesophase Symmetries and Topologies in Self-Assembled Soft Matter**  Room: 275
A16.1 Bates, Frank: Formation of Low Symmetry Ordered Phases in Block Polymer Melts.  8:00AM

A19: **Near Term Applications of Small-scale Quantum Computing**  Room: 278-279
A19.1 Martinis, John: Quantum Supremacy: Checking A Quantum Computer With A Classical Supercomputer.  8:00AM
A19.3 Aspuru-Guzik, Alan: Quantum Machine Learning and Quantum Computing for Chemistry.  8:48AM
A19.4 Farhi, Eddie: Quantum supremacy through the quantum approximate optimization algorithm.  9:24AM
A19.5 Boixo, Sergio: Characterizing Beyond-Classical Computation in Near-Term Devices.  10:00AM

A21: **Polymer Physics - From Academia to Industry and Back**  Room: 281-282
A21.2 Brant, Patrick: Comb Block Polyolefins.  8:12AM
A21.3 Alamo, Rufina: Understanding Melt-Memory of Commercial Polyolefins.  8:48AM
A21.4 Meth, Jeffrey: Applications of Polymer Nanocomposites.  9:24AM

A22: **Nano-scale Perspectives on Phase Transitions in Correlated Oxides**  Room: NOT A
A22.3 McLeod, Alexander: Nanotextured phase coexistence in the correlated insulator V$_2$O$_3$.  8:24AM
A22.5 Carlson, Erica: Spatial complexity in correlated electronic systems.  9:12AM

A23: **Novel Phenomena and Routes to Realizations of Weyl and Dirac Semimetals**  Room: NOT B
A23.2 Inoue, Hiroyuki: Detecting surface-bulk connectivity in Weyl semimetal TaAs via scanning tunneling microscopy.  8:12AM
A23.3 Kane, Charles: Symmetry Protected Topological Insulators and Semimetals.  8:48AM
A23.4 Kee, Hae-Young: Topological crystalline semimetal in Iridates with strong spin-orbit coupling.  9:24AM

A24: **Superconducting and Quantum Metamaterials**  Room: NOT C
A24.1 Anlage, Steven: Emergent and Nonlinear Properties of Macroscopic Quantum Metamaterials.  8:00AM
A24.2 Kawabata, Shiro: Nonlinear electromagnetic response of superconducting quantum metamaterials.  8:36AM

A25: **Advances in Molecular Dynamics Simulations: From Atomistic to Coarse Grained Models I**  Room: 288
A25.4 Bolhuis, Peter: Multiscale simulations of patchy particle systems combining Molecular Dynamics, Path Sampling and Green’s Function Reaction Dynamics.  8:36AM

NOT=A New Orleans Theater
A26: *Chemical Physics of Hydrogen Bonding I*  Room: 289
A26.1 Markland, Thomas: Unravelling the structure and dynamics of concentrated aqueous proton defects using simulations incorporating both nuclear and electronic quantum effects.  8:00AM
A26.3 Bowman, Joel: Theoretical and Computational Studies of the IR Spectra of Small Water and Protonated Water Clusters.  8:48AM

A29: *Optical Frequency Combs - Generation, Metrology & Applications*  Room: 292
A29.2 Delfyett, Peter: Coherent Optical Signal Processing using Semiconductor Based Frequency Combs.  8:12AM
A29.4 Bjork, Bryce: A Few Atoms Too Many: Unravelling Molecular Complexities with Frequency Comb Spectroscopy.  9:00AM

A30: *Graphene: Structure, Defects, and Functionalization*  Room: 293
A30.1 Gallagher, Patrick: Self-assembly of environmental adsorbates on graphene and other 2D materials.  8:00AM

A31: *Carbon Nanotubes and Related Materials: Transport and Devices*  Room: 294
A31.4 Arnold, Michael: Wafer-scale, massively parallel carbon nanotube arrays for realizing field effect transistors with current density exceeding silicon and gallium arsenide.  8:36AM

A32: *Devices from 2D Materials*  Room: 295
A32.1 Heinz, Tony: TDB - Devices from 2D Materials: Function, Fabrication and Characterization.  8:00AM
A32.4 Castro Neto, Antonio Helio: 2D Materials: Science and Technology.  9:00AM

A33: *Excitons in 2D Semiconductors*  Room: 296
A33.7 Dery, Hanan: Theory of dynamical screening of excitons in monolayer transition-metal dichalcogenides.  9:12AM

A34: *Hybrid Organic-Inorganic Halide Perovskites II*  Room: 297
A34.1 Mitzi, David: Hybrid Organic-Inorganic Perovskites: Structural Diversity and Opportunities for Semiconductor Design.  8:00AM

A40: Invited Session: The Physicist and the Philosopher: Einstein, Bergson, and the Debate That Changed Our Understanding of Time  Room: 387
A40.1 Canales, Jimena: Einstein and Time in Physics and Philosophy.  8:00AM
A40.2 bricmont, Jean: Bergson vs. Einstein: is there really a philosopher’s time?.  8:36AM
A40.3 Frank, Adam: About Time. Physics, Philosophy and the Battle Between Albert Einstein and Henri Bergson.  9:12AM
A40.4 Ford, Russell: What If Bergson Won?.  9:48AM
A40.5 Martinez, Alberto: Einstein’s Phobia of Philosophy.  10:24AM

A42: *Opto-mechanics and Microwave Mechanical Hybrids*  Room: 389
A42.1 Lehner, Konrad: Quantum transduction with mechanical oscillators.  8:00AM

A43: *Spin Orbit Physics in Oxides I*  Room: 390
A43.8 Christianson, A.D.: The Consequences of Spin-Orbit Coupling on the 5d³ Electronic Configuration.  9:24AM

A44: *Dirac and Weyl Semimetals: Transport I*  Room: 391
A44.2 Analytis, James: Weyl Wiggles: exotic quantum oscillatory phenomena in Weyl and Dirac semi-metals.  8:12AM

A45: *2D Topological Superconductors*  Room: 392
A45.1 Ben-Shach, Gilad: Unconventional Electron Pairing and Topological Superconductivity in Proximitized HgTe Quantum Wells.  8:00AM

A46: *Entanglement in Open Quantum Systems*  Room: 393
A46.1 Nakamura, Yasunobu: Fluctuation relations and Maxwell’s demon in a circuit QED setup.  8:00AM

A48: *Frustrated Magnetism: Kitaev Model*  Room: 395
A48.4 Moessner, Roderich: Magnetic Majorana Fermions.  8:36AM
A49: Physics of Collective Cell Migration  Room: 396
A49.1 Manning, M. Lisa: How do generalized jamming transitions affect collective migration in confluent tissues?.  8:00AM
A49.3 Camley, Brian: Collective gradient sensing: fundamental bounds, cluster mechanics, and cell-to-cell variability.  8:48AM
B2: **Novel Chemistry under Extreme Conditions**  Room: 261

B2.1 Ma, Yanming: Computational Design of Novel Compounds and Room-temperature Superconductors at High Pressure Conditions. 11:15AM

B7: **Computational Physics at the Petascale and Beyond II**  Room: 266

B7.1 Clementi, Cecilia: Adaptive sampling strategies with high-throughput molecular dynamics. 11:15AM

B9: **Multimodal Characterization of Soft Materials in Complex Environments I**  Room: 268

B9.1 Gomez, Enrique: Recent instrumentation advances offer new opportunities in electron microscopy of polymers. 11:15AM

B10: **Polymer Nanocomposites - Structure and Driven Assembly**  Room: 269

B10.4 Kumar, Sanat: Tunable Multiscale Nanoparticle Ordering by Polymer Crystallization. 11:51AM

B11: **Organic Electronics - Fundamentals of Electronic Transport**  Room: 270

B11.1 Kmmel, Stephan: Visualizing electron dynamics in organic materials: Charge transport through molecules and angular resolved photoemission. 1:15PM

B19: **Progress in Quantum Simulation**  Room: 278-279

B19.1 Gambetta, Jay: Quantum simulations with noisy quantum computers. 11:15AM

B21: **Biopolymer Physics**  Room: 281-282

B21.2 De Vries, Renko: Polymer brush coatings for DNA: fundamental polymer physics and nanofabrication applications. 11:27AM

B21.4 Korley, LaShanda: Structural Interplay - Tuning Mechanics in Peptide-Polyurea Hybrids. 12:15PM

B22: **Quantum Criticality and Novel Phases in f-electron Systems**  Room: NOT A

B22.1 Gannon, William: Quasi-1D heavy fermion magnet Yb$_2$Pt$_2$Pb in Magnetic Field. 11:15AM

B22.2 Gegenwart, Philipp: Quantum criticality in geometrically frustrated heavy-fermion systems. 11:51AM

B22.3 Nica, Emilian Marius: Global phase diagram and quantum criticality of the Ising-anisotropic Kondo lattice. 12:27PM

B22.4 Canfield, Paul: Preserved Entropy, quantum criticality and fragile magnetism. 1:03PM

B23: **From Isometry to Reality: Geometric principles, Mechanics, and Morphology of Thin Solid Structures**  Room: NOT B

B23.1 Damman, Pascal: Patterns through elastic instabilities, from thin sheets to twisted ribbons. 11:15AM

B23.2 Gemmer, John: Isometric immersions and self-similar buckling in elastic sheets. 11:51AM

B23.3 Moshe, Michael: Geometric charges in theories of elasticity and plasticity. 12:27PM

B23.4 Katifori, Eleni: Gaussian curvature and confinement in thin shells. 1:03PM

B24: **From Ballistic to Hydrodynamic Flow in Graphene**  Room: NOT C

B24.1 Chen, Shaowen: Electron optics with ballistic graphene junctions. 11:15AM

B24.2 Lee, Menyoung: Ballistic miniband conduction in a graphene superlattice. 11:51AM

B24.3 Levitov, Leonid: Higher-Than-Ballistic Conduction in Viscous Electron Fluids. 12:27PM

B24.4 Lee, Hu-Jong: Valley-symmetric quasi-1D transport in ballistic graphene. 1:03PM

B24.5 Kim, Philip: Hydrodynamic transport in graphene near the charge neutrality point. 1:39PM

B25: **Chemical Physics of Multichromophores I**  Room: 288

B25.1 Chin, Alex: Tensor network methods for the simulation of open quantum dynamics in multichromophore systems: Application to singlet fission in novel pentacene dimers. 11:15AM

B25.2 Huxter, Vanessa: Ultrafast Nonlinear Frequency Generation in Excitonic Systems and the Dynamics of Novel Photosynthetic Pigment Analog. 11:51AM
March Meeting 2017 Invited Talks.

B26: Chemical Physics of Hydrogen Bonding II  Room: 289
B26.1 Gaigeot, Marie-Pierre: Water at silica/liquid water interfaces investigated by DFT-MD simulations. 11:15AM
B26.2 Han, Songi: Modulators of heterogeneous protein surface water dynamics. 11:51AM
B26.3 Ben-Amotz, Dor: Enhanced Tetrahedral Order in Hydrophobic Hydration-Shells. 12:27PM

B29: Frontiers in Computational Materials Science  Room: 292
B29.1 Ferguson, Andrew: Nonlinear machine learning in soft materials engineering and design. 11:15AM
B29.2 Fernandez Serra, Marivi: Using density functional theory to solve complex problems: from liquid water to dark matter. 11:51AM
B29.3 Lester, Jr, William: Quantum Monte Carlo in Materials Science: Electronic Structure. 12:27PM
B29.5 Aspuru-Guzik, Alan: Machine Learning for Materials and Chemicals Discovery. 1:39PM

B34: Thermoelectrics - Sn-Se and Modeling  Room: 297
B34.9 Fornari, Marco: Thermoelectric Materials and Novel Thermoelectric Phenomena. 12:51PM

B38: Fe-based Superconductors: Nematicity I  Room: 385
B38.1 Degiorgi, L.: Anisotropic optical response in the electronic nematic phase of iron- pnictides. 11:15AM
B38.2 Curro, Nicholas: Nematicity and Spin Fluctuations in the Iron Pnictide Superconductors Studied by NMR. 11:51AM

B40: Jonathan F. Reichert and Barbara Wolff-Reichert Award for Excellence in Advanced Laboratory Instruction  Room: 387
B40.2 Eblen-Zayas, Melissa: Redesigning an Advanced Lab Course to Promote Experimental Design. 11:27AM
B40.3 Ayars, Eric: A Flipped Modular Skills-Based Introductory Electronics Course. 12:03PM
B40.4 Kozminski, Joseph: AAPT Lab Recommendations: Past, Present, and Future. 12:39PM
B40.5 Carter, Ashley: Adding Interdisciplinary Exploration to Teaching Laboratories using AFM and Biophysical Samples.. 1:15PM

B42: Organic Spintronics  Room: 389
B42.7 Malissa, Hans: Spin-dependent electronic processes in organic semiconductors. 12:27PM

B44: Focus Session Dirac and Weyl Semimetals: ARPES, STM and Theory  Room: 391
B44.1 Fang, Chen: Nonsymmetric nodal line and nodal point semimetals. 11:15AM

B45: Topological Materials: Thin Film  Room: 392

B46: Experimental Advances in Semiconducting QC  Room: 393
B46.1 Nichol, John: High-fidelity entangling gate for double-quantum-dot spin qubits. 11:15AM

B47: Antiferromagnetic Heterostructures and Magnon Drag  Room: 394
B47.4 Flebus, Benedetta: Novel contributions to the magnon drag thermopower in metal spintronics. 11:51AM
B47.7 Chen, Kai: Spin transport in antiferromagnetic heterostructures. 12:51PM

B49: Active Matter: Recent Theoretical Advances  Room: 396
B49.2 Chate, Hugues: The world of Vicsek-like models and related experiments. 11:27AM
B49.3 Dunkel, Jorn: Phenomenological higher-order PDE models for active suspensions. 12:03PM

B53: Stress and Strain: Mental Health and Graduate School  Room: 287
B53.2 Luiti, Simonetta: TBA. 11:27AM

NOT=New Orleans Theater
C4: **Physics of the Cytoskeleton II**  Room: 263  
C4.4 Gardel, Margaret: Mechanics of Active Matter Constructed from Actomyosin.  3:06PM

C5: **Evolutionary Dynamics of Genomes**  Room: 264  
C5.1 Koonin, Eugene: Theory of microbial genome evolution.  2:30PM  
C5.7 Nimwegen, Erik: How do prokaryotic genomes evolve?.  4:06PM

C6: **Thin Films - Nanocomposites and Block Copolymers**  Room: 265  
C6.4 Composto, Russell: Self-Assembled Nanorods and Nanoplates in Polymer Nanocomposite Films.  3:06PM

C7: **Computational Physics at the Petascale and Beyond III**  Room: 266  
C7.4 Lin, Lin: Accelerating large scale Kohn-Sham density functional theory calculations with semi-local functionals and hybrid functionals.  3:06PM

C10: **Polymer Nanocomposites - Dynamics From Segmental to Chain Scale**  Room: 269  
C10.7 Archer, Lynden: Structure and Dynamics of Polymer/Polymer grafted nanoparticle composite.  3:42PM

C11: **Polymers for Energy Storage and Conversion I**  Room: 270  
C11.1 Balsara, Nitash: Ohm’s Law, Batteries, and the Clean Energy Landscape.  2:30PM

C13: **Non-Equilibrium Physics with Ultracold Atoms II**  Room: 272  
C13.1 Navon, Nir: Emergence of a Turbulent Cascade in a Quantum Gas.  2:30PM

C14: **Statistical Mechanics of Active Matter**  Room: 273  
C14.1 Ouellette, Nicholas: A Materials Approach to Collective Behavior.  2:30PM

C15: **Extreme Mechanics of Shells**  Room: 274  
C15.1 Kosmrlj, Andrej: Statistical mechanics of microscopically thin thermalized shells.  2:30PM

C16: **Focus Session: Mechanical Singularities in Soft Matter II**  Room: 275  
C16.13 Fineberg, Jay: Friction is Fracture: a new paradigm for the onset of frictional motion.  4:54PM

C18: **Physics of Bio-inspired Materials I**  Room: 277  
C18.7 Fratzl, Peter: Bio-inspired active materials.  3:42PM

C19: **DMP/GMAG Awards Session**  Room: 278-279  
C19.2 Canfield, Paul: Synthesis as the heart of New Materials Physics.  2:42PM  
C19.3 Jariwala, Deep: Mixed Dimensional Van der Waals Heterostructures for Opto-Electronics.  3:18PM

C21: **Flexible and Stretchable Organic Electronics**  Room: 281-282  
C21.1 Loo, Yueh-Lin: Small Molecules for Large-Area Applications.  3:06PM  
C21.2 O’Connor, Brendan: Plastic Deformation as a Means to Achieve Stretchable Polymer Semiconductors.  3:06PM  
C21.3 Malliaras, George: Interfacing with the Brain using Organic Electronics.  3:42PM  
C21.4 Lipomi, Darren: Molecularly Stretchable Electronics for Energy and Healthcare.  4:18PM  
C21.5 Hyun, Woo Jin: High-Throughput Printing Process for Flexible Electronics.  4:54PM

C22: **Floquet Time Crystals**  Room: NOT A  
C22.2 Else, Dominic: Floquet Time Crystals.  2:42PM  
C22.3 Monroe, Christopher: Realization of discrete time crystals in a spin chain of trapped ions.  3:18PM
C23: Discoveries on the Spectrum of Fluctuations Responsible for Superconductivity and Normal State Anomalies in Cuprates  Room: NOT B
C23.4 Hsieh, David: Evidence of a global inversion-symmetry-broken phase in the pseudogap region of YBa$_2$Cu$_3$O$_y$.  3:06PM

C24: Spin-Orbit Coupling at Interfaces: Blessing or Curse for Future Spintronic Devices?  Room: NOT C
C24.2 Amin, Vivek: Spin transport at interfaces with spin-orbit coupling.  2:42PM
C24.3 Belashchenko, Kirill: Theory of spin loss at metallic interfaces.  3:18PM
C24.5 Gambardella, Pietro: Spin-Orbit Torques and Magnetoresistance in 5d and 4d Metal Systems.  4:06PM

C25: Advances in Molecular Dynamics Simulation: From Atomistic to Coarse Grained Models - II  Room: 288
C25.1 Paesani, Francesco: Many-Body Molecular Dynamics: Chemical and Spectroscopic Accuracy from the Gas to the Condensed Phase.  2:30PM
C25.4 Galli, Giulia: First principles molecular dynamics of heterogenous materials.  3:30PM
C25.7 Glotzer, Sharon: Self-assembly and GPU MD – invited talk.  4:30PM

C28: Doping and Defects in Semiconductors II: Oxides  Room: 291
C28.1 McCluskey, Matthew: Strange conductivity of strontium titanate.  2:30PM

C31: Carbon Nanotubes and Related Materials: Physical and Chemical Properties II  Room: 294
C31.1 Cheng, Hui-ming: TBD - Carbon Nanotubes and Related Materials.  2:30PM

C40: Pais Prize Session  Room: 387
C40.1 Nye, Mary-Jo: Abraham Pais Prize Lecture: Shifting Problems and Boundaries in the History of Modern Physics.  2:30PM
C40.2 Franklin, Allan: Is Seeing Believing? Direct and Indirect Observation in Physics.  3:06PM
C40.4 Nauenberg, Michael: A resolution to the historians disagreement over Planck’s introduction of the quantum hypothesis.  3:54PM

C49: Reinforced (By) Water  Room: 396
C49.3 Hayward, Ryan: Shape morphing and motion of responsive hydrogel composites.  2:54PM

C50: Low-D and Molecular Magnetism II  Room: 397
C50.7 Mourigal, Martin: Continuous excitations of the triangular-lattice quantum spin liquid candidate YbMgGaO$_4$.  3:42PM

NOT=New Orleans Theater
C53: From Physics Girl to the Physics Bus, Creating an Effective Voice for Physics in a Diverse Society

Room: 287

C53.1 Fox, Claire: Physics Bus: An Innovative Model for Public Engagement.  2:30PM
C53.2 Cowern, Dianna: Physics Girl: Where Education meets Cat Videos.  3:06PM
C53.3 Falco, Charles: The Art of the Motorcycle and the History of Art (and Condensed Matter Physics).  3:42PM
C53.5 Dreyer-Lude, Melanie: Finding Your Scientific Voice - Theatre Techniques for Physicists.  4:30PM
E1: *Computational Discovery and Design of Novel Materials IV*  
Room: 260  
8:00AM

E2: *Materials in Extremes II*  
Room: 261  
E2.1 Citroni, Margherita: Dynamics of chemical reactions under pressure.  
8:00AM

E4: *Advances in Cellular and Multicellular Imaging*  
Room: 263  
E4.1 Kural, Comert: Mechanoregulation of clathrin-mediated endocytosis in isolated cells and developing tissues.  
8:00AM

E7: *First-Principles Modeling of Excited-State Phenomena I: Methodological Advances*  
Room: 266  
E7.10 Hybertsen, Mark: Connecting Interface Structure to Energy Level Alignment at Aqueous Semiconductor Interfaces.  
9:48AM

E9: *Glass Formation and Dynamics in Nanostructured Polymers and Glasses I*  
Room: 268  
9:12AM

E10: *Polymer Nanocomposites Related to Optical and Plasmonic Properties*  
Room: 269  
E10.10 Kotov, Nicholas: Self-Assembly of Nanoparticles and Origin of Life.  
9:48AM

E14: *Symmetries, Spatiotemporal Patterns and Synchronization*  
Room: 273  
8:00AM

E19: *Thermalization and Many-Body Localization in Small Quantum Systems*  
Room: 278-279  
E19.1 Kaufman, Adam: Quantum thermalization through entanglement.  
8:00AM

E21: *Polymer Physics Prize*  
Room: Hall I-1  
E21.1 Olvera De La Cruz, Monica: Polymer Physics Prize Talk.  
8:00AM  
8:36AM

E22: *Nematicity and the Valley Degree of Freedom*  
Room: NOT A  
E22.1 MacDonald, Allan: Quantum Hall Electron Nematics.  
8:00AM  
E22.2 Parameswaran, Siddharth: Quantum Hall Valley Nematics: From Field Theories to Microscopic Models.  
8:48AM

E23: *Majorana States in Topological Superconductors*  
Room: NOT B  
E23.2 Morr, Dirk: Design of Majorana Edge States in Topological Superconductors.  
8:12AM

E24: *Spin Orbit Torques and Spin Waves*  
Room: NOT C  
E24.1 Adeyeye, Adekunle: A reconfigurable waveguide for energy-efficient transmission and local manipulation of information in a nanomagnetic device.  
8:00AM

E24.2 Demokritov, Sergej: Excitation of propagating spin waves by pure spin current.  
8:36AM

E24.3 Kent, Andrew D.: Magnon Condensates in Spin-Transfer Torque Nanocontacts.  
9:12AM

E24.4 Grollier, Julie: Neuromorphic computing with spin-torque nano-oscillators.  
9:48AM

E24.5 Akerman, Johan: Long-range mutual synchronization of spin Hall nano-oscillators.  
10:24AM

NOT = New Orleans Theater
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Room</th>
<th>Presentation Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00</td>
<td>E25: <em>Chemical Physics of Multichromophores II</em> Room: 288</td>
<td>288</td>
<td>E25.1 Aspuru-Guzik, Alan: Conditional energy transfer: Towards molecular excitonic Gates.</td>
<td>8:00 AM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E25.7 Glowacki, David: Atomic absorption spectra and non-adiabatic dynamics of the LH2 complex with a GPU-accelerated <em>ab initio</em> exciton model.</td>
<td>9:36 AM</td>
</tr>
<tr>
<td>8:00</td>
<td>E26: <em>Chemical Physics of Hydrogen Bonding III</em> Room: 289</td>
<td>289</td>
<td>E26.1 Bakker, Huib J.: Water at protein surfaces studied with femtosecond nonlinear spectroscopy.</td>
<td>8:00 AM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E26.2 Johnson, Mark: Cold cluster snapshots of the Grotthuss proton relay mechanism in water.</td>
<td>8:36 AM</td>
</tr>
<tr>
<td>8:00</td>
<td>E29: Jamming of Frictional and Non-spherical Particles Room: 292</td>
<td>292</td>
<td>E29.2 Bertrand, Thibault: Simulations of shear jamming in packings of frictionless and frictional particles.</td>
<td>8:12 AM</td>
</tr>
<tr>
<td>8:00</td>
<td>E30: <em>2D Materials: Processing and Application</em> Room: 293</td>
<td>293</td>
<td>E30.7 Hersam, Mark: Solution-Based Processing and Applications of Two-Dimensional Heterostructures.</td>
<td>9:12 AM</td>
</tr>
<tr>
<td>8:00</td>
<td>E32: <em>2D Complex Oxide Devices and Devices at Oxide Interfaces</em> Room: 295</td>
<td>295</td>
<td>E32.1 Hwang, Harold: Synthesis and devices of complex oxides in the 2D limit.</td>
<td>8:00 AM</td>
</tr>
<tr>
<td>8:00</td>
<td>E34: <em>Hybrid Organic-Inorganic Halide Perovskites III</em> Room: 297</td>
<td>297</td>
<td>E34.1 Cahen, David: Halide Perovskites: New Science or “only” future Energy Converters?.</td>
<td>8:00 AM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E34.2 Falstra, Thomas: Confinement Effects in Corner-, Edge- and Face-sharing Iodine-based Hybrids.</td>
<td>8:36 AM</td>
</tr>
<tr>
<td>8:00</td>
<td>E36: <em>Advances in Scanned Probe Microscopy I</em> Room: 299</td>
<td>299</td>
<td>E36.1 Noad, Hilary: Scanning superconducting quantum interference device measurements of variations in superconducting transition temperature of two-dimensionally doped SrTiO$_3$.</td>
<td>8:00 AM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E36.5 Ghahari, Fereshte: An On/Off Berry Phase Switch in Circular Graphene Resonators.</td>
<td>9:12 AM</td>
</tr>
<tr>
<td>8:00</td>
<td>E37a: <em>Complex Oxide Interfaces and Heterostructures- Stannates, Superconductivity</em> Room: 383</td>
<td>383</td>
<td>E37a.4 Jalan, Bharat: Structure, Defects and Electronic Transport in High-Mobility BaSnO$_3$ Films and Heterostructures.</td>
<td>8:36 AM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E37a.8 Bozovic, Ivan: What makes high-$T_c$ <em>cuprate</em> superconductors so special?.</td>
<td>9:48 AM</td>
</tr>
<tr>
<td>8:00</td>
<td>E40: 60 Years since BCS and 30 Years since Woodstock Room: 387</td>
<td>387</td>
<td>E40.1 Coleman, Piers: Phil Anderson’s Magnetic Ideas in Superconductivity.</td>
<td>8:00 AM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E40.2 Grant, Paul: The Woodstock of Physics: The Hyped Future Then (1987)…The Actual Situation Now (2017).…</td>
<td>8:36 AM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E40.3 Greene, Richard: The Current Experimental Status of the High Tc Problem.</td>
<td>9:12 AM</td>
</tr>
<tr>
<td>8:00</td>
<td>E43: <em>Spin Orbit Physics in Oxides II</em> Room: 390</td>
<td>390</td>
<td>E43.1 Deng, Xiaoyu: Transport properties of correlated metals: A dynamical mean field theory perspective.</td>
<td>8:00 AM</td>
</tr>
<tr>
<td>8:00</td>
<td>E47: <em>Frontiers in Magnetic Imaging</em> Room: 394</td>
<td>394</td>
<td>E47.13 Fuchs, Gregory: Nanoscale magnetic imaging using picosecond thermal gradients.</td>
<td>10:24 AM</td>
</tr>
<tr>
<td>8:00</td>
<td>E49: <em>DBIO Delbrück Award Session</em> Room: 396</td>
<td>396</td>
<td>E49.1 Höfer, Thomas: Exploiting single-cell variability to infer the dynamics of immune responses.</td>
<td>8:00 AM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E49.3 Chakraborty, Arup: How to hit HIV where it hurts.</td>
<td>8:48 AM</td>
</tr>
<tr>
<td>8:00</td>
<td>E51: <em>Readout in Superconducting Qubits: Parametric and Novel Measurements</em> Room: 398</td>
<td>398</td>
<td>E51.1 O’Brien, Kevin: Simultaneous single-shot readout of multi-qubit circuits using a traveling-wave parametric amplifier.</td>
<td>8:00 AM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E52: <em>Semiconductor Qubits: Quantum Dot Readout and Sensing</em> Room: 399</td>
<td>8:00 AM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E52.1 Liu, Yinyu: Threshold Dynamics of a Semiconductor Single Atom Maser.</td>
<td>8:00 AM</td>
</tr>
</tbody>
</table>
March Meeting 2017 Invited Talks.

F1: *Computational Discovery and Design of Novel Materials V*  Room: 260
F1.10 Marom, Noa: Effect of Crystal Packing on the Electronic Properties of Molecular Crystals.  1:03PM

F2: *Materials in Extremes III*  Room: 261
F2.1 Barnes, Brian: Hierarchical Multiscale Simulation: Scale-Bridging for Shock Response of Energetic Materials.  11:15AM

F6: *The Structure and Dynamics of Confined Biopolymers*  Room: 265
F6.4 Morrison, Greg: Confined wormlike chains in external fields.  11:51AM

F7: *First-Principles Modeling of Excited-State Phenomena II: Computational Advances*  Room: 266
F7.4 Bruneval, Fabien: Many-body perturbation theory for excited electrons: from materials to molecules.  11:51AM

F8: *Electrons, Phonons, and Electron Phonon Scattering I*  Room: 267
F8.1 Mauri, Francesco: Anharmonic phonons and second-order phase-transitions by the stochastic self-consistent harmonic approximation.  11:15AM

F9.1 Doxastakis, Manolis: Three dimensional characterization of polymer nanostructures through an integrated scattering and modeling approach.  11:15AM

F10: *Ion Containing Polymers - The Role of Structure and Dynamics I*  Room: 269
F10.7 Hickner, Michael: New Polymer Structures for Anion Exchange Membranes.  12:27PM

F12: *Natural Pattern Formation and Earth’s Climate System*  Room: 271
F12.1 Cael, B.B.: The Volume of Earth’s Lakes.  11:15AM

F15: *Population Ecology and Evolutionary Dynamics*  Room: 274
F15.1 Noble, Andrew: Ising universality describes emergent long-range synchronization of coupled ecological oscillators.  11:15AM

F19: DCOMP Metropolis Award Session: Electric Polarization and Novel Routes to Ferroelectricity  Room: 278-279
F19.2 Liu, Shi: Multiscale Simulations of Dynamics of Ferroelectric Domains.  11:27AM
F19.3 Garrity, Kevin F.: Theory of hyperferroelectrics.  12:03PM
F19.4 Ghosez, Philippe: Polarization activated by Jahn-Teller distortions in perovskites and vice versa.  12:39PM

F21: Polymer Rheology - Flexibility, Charge and Extensibility  Room: 281-282
F21.1 Colby, Ralph: Linear Viscoelasticity of Ionic Polymers: Ionomers and Polyelectrolytes.  11:15AM
F21.4 Larson, Ronald: Configurations and Dynamics of Semi-Flexible Polymers in Good and Poor Solvents.  12:15PM

F22: New developments in the Study of 3D Dirac and Weyl semimetals  Room: NOT A
F22.1 Lin, Hsin: Topological Materials.  11:15AM
F22.2 Fang, Zhong: Topological Electronics States and Materials.  11:51AM
F22.3 Mao, Zhiquiang: Relativistic Fermions Generated by Square Lattices in Layered Compounds.  12:27PM
F22.4 Li, Qiang: Chiral Magnetic Effect in Condensed Matters.  1:03PM
F22.5 Kaminski, Adam: Electronic properties of new topological quantum materials.  1:39PM

F23: Frontiers of Spectroscopy and Topological Materials: DCMP and IUPAP Prize Session  Room: NOT B
F23.1 Chang, Cui-Zu: IUPAP C-10 Award Talk: From Topological Insulators to Quantum Anomalous Hall Effect.  11:15AM
F23.2 Felser, Claudia: Weyl and Heusler compounds.  11:51AM
F23.3 Bradley, Barry: Algebra, topology, and the solid state: New perspectives on insulators and semimetals.  12:27PM
F23.5 Kevan, Stephen: Surface states, skyrmions, and synchrotrons.  1:15PM

NOT=New Orleans Theater
March Meeting 2017 Invited Talks.

**F24: Graphene Spintronics**  Room: NOT C

- **F24.3** Casanova, Félix: A two-dimensional spin field-effect switch. 11:39AM
- **F24.4** Beschoten, Bernd: Graphene: A membrane with steadily improving charge and spin transport properties. 12:15PM
- **F24.5** Brihuega, Ivan: Atomic-scale control of graphene magnetism by using hydrogen atoms. 12:51PM

**F25: Chemical Physics of Multichromophores III**  Room: 288

- **F25.4** Mitric, Roland: Light-induced nonadiabatic dynamics in molecular assemblies and nanostructures. 11:51AM

**F26: Advances in Molecular Dynamics Simulation: From Atomistic to Coarse Grained Models - III**  Room: 289

- **F26.1** Noe, Frank: Variationally optimal selection of slow coordinates and reaction coordinates in macromolecular systems. 11:15AM

**F28: Dopants and Defects in Semiconductors IV: Nitrides**  Room: 291

- **F28.1** Irmscher, Klaus: Defect related electrical and optical properties of AlN bulk crystals grown by physical vapor transport. 11:15AM

**F29: Industrial Physics Forum: Physics in the Industrial World**  Room: 292

- **F29.1** McBride, James: Relevant and Rewarding - Strategic Research in Industrial Physics. 11:15AM
- **F29.3** Dever, Clark: The Reality of Virtual Reality Product Development. 12:03pm

**F30: 2D Materials: Properties and Characterization**  Room: 293

- **F30.10** Beton, Peter: 2D Materials: Synthesis, Defects, Structure and Properties. 1:03PM

**F31: Quantum Transport**  Room: 294

- **F31.1** Morpurgo, Alberto: “Designer” spin-orbit interaction in graphene on semiconducting transition metal dichalcogenides. 11:15AM
- **F31.4** Mishchenko, Artem: Tuning the chirality of Dirac electrons in van der Waals heterostructures. 12:15PM

**F32: Optoelectronic Devices from 2D Materials**  Room: 295

- **F32.1** Barbara, Paola: Nanostructured materials for broadband light detection. 11:15AM

**F34: Thermal Transport**  Room: 297

- **F34.10** Fiete, Gregory A.: Thermal transport in Weyl, double-Weyl, Dirac, and magnetically ordered systems with strong spin-orbit coupling. 1:03PM

**F35: Surface Science of Organic Molecular Solids, Films, and Nanostructures I**  Room: 298

- **F35.7** Andrew, Trisha: Tuning the Optoelectronic Properties of Organic Semiconductor Crystals with Monolayer Graphene Templates. 12:27PM

**F40: Patterns of Network Synchronization**  Room: 387

- **F40.2** Nishikawa, Takashi: Prevalence of Asymmetry-Induced Synchronization in Oscillator Networks. 11:27AM
- **F40.4** Arenas, Alex: Control of coupled oscillator networks with application to microgrid technologies. 12:15PM
- **F40.5** Kiss, Istvan: Partially synchronized states in small networks of electrochemical oscillators: effect of heterogeneities and network topology. 12:51PM

**F43: Multiferroic Oxide Heterostructures**  Room: 390

- **F43.1** Dong, Shuai: Ferroelectric control of magnetism in oxide heterostructures. 11:15AM

**F44: Dirac and Weyl Semimetals: STM**  Room: 391

- **F44.1** beidenkopf, haim: Spectroscopic Visualization of Inversion and Time-Reversal Symmetry Breaking Weyl Semi-metals. 11:15AM

**F45: Realization of Kitaev Chain**  Room: 392

- **F45.1** Bakkers, Erik: Kitaev model with quantum dot chains I: Andreev transport. 11:15AM

NOT=New Orleans Theater
March Meeting 2017 Invited Talks.

**F46: Continuous Measurements and Non-commuting Observables**  Room: 393
- **F46.1** Hacohen-Gourgy, Shay: Dynamics of simultaneously measured non-commuting observables.  11:15AM
- **F46.6** Huard, Benjamin: Information and energy transfer via fluorescence in superconducting circuits.  12:39PM

**F47: Spin-Orbit Torque I**  Room: 394
- **F47.1** Marrows, Christopher: Spin-orbit interactions in thin magnetic films: from doping and interfaces to transport and skyrmions.  11:15AM

**F49: Preparing Physics Students for 21st Century Careers**  Room: 396
- **F49.1** McNeil, Laurie: They Won’t All Grow Up to Be You: Preparing Students for Diverse Careers.  11:15AM
- **F49.2** Giri, Sandeep: What the Industry Wants. How Physics Students can Prepare to Thrive in the Private Sector..  11:51AM
- **F49.3** Magee-Sauer, Karen: Effective Practices for Training and Inspiring High School Physics Teachers.  12:27PM
- **F49.5** Hodapp, Theodore: Best Practices in Physics Program Assessment: Should APS Provide Accreditation Standards for Physics?.  1:15PM

**F51: Parametric and Multimode Interactions in Superconducting Devices**  Room: 398
- **F51.1** Chakram, Srivatsan: Parametric interactions in multimode cavities.  11:15AM

**F53: Biological Materials Self-Assembly**  Room: 287
- **F53.2** Grime, John: Coarse-grained models of key self-assembly processes in HIV-1.  11:27AM
- **F53.4** Doye, Jonathan: Simulations of self-assembling DNA.  12:15PM
- **F53.5** Grigoryan, Gevorg: Ion transport across the biological membrane by computational protein design.  12:51PM

NOT=New Orleans Theater
H2: *Materials in Extremes IV*  
Room: 261  
H2.1 Gottfried, Jennifer: Laser-shocked energetic materials for laboratory-scale characterization and model validation.  2:30PM

H4: *Specificity, Recognition and Coding in Biology*  
Room: 263  
H4.1 Hansen, Anders: Temporal coding in gene regulation.  2:30PM  
H4.7 Hermundstad, Ann: The role of disorder in olfactory sensing.  4:06PM

H7: *First-Principles Modeling of Excited-State Phenomena III: TDDFT*  
Room: 266  
H7.4 Correa, Alfredo A.: Application of non-adiabatic electron dynamics to non-linear response and electrical conductivity of materials.  3:06PM

H11: *Organic Electronics - Organic Photovoltaics*  
Room: 270  
H11.8 Banerji, Natalie: Charge generation in polymer:fullerene and oligomer:fullerene blends for organic photovoltaics.  3:54PM

H14: *Collective Dynamics: Fluid Physics of Life*  
Room: 273  
H14.1 Bodenschatz, Eberhard: Cilia-based transport networks.  2:30PM

H16: *Physics of Bio-inspired Materials II*  
Room: 275  
H16.4 Filippidi, Emmanouela: Controlling toughness and dynamics of polymer networks via mussel-inspired dynamical bonds.  3:06PM

H18: *Function from Geometry: 3D Printing to Programmable Matter I*  
Room: 277  
H18.1 Aharoni, Hillel: Making Faces: Thin Nematic Elastomer Sheets in Theory and in Practice.  2:30PM

H19: *Calculating Optical Properties from First Principles*  
Room: 278-279  
H19.1 Louie, Steven G.: Excited States and Optical Spectra Based on GW-BSE: Dimensionality and Screening.  2:30PM  
H19.2 Kioupakis, Emmanouil: Extreme quantum confinement in nitrides for improved LED efficiency.  3:06PM  
H19.4 Gillet, Yannick: Finding order in disorder: Raman spectroscopy of amorphous silicon, from ab initio to multiscale modeling.  3:54PM

H21: *Extreme Events in a Changing Climate*  
Room: 281-282  
H21.2 McKinnon, Karen: The signal and the noise: forced and unforced changes in temperature distributions and the probability of extremes.  2:42PM  
H21.3 Mann, Michael: Influence of Anthropogenic Climate Change on Planetary Wave Resonance and Extreme Weather Events.  3:18PM  
H21.5 Francis, Jennifer: Crazy Weather and the Arctic Meltdown: Emerging Connections.  4:06PM

H22: *Spectroscopy of Majorana States in Solids*  
Room: NOT A  
H22.1 Kouwenhoven, Leo: Experimental progress on Majoranas in semiconductors.  2:30PM  
H22.2 Bocquillon, Erwann: Gapless Andreev bound states in a topological junction on the Quantum Spin Hall insulator HgTe.  3:06PM  
H22.3 Jia, Jinfeng: Observation of Majorana fermions in the vortex on topological insulator-superconductor heterostructure Bi$_2$Te$_3$/NbSe$_2$.  3:42PM  
H22.4 Marcus, Charles: Zero Modes in Single and Double Majorana Islands.  4:18PM  
H22.5 Glazman, Leonid: Conductance of a proximitized nanowire in the Coulomb blockade regime.  4:54PM

H23: *Stripe and Bubble Phases in a Two-dimensional Electron Gas: Recent Developments*  
Room: NOT B  
H23.1 Csáthy, Gábor: Observation of a pressure-driven quantum phase transition from a fractional quantum Hall state to an electronic stripe state at $\nu = 5/2$.  2:30PM  
H23.2 Mueed, M. A.: Reorientation of the Stripe Phase of 2D Electrons by a Minute Density Modulation.  3:06PM  
H23.5 Fradkin, Eduardo: Nematic Order in Two-Dimensional Electronic Fluids in magnetic Fields.  4:06PM

NOT=New Orleans Theater
March Meeting 2017 Invited Talks.

H25: JCP Editor's Choice Session  Room: 288
H25.2 Elsasser, Thomas: Phase-resolved two-dimensional terahertz spectroscopy - a probe of highly nonlinear light-matter interactions.  2:42PM
H25.3 Matsika, Spiridoula: Insights into the nonadiabatic dynamics of radical cations.  3:18PM
H25.5 Brumer, Paul: Quantum Dynamics of Incoherently Driven Systems.  4:06PM

H29: Role of Measurements and Instrumentation in Advancing Industry and Applied Physics  Room: 292
H29.2 Hollenhorst, James: New Measurement Technology Enables the Revolution in the Life Sciences.  2:42PM
H29.4 Colombo, Luigi: Semiconductor Characterization: from Growth to Manufacturing.  3:30PM

H32: Excitonic Devices from 2D Materials  Room: 295
H32.1 Crooker, Scott: Electrons, holes, and excitons in monolayer semiconductors: Magneto-optical studies of polarization dynamics and dielectric screening.  2:30PM

H36: Advances in Scanned Probe Microscopy II  Room: 299

H37a: Dielectric and Ferroelectric Oxides III  Room: 383
H37a.1 Hlinka, Jiri: Manifestations of Bloch walls in perovskite ferroelectrics.  2:30PM

H40: Soft Excitations in Glasses and Jammed Solids  Room: 387
H40.1 Ediger, Mark: Suppressed beta relaxations and reduced heat capacity in ultrastable organic glasses prepared by physical vapor deposition.  2:30PM
H40.2 Hellman, Frances: Ideality and Tunneling Level Systems (TLS) in amorphous silicon films.  3:06PM
H40.4 Del Gado, Emanuela: Exploring relaxation pathways in rheology and aging of jammed soft solids.  3:54PM
H40.5 Franz, Silvio: Soft modes in the perceptron model for jamming.  4:30PM

H41: Fe-based Superconductors: FeSe  Room: 388
H41.1 Buechner, Bernd: TBD - Fe-based Superconductors.  2:30PM

H42: Advances in Digital Quantum Simulation  Room: 389
H42.1 Lloyd, Seth: Small-scale quantum computers: current state of the art and applications.  2:30PM

H45: Topological Josephson Junction  Room: 392
H45.1 Bouman, Daniël: Magnetic field induced $4\pi$ periodic Josephson effect in InAs nanowires.  2:30PM

H47: Spin Seebeck and Spin Nernst Effects  Room: 394
H47.1 Kuschel, Timo: Spin Seebeck, anomalous Nernst, and magnetic proximity effects in non-magnet/magnet heterostructures.  2:30PM
H47.11 Goennenwein, Sebastian: Observation of the Spin Nernst Effect in Platinum.  4:54PM

H49: Physical Perspectives on the Microbiota of Humans and other Animals  Room: 396
H49.2 Mehta, Pankaj: Statistical Physics Approaches to Microbial Ecology.  2:42PM
H49.4 Hwa, Terence: Spatiotemporal microbiota dynamics from quantitative in vitro and in silico models of the gut.  3:30PM
H49.5 Gore, Jeff: Community assembly of the worm gut microbiome.  4:06PM

H50: Single-Molecule Magnets and Q-bits  Room: 397
H50.1 Chibotaru, Liviu: Strategies towards High-Temperature Lanthanide-Based Single-Molecule Magnets.  2:30PM

H51: Parametric, Novel, & Strong Coupling of Superconducting Circuits  Room: 398
H51.1 Aumentado, Jose: Implementing quantum optics with parametrically driven superconducting circuits.  2:30PM

NOT=New Orleans Theater
H52: **Quantum Simulation: Topology & Chemistry**  Room: 399

**H52.1** Flurin, Emmanuel: Observing Topological Invariants of Bloch Bands Using Quantum Walk in Superconducting Circuits.  2:30PM

H53: **The New (and Future) Faculty Workshop in Three Hours**  Room: 287

**H53.1** Hilborn, Robert: Physics and Astronomy New Faculty Workshops: 20 Years of Workshops and 2000 Faculty.  2:30PM

**H53.2** Mason, Bruce: The AAPT/ComPADRE Digital Library: Supporting Physics Education at All Levels.  3:06PM

**H53.3** Dubson, Michael: Interactive Engagement in the Large Lecture Environment.  3:42PM

**H53.4** Jariwala, Manher: The Integration of Research, Teaching, and Learning: Preparation of the Future STEM Faculty.  4:18PM

**H53.5** Goldberg, Bennett: New pathways to physics instruction: Blending a MOOC and in-person discussion to train physics graduate students and postdocs in evidence-based teaching.  4:54PM

NOT=New Orleans Theater
K1: Van der Waals Bonding in Advanced Materials I  Room: 260
K1.1 Choi, Jin-Ho: Atomic mechanisms of van der Waals epitaxy and property optimization of layered materials.  8:00AM

K8: Electrons, Phonons, and Electron Phonon Scattering III  Room: 267
K8.1 Krishnaswamy, Karthik: First-principles calculations of mobility.  8:00AM

K10: Ion Containing Polymers - The Role of Structure and Dynamics II  Room: 269
K10.1 Davis, Eric: Structure and Transport in Ion-containing Polymers under Confinement: Nafion Thin Films.  8:00AM

K14: Mechanical Metamaterials I  Room: 273
K14.1 Coulais, Corentin: Metamaterials shake up textbook mechanics.  8:00AM

K18: Polymeric Membranes - Water Purification  Room: 277
K18.4 Nunes, Suzana: Nanostructured membranes based on polysulfone homopolymers and copolymers.  8:36AM

K19.1 Hung, Chen-Lung: Interfacing cold atoms with nanophotonics for many-body physics.  8:00AM
K19.2 Chang, Derrick: Atomic physics meets nanophotonics: creating complex quantum states of matter and light.  8:36AM
K19.3 McDermott, Robert: Hybrid Quantum Information Processing with Superconductors and Neutral Atoms.  9:12AM
K19.4 Lev, Benjamin: A Scanning Quantum Cryogenic Atom Microscope.  9:48AM
K19.5 Keeling, Jonathan: From weak to ultra-strong matter-light coupling with organic materials.  10:24AM

K21: Keithley Award Session  Room: 281-282
K21.2 Denes, Peter: You can’t measure what you can’t see – detectors for microscopies.  8:12AM
K21.4 Carini, Gabriella: Fast x-ray and electron detectors at SLAC user facilities using CCD and CMOS technology.  9:00AM
K21.5 Minor, Andrew: New modes of electron microscopy for materials science enabled by fast direct electron detectors.  9:36AM

K22: Spins in Solids for Quantum Information Processing  Room: NOT A
K22.1 Hanson, Ronald: The birth of quantum networks: merging remote entanglement with local multi-qubit control.  8:00AM
K22.2 Klimov, Paul: Quantum Control and Entanglement of Spins in Silicon Carbide.  8:36AM
K22.5 Jelezko, Fedor: Light matter quantum interface based on single colour centres in diamond.  9:36AM

K23: Novel Surface and Bulk States in Topological Kondo Insulators  Room: NOT B
K23.1 Li, Shiyian: Bulk Fermi surface of charge-neutral excitations in SmB6 or not: A heat-transport study.  8:00AM
K23.4 Nakajima, Yasuyuki: Chiral edge transport induced by Dirac-electron-mediated ferromagnetic domain walls in topological Kondo insulator SmB6.  9:00AM
K23.5 Dzero, Maxim: Unconventional electronic properties of conventional Kondo insulator.  9:36AM

K24: Spectroscopic Signatures of Fractionalized Excitations in Quantum Magnets  Room: NOT C
K24.1 Halsz, Gbor: Resonant inelastic X-ray scattering of the Kitaev spin liquid.  8:00AM
K24.2 Knolle, Johannes: Majorana spectroscopy of Kitaev spin-liquids.  8:36AM
K24.5 Lemmens, Peter: Fractionalized Excitations in higher dimensional Iridates.  9:36AM

K25: Advances in Molecular Dynamics Simulation: From Atomistic to Coarse-Grained Model - IVs  Room: 288
K25.1 Olivera de la Cruz, Monica: Control of DNA-Functionalized Nanoparticle Assembly.  8:00AM
K25.4 Lyman, Edward: All-atom molecular dynamics simulation of lipid bilayers: Recent successes and current challenges.  9:00AM
K25.7 Noid, William: Thermodynamic forces in coarse-grained simulations.  10:00AM

K29: Physics Leading the Frontier of Genomics and Applications  Room: 292
K29.1 Di Ventra, Massimiliano: Quantum sequencing: opportunities and challenges.  8:00AM
K29.2 Ling, Xinsheng Sean: Nanopore Kinetic Proofreading of DNA Sequences.  8:36AM
K29.3 Ala-Nissila, Tapio: Iso-Flux Tension Propagation Theory and It’s Application to Driven Polymer Translocation.  9:12AM
K29.4 Bao, Gang: Precision Genome Editing for Treating Single-gene Disorders.  9:48AM
K30: Transition Metal Dichalcogenides: Processing and Applications  Room: 293
K30.7 Kis, Andras: 2D dichalcogenide electronic materials and devices.  9:12AM

K37a: Complex Oxide Interfaces and Heterostructures - Oxide 2-DEGs  Room: 383
K37a.1 Kawasaki, Masachi: TBD - Complex Oxide Interfaces and Heterostructures.  8:00AM

K40: Designed Polymer Surfaces for Adhesion, Release, Self-Cleaning, Anti-Fouling, and other Applications  Room: 387
K40.4 Crosby, Alfred: Scaling Principles for Understanding and Exploiting Adhesion.  8:36AM
K40.5 Dhinojwala, Ali: Role of Confined Water in Underwater Adhesion.  9:12AM

K44: Dirac and Weyl Semimetals: Transport II  Room: 391
K44.4 Jia, Shuang: Magnetic field induced Weyl node annihilation in TaP.  8:36AM

K45: Topological Materials: Synthesis and Characterization—Other Materials  Room: 392
K45.1 Drichko, Natalia: Breakdown of the Kondo insulating state in SmB$_6$ by introducing Sm vacancies.  8:00AM

K46: Quantum Gates in Superconducting Qubits  Room: 393
K46.1 McKay, David: Fixed-Frequency Qubits Coupled via a Tunable Bus.  8:00AM

K49: Physics of Neural Network Dynamics in the Brain  Room: 396
K49.4 Li, Bo: The central amygdala circuits in fear regulation.  8:36AM
K49.5 La Camera, Giancarlo: A model of metastable dynamics during ongoing and evoked cortical activity.  9:12AM

K50: Nanomagnets  Room: 397
K50.7 Nembach, Hans: Wavevector dependent damping in nanomagnets.  9:12AM

K52: Thermodynamics and Thermalization in Quantum Information Theory  Room: 399
K52.1 Lutz, Eric: A single atom heat engine.  8:00AM

NOT=New Orleans Theater
L2: *Materials in Extremes VI*  Room: 261  
L2.1 Pagan, Darren: Combining In-Situ X-ray Imaging with Computational Modeling to Understand Granular Deformation during Dynamic Loading. 11:15AM

L4: *Physics of Genome Organization: from DNA to Chromatin II*  Room: 263  
L4.7 Grosberg, Alexander: Passive and Active Hydrodynamics of Topologically Constrained Polymer Globules. 12:27PM

L6: *Bring Order from Disorder with Intrinsically Disordered Proteins*  Room: 265  
L6.4 Dunker, A. Keith: Intrinsically Disordered Proteins and the Origins of Multicellular Organisms. 11:51AM  
L6.8 Bondos, Sarah: Multiple structure-intrinsic disorder interactions regulate and coordinate Hox protein function. 1:03PM

L7: *First-Principles Modeling of Excited State Phenomena V: Low-Dimensional Systems*  Room: 266  
L7.1 Draxl, Claudia: Graphene revisited: From orbital mapping to its impact as a substrate. 11:15AM

L8: *Electrons, Phonons, and Electron Phonon Scattering IV*  Room: 267  
L8.1 Li, Baowen: Anomalous phonon/heat transport in low dimensional micro/nano materials. 11:15AM

L9: *Mechanical Patterning in Cells and Tissues*  Room: 268  
L9.4 Neufeld, Zoltan: Bistable front dynamics in a contractile medium: travelling wave and cortical advection define stable zones of RhoA signaling at epithelial adherens junctions. 11:51AM

L10: *Principles of Cellular Remodeling*  Room: 269  
L10.4 del Alamo, Juan Carlos: Mechanical Coordination of Single-Cell and Collective-Cell Amoeboid Migration. 11:51AM

L18: *Energy - Renewable and Sustainable*  Room: 277  
L18.1 Haegel, Nancy: The Terawatt Challenge. 11:15AM  
L18.3 Mooney, David: A Transforming Electricity System: Understanding the Interactions Between Clean Energy Technologies, Markets, and Policies. 12:03PM  
L18.4 Le, Duy: Two-dimensional materials for cost effective catalysts. 12:39PM

L19: *Atoms and Molecules in Cavities*  Room: 278-279  
L19.1 Kena-Cohen, Stephane: Room-temperature polariton condensation and superfluidity in an organic microcavity. 11:15AM  
L19.2 Kollath, Corinna: Dynamic gauge fields and topological state of fermionic quantum gases in optical cavities. 11:51AM  
L19.3 Landini, Manuele: Quantum phases from competing short- and long-range interactions in an optical lattice. 12:27PM  
L19.4 Hemmerich, Andreas: Bosons in a narrow-band optical resonator. 1:03PM  
L19.5 Buchmann, Lukas: Multimode Optomechanics with Cold Atoms. 1:39PM

L21: *1144 Iron Based Superconductors*  Room: 281-282  
L21.1 Iyo, Akira: Structure and superconductivity in the 1144 type compounds of AeFe₄As₄ (Ae = Ca, Sr, A = K, Rb, Cs). 11:15AM  
L21.2 Cao, Guang-Han: Superconductivity and Ferromagnetism in AEuFe₄As₄ (A = Rb and Cs). 11:51AM  
L21.3 Bud'ko, Sergey L.: Anisotropic physical properties of single phase, single-crystalline CaKFe₄As₄. 12:27PM  
L21.5 Eremin, Ilya: Electronic structure and superconducting gap in CaKFe₄As₄. 1:15PM

L22: *Physics For Everyone*  Room: NOT A  
L22.2 Gilbert, Pupa: Color: Physics and Perception. 11:27AM  
L22.3 Falco, Charles: The Science of Optics; The History of Art. 12:03PM  
L22.4 Halpern, Paul: Thinking in Pictures: John Wheeler, Richard Feynman and the Diagrammatic Approach to Problem Solving. 12:39PM

NOT=New Orleans Theater
L23: Interplay of Magnetism, Superconductivity and Unconventional Order in Heavy Fermion Materials  
Room: NOT B  
L23.4 Nevidomskyy, Andriy: Topological nodal superconductivity in the heavy fermion metal UPt3. 11:51AM  
L23.5 Flint, Rebecca: Hybridization with a twist: Hidden (hastatic) order in URu2Si2. 12:27PM

L24: Frontiers in Theory: Joint DCMP/DCOMP/GSNP Prize Session  
Room: NOT C  
L24.1 Andrei, Natan: On the solution of the Kondo Problem. 11:15AM  
L24.5 Kitaev, Alexei: Oliver E. Buckley Condensed Matter Prize: Emergent gravity from interacting Majorana modes. 12:27PM

L25: Chemical Physics of Multichromophores IV  
Room: 288  
L25.7 Darancet, Pierre: Understanding Non-Equilibrium Charge Transport and Rectification at Chromophore/Metal Interfaces. 12:27PM

L28: Dots and Defects in Semiconductors VI: Compound and 2D Semiconductors  
Room: 291  
L28.1 Jungwirth, Nicholas R: Single Quantum Defects in h-BN and ZnO. 11:15AM

L29: FIAP Plenary: Physics that Changed the World  
Room: 292  
L29.1 Denbaars, Steven: Energy Efficient GaN Lighting. 11:15AM  
L29.3 Bottomley, Paul: Magnetic Resonance Medical Imaging (MRI) from the inside. 12:03PM  
L29.4 Littlewood, Peter: Batteries that Changed the World. 12:39PM  
L29.5 Chu, Steven: How Does My Cellphone GPS Work? – The Physics of Precision Time-Keeping. 1:15PM

L31: Superconductivity and Correlated States in 2D Materials I  
Room: 294  
L31.1 Mak, Kin Fai: TBD - 2D Materials: Metals, Superconductors, and Correlated Materials. 11:15AM

L34: Thermal Transport Modeling - Novel Approaches  
Room: 297  
L34.1 Baroni, Stefano: Car and Parrinello meet Green and Kubo: simulating atomic heat transport from equilibrium ab initio molecular dynamics. 11:15AM  
L34.8 Cepellotti, Andrea: Emergent phenomena in phonon thermal transport. 1:03PM

L39: Fe-based Superconductors: Orbital Effects and Nematicity  
Room: 386  
L39.1 Khodas, Maxim: Interplay and competition between the magnetism, superconductivity and orbital order in iron-based superconductors. 11:15AM

L40: How to Get a Job: Preparing for a Career in Physics  
Room: 387  
L40.1 Bailey, Crystal: Beyond the Rose-Colored Binoculars: How to Launch a Successful Physics Career in the 21st Century. 11:15AM  
L40.2 Mulvey, Patrick: Career Paths for Physics Degree Recipients. 11:51AM  
L40.3 Cherry, Michael: Preparing for a Career at a Research University. 12:27PM  
L40.4 Mack, Gregory: Alternate Careers for Physicists: Science Policy and Government Relations. 1:03PM  
L40.5 Meisner, Gregory: Preparing for a Career in Industrial Physics. 1:39PM

L42: Advances in Analog Quantum Simulation  
Room: 389  
L42.1 Gorshkov, Alexey: Entanglement Generation and Area Law with Long-Range Interactions. 11:15AM

L45: Superconducting Topological Insulator  
Room: 392  
L45.1 Jia, J.F.: tbd. 11:15AM

L46: Focus: Quantum Gates in Superconducting Qubits Continued  
Room: 393  
L46.1 Jin, Xiaoyue: Faster gate operations through strong parametric coupling of superconducting circuits. 11:15AM

L48: Frustrated Magnetism: Spin Ice  
Room: 395  
L48.4 Dutton, Sian: Emergent Order in the Kagome Ising Magnet Dy3Mg2Sb3O14. 11:51AM  
L48.5 Dun, Zhiling: From pyrochlore to the tripod kagome lattice. 12:27PM

NOT=New Orleans Theater
L49: Valley, Spin and Topological Physics  Room: 396
L49.5 Kim, Keun Su: Dirac semimetal state in black phosphorus. 12:03 PM
P0: Special Event Kavli Symposium: Quantum Matter and Quantum Information  Room: Hall I-1
P0.1 Haldane, F. D. M.: Topological States of Quantum Condensed Matter.  2:30PM
P0.2 Kosterlitz, J Michael: Topological Defects and Phase Transitions.  3:06PM
P0.3 Moler, Kathryn: Currents and Phases in Quantum Rings.  3:42PM
P0.5 Cleland, Andrew: Hybrid quantum systems: Outsourcing superconducting qubits.  4:30PM
P0.6 Devoret, Michel: Protecting quantum information in superconducting circuits.  5:06PM

P2: Materials in Extremes VII  Room: 261
P2.1 McMahon, Malcolm: Ultrafast studies of shock-induced melting and phase transitions at LCLS.  2:30PM

P4: Physics of Polymer Surfaces and Interfaces II  Room: 263
P4.7 APS, Abstract: Bulk & Interfacial Contributions to the Adhesion of Acrylic Emulsion-Based Pressure Sensitive Adhesives.  3:42PM

P5: Non-equilibrium Dynamics of Neural Circuits  Room: 264
P5.8 Miller, Kenneth: Transient amplification and short term memory in neural circuits.  3:54PM

P6: Virus Capsid Protein Dynamics  Room: 265
P6.7 de Pablo, Pedro J: Atomic Force Microscopy of virus capsids uncover the interplay between mechanics, structure and function.  3:42PM

P7: First-Principles Modeling of Excited State Phenomena VI: Semiconductors and Oxides  Room: 266
P7.1 Ismail-Beigi, Sohrab: Implementation of highly parallel and large scale GW calculations within the OpenAtom software.  2:30PM

P10: Morphology Evolution and Structure-Property Relationship in Multicomponent Curing Systems  Room: 269
P10.1 Hillmyer, Marc: Functional bicontinuous nanostructures by in situ formation of block polymer modified thermosets.  2:30PM
P10.5 Mehta, Rujul: Reaction Induced Phase Separation in Multi-component Epoxy Thermosets for Large Thickness Casting.  3:42PM

P18: Mechanics and Non-linear Rheology of Soft Gels II  Room: 277
P18.6 Divoux, Thibaut: Nonlinear viscoelasticity and generalized failure criterion for polymer gels.  3:30PM

P21: Soft Tribute to John Cahn  Room: 281-282
P21.2 Cabral, Joao: Reconciliation of Cahn-Hilliard predictions for spinodal decomposition length scales in polymer blends.  2:42PM
P21.4 Langer, James: Softening and Hardening Mechanisms in Dislocation-Enabled Plasticity.  3:30PM
P21.5 Han, Charles: Small Angle Neutron Scattering Study in Multi-Component Polymer Systems: Spinodal Decomposition and Beyond.  4:06PM

P22: Condensed Matter Research at Global Muon Facilities  Room: NOT A
P22.1 Luke, Graeme:Muon Spin Relaxation/Rotation Studies of Novel Magnetic Systems.  2:30PM
P22.2 Morenzoni, Elvezio: Nanoscale investigations of thin films, heterostructures and interfaces with low energy polarized muons..  3:06PM
P22.4 Mengyan, Rick (P.W.): Role of the Muon in Semiconductor Research.  3:54PM
P22.5 Keren, Amit: Is magnetism relevant to cuprate superconductivity: lanthanides versus charge compensated 123?.  4:30PM

P23: Novel 2D Semiconductors  Room: NOT B
P23.4 Javey, Ali: 2D Semiconductor Electronics: Advances, Challenges and Opportunities.  3:06PM

P25: DCP Prize Session  Room: 288
P25.3 Carter, Emily: In the Footsteps of Irving Langmuir: Physical Chemistry in Service of Society.  2:54PM

NOT=New Orleans Theater
March Meeting 2017 Invited Talks.

P28: *Dopants and Defects in Semiconductors VII* Room: 291
P28.1 Janotti, Anderson: Defects and Small Polarons on Oxide Surfaces. 2:30PM

P29: *Lab to Product: the Marketplace* Room: 292
P29.1 Murphy, John: Funding Innovation from an Industry Perspective. 2:30PM
P29.3 Araujo, Carlos: Physics, Materials, Devices and Chips - A Lab to Product Quest. 3:18PM
P29.4 Dallasasse, John: The Oxide-Confined Vertical-Cavity Surface-Emitting Laser: From Dust to Light. 3:54PM

P31: *Magnetism in 2D Materials II* Room: 294
P31.1 Mandrus, Dave: 2D Magnets. 2:30PM

P34: *Nanoscale Charge Transport* Room: 297
P34.1 Bischak, Connor: Carrier, ion, and phonon mediated phase transitions in mixed halide perovskite nanostructures via low-exposure cathodoluminescence imaging. 2:30PM
P34.8 Nelson, Keith: TBD - Electron, Exciton, and Heat Transport in Nanostructures. 4:18PM

P37a: *Dielectric and Ferroelectric Oxides V* Room: 383
P37a.1 Paillard, Charles: Photostriction in ferroelectric and multiferroic materials from first principles. 2:30PM

P40: *Women in Physics: Understanding and Improving the Climate* Room: 387
P40.1 Barthelemy, Ramon: Gender discrimination in physics and astronomy: Graduate student experiences of sexism and gender microaggressions. 2:30PM
P40.2 Lim, Gloria: Women in physics: A comparison to science, technology, engineering, and math education over four decades. 3:06PM
P40.3 Mensah, Felicia: Retelling the educational pathways of Black women physicists: Stories of experiencing and overcoming obstacles in life. 3:42PM

P43: *Manganite Films* Room: 390
P43.10 Arenholz, Elke: Heterogeneity in magnetic complex oxides. 4:18PM

P45: *Majorana Nanowire Based Topological Devices* Room: 392
P45.1 Alicea, Jason: New theory insights and experimental opportunities in Majorana wires. 2:30PM

P46: *Implementing Quantum Algorithms in Experimental Systems* Room: 393
P46.1 Barends, Rami: Challenges ahead in implementing digital quantum algorithms. 2:30PM
P46.2 DiCarlo, Leo: An extensible circuit QED architecture for quantum computation. 3:06PM

P47: *Spin Transport and Topology* Room: 394
P47.4 Karel, Julie: Uncovering Berry: The Role of Topology in the Anomalous Hall Effect of Amorphous Ferromagnetic Fe-Si and Antiferromagnetic Mn3Ge. 3:06PM
P47.8 kondou, kouta: Charge-spin conversion at interfaces with spin splitting. 4:18PM

P48: *Frustrated Magnetism: Quantum Spin Ice* Room: 395
P48.1 Coldea, Radu: Phase diagram and spin dynamics of the frustrated pyrochlore magnet Yb_2Ti_2O_7 in applied field. 2:30PM
P48.5 Armitage, N. Peter: Low energy electrodynamics of the quantum spin ice of Yb_2Ti_2O_7. 3:42PM

P52: *NV Centers and Spin Ensembles* Room: 399
P52.2 Bienfait, Audrey: Controlling spin relaxation with a cavity. 2:42PM

NOT=New Orleans Theater
Special Session Q3: Special Event Public Lecture: The Physics and Materials Science of Superheroes
Room: HALL I-1
Start times after first talk are approximate

Q3.1 Kakalios, James: The Physics and Materials Science of Superheroes. 6:30PM
R2: *Materials in Extremes VIII*  Room: 261
R2.1 Belof, Jonathan: Time-dependent freezing of water under shock and ramp loading.  8:00AM

R4: *Physics of Proteins Association and Recognition II*  Room: 263
R4.4 Cheung, Margaret: Opposing intermolecular tuning of Ca$^{2+}$ affinity for Calmodulin by its target peptides.  8:36AM

R7: *First-Principles Modeling of Excited State Phenomena VII: Phonons and Electron Dynamics*  Room: 266
R7.7 Monserrat, Bartomeu: Electron-phonon coupling from finite displacements: including electron correlation and higher order terms.  9:12AM

R19: *Novel Magnetism and Correlated States in Ultracold Atomic Systems*  Room: 278-279
R19.2 Laburthe-Tolra, Bruno: Quantum magnetism with highly magnetic atoms.  8:12AM
R19.3 Brennecke, Ferdinand: Exploring antiferromagnetic correlations of ultracold atoms in two dimensions.  8:48AM
R19.4 Greiner, Markus: Site-resolved observations of antiferromagnetic correlations in the Hubbard model.  9:24AM
R19.5 Gross, Christian: Exploring quantum magnetism at the single spin and atom level.  10:00AM

R21: *Polymer Glasses in Confinement and Deformation*  Room: 281-282
R21.1 Baschnagel, Jorg: Shear elasticity and shear relaxation in glass-forming polymer melts and films.  8:00AM
R21.5 Caruthers, James: What We Know and Don’t Know About the Thermo-mechanical Behavior of Glassy Polymers.  9:12AM

R22: *Unification of Topological Insulators and the Half-filled Landau Level*  Room: NOT A
R22.1 Metlitski, Max: Electric-magnetic duality of topological insulators.  8:00AM
R22.3 Mong, Roger: Dirac composite fermions in the half-filled Landau level.  8:48AM

R23: *Charge and Heat Transport at the Nanoscale*  Room: NOT B
R23.1 Menges, Fabian: Local probing of thermal energy transfer and conversion processes in VO2 nanostructures.  8:00AM
R23.3 Halbertal, Dorri: Nanoscale thermal imaging of dissipation in quantum systems and in encapsulated graphene.  8:48AM
R23.4 Nowack, Katja C.: Imaging currents in two-dimensional quantum materials.  9:24AM
R23.5 Di Ventra, Massimiliano: Functional Theories of Heat and Charge Transport.  10:00AM

R29: *Industrial Advances in Computation*  Room: 292
R29.1 Demkov, Alexander: Modeling for integrated oxide electronics and photonics.  8:00AM
R29.2 Buongiorno Nardelli, Marco: High-throughput materials discovery and development: breakthroughs and challenges in the mapping of the materials genome.  8:36AM
R29.3 Neugebauer, Jorg: Ab initio guided design of structural materials with superior mechanical properties.  9:12AM
R29.4 Fay, Patrick: Novel Heterostructure Devices for Ultra-Scaled Logic.  9:48AM

R30: *Transition Metal Dichalcogenides: Structure and Defects*  Room: 293
R30.13 Chhowalla, Manish: Phase Engineered 2D Transition Metal Dichalcogenides for Electronics.  10:24AM

R33: *Advanced Spectroscopy*  Room: 296
R33.7 Louie, Steven: TBD - 2D Materials: Semiconductors.  9:12AM

R34: *Nanostructures and Metamaterials*  Room: 297
R34.10 Farao, Andrei: Flat and conformal optics with dielectric metasurfaces.  9:48AM

R38: *Photovoltaics: Thin Film and Nanostructured*  Room: 385
R38.10 Leite, Marina: Functional imaging of photovoltaic materials.  9:48AM

R39: *Fe-based Superconductors: Nematicity II*  Room: 386
R39.6 Meingast, Christoph: New experimental results concerning the nematic state in Fe-based superconductors.  9:00AM
R39.7 Gallais, Yann: Nematic fluctuations and resonance in iron-based superconductors.  9:36AM

NOT=New Orleans Theater
March Meeting 2017 Invited Talks.

R40: Emerging Technologies and the Future of the Nuclear Arsenals  Room: 387
  R40.1 Lieber, Keir: The New Era of Counterforce.  8:00AM
  R40.2 Grego, Laura: Strategic Missile Defense & Nuclear Deterrence.  8:36AM

R42: Spins in Semiconductors, Hyperfine and Spin-Orbit Coupling  Room: 389
  R42.4 Barnes, Edwin: Prolonging the quantum coherence of semiconductor spins.  8:36AM

R43: Magnetic Oxide Interfaces  Room: 390
  R43.6 Benckiser, Eva: Resonant elastic x-ray scattering studies of magnetism in nickelate heterostructures.  9:00AM

R44: Dirac and Weyl Semimetals: Optics II  Room: 391
  R44.4 Moore, Joel: Linear and nonlinear responses in topological semimetals.  8:36AM

R45: Exotic Topological Superconductors  Room: 392
  R45.1 Liu, Feng: Topological Edge States in High-Temperature Superconductor FeSe/SrTiO3(001) Film.  8:00AM

R47: Spin-Orbit Torque III and Chiral Domain Walls  Room: 394
  R47.4 Kurebayashi, Hidekazu: Current-induced spin torques in inversion broken materials.  8:36AM

R49: Mechanics in Morphogenesis  Room: 396
  R49.1 Mani, Madhav: Does the lattice matter? The interplay of tissue mechanics and cell-cell signaling.  8:00AM
  R49.2 Bouaoud, Arezki: Beller Lectureship: Stochasticity and robustness in growth and morphogenesis.  8:36AM
  R49.4 Mahadevan, L.: Motifs in morphogenesis.  9:24AM
  R49.5 Nelson, Celeste: Buckling and folding in lung development.  10:00AM

R50: Artificial Spin Ice and Honeycomb Structures  Room: 397
  R50.6 Fernandez-Pacheco, Amalio: 3D magnetic nanostructures grown by focused electron and ion beam induced deposition.  9:00AM

R51: Error Correction  Room: 398
  R51.1 Kapit, Eliot: Passive Error Correction and Gates for a Very Small Logical Qubit.  8:00AM

R52: Semiconducting QC: Donor and Dot-Donor Qubits, Rolf Landauer and Charles Bennett Award Session  Room: 399
  R52.6 Morello, Andrea: Rolf Landauer and Charles H. Bennett Award Talk: Experimental development of spin qubits in silicon.  9:00AM

NOT=New Orleans Theater
S2: Materials in Extremes IX  Room: 261
S2.1 mazevet, stephane: Ab initio equation of states for planetary and exoplanetary modeling. 11:15AM

S4: Photoreceptor and Signal Transduction  Room: 263
S4.7 Crane, Brian: Understanding blue-light photoreceptors. 12:27PM

S5: Machine Learning for Modeling and Control of Biological Systems I  Room: 264
S5.1 Neuret, Gregor: Dynamic control and model inference of signal activated gene regulation. 11:15AM

S7: Theory and Simulation of Fiber-Based Materials  Room: 266
S7.2 MacKintosh, Fred: Mechanical critical phenomena and the elastic response of fiber networks. 11:27AM

S9: Tough Hydrogels I  Room: 268
S9.7 Creton, Costantino: Physics and Mechanics of dual-crosslink gels. 12:27PM

S11: Tuning Polymer Rheology for Printing, Spinning, or Coating Applications  Room: 270
S11.1 Ellison, Chris: A new approach for high performance fiber manufacturing via simultaneous fiber spinning and UV initiated polymerization. 11:15AM

S13: Quantum Optics in Hybrid Systems: Noise, Photon Emission, and Optomechanical Transduction  Room: 272
S13.1 Hosseini, Mahdi: Quantum state detection and state preparation based on cavity-enhanced nonlinear interaction of atoms with single photon. 11:15AM

S19: Nanothermodynamics and Quantum Information  Room: 278-279
S19.1 Crooks, Gavin: Fluctuation theorems, optimal control, and information engines. 11:15AM
S19.2 Murch, Kater: Exploring quantum thermodynamics in continuous measurement of superconducting qubits. 11:51AM
S19.3 Jarzynski, Christopher: Nanothermodynamics in the strong coupling regime. 12:27PM
S19.5 Campbell, Steve: Trade-off between speed and cost in shortcuts to adiabaticity. 1:03PM

S21: Medical Physics Today and Tomorrow  Room: 281-282
S21.1 Gatenby, Robert: The Fundamental Role of Darwinian Dynamics in Cancer. 11:15AM
S21.2 Austin, Robert: Attacking cancer dormancy using game theory. 11:51AM
S21.3 Bortfeld, Thomas: Advancing Cancer Treatment Delivery - Role of Physics. 12:27PM
S21.4 Jeraj, Robert: Implications of Tumor Heterogeneity for Precision Medicine. 1:03PM

S22: Artificial Spin Ice and Related Frustrated Artificial Materials  Room: NOT A
S22.1 Chern, Gia-Wei: Recent development of artificial spin ice: a theoretical perspective. 11:15AM
S22.4 Canals, Benjamin: Artificial magnets as model systems: from the fragmentation of magnetization to the 6-vertex model. 12:15PM

S23: Superconductivity and Its Competitors  Room: NOT B
S23.1 Hirschfeld, Peter: High Tc in monolayers and intercalates of FeSe: role of incipient bands and orbital selectivity. 11:15AM
S23.2 Chubukov, Andrey: Interplay between magnetism, superconductivity, and orbital order in iron-based superconductors – parquet renormalization group study. 11:51AM
S23.4 Kasahara, Shigeru: BCS-BEC crossover in FeSe with small Fermi energies. 12:39PM
S23.5 Behnia, Kamran: Superconductivity and ferroelectricity in calcium-substituted-oxygen-reduced strontium titanate. 1:15PM

S24: Progress in Physics Inspired by Walter Kohn  Room: NOT C
S24.1 Niu, Qian: Geometric phase effects in Bloch bands. 11:15AM
S24.2 Murdin, Ben: Theory of Donor States in Silicon. 11:51AM
S24.3 Burke, Kieron: Density Functional Theory: A great physics success story. 12:27PM
S24.5 Galli, Giulia: Predicting materials for sustainable energy sources: The key role of density functional theory. 1:15PM

NOT=New Orleans Theater
March Meeting 2017 Invited Talks.

S25: Focus Session Chemical Physics Frontiers at Interfaces II  Room: 288
S25.1 Eisenthal, Kenneth: Frontiers at Interfaces. 11:15AM
S25.6 Bonn, Mischa: Charge Transfer across Quantum Dot-Oxide Interfaces for High-Efficiency Photovoltaics. 12:39PM

S26: Chemical Physics at the Edges I  Room: 289
S26.1 Ho, Wilson: Atomic-Scale Inelastic Tunneling Probe of Molecular Potentials. 11:15AM
S26.2 Gross, Leo: Radical Chemistry and Charge Manipulation with an Atomic Force Microscope. 11:51AM

S28.1 Falco, Charles: Ibn al-Haytham and His Influence on Post-Medieval Western Culture. 11:27AM
S28.4 Guardincerri, Elena: Applications of Muon Radiography. 12:39PM

S29: Entrepreneurs: Building the Company  Room: 292
S29.3 Biberger, Maximilian: Starting Up a Company in a Mature Market: Wise or Foolish ?. 11:39AM
S29.5 Murry, Stefan: Applying Scientific Skills to the Business World. 12:27PM

S31: Superconductivity and Correlated States in 2D Materials II  Room: 294
S31.1 Crommie, Michael: Local Probe Characterization of Novel Electronic Phases in 2D Transition Metal Dichalcogenides. 11:15AM

S33: Structural and Electronic Properties  Room: 296
S33.7 Dani, Keshav: Imaging the motion of electrons in 2D semiconductor heterostructures.. 12:27PM

S34: Plasmonics  Room: 297
S34.4 Ma, Renmin: Room Temperature Ultralow Threshold Plasmonic Nanolasers with Unusual Scaling Laws. 11:51AM

S37a: Complex Oxide Interfaces and Heterostructures - Defects at Oxide Interfaces  Room: 383
S37a.6 Diebold, Ulrike: TBD - Complex Oxide Interfaces and Heterostructures. 12:15PM

S42: Spins and Defects in Si and SiC  Room: 391
S42.1 Christie, David: Creating and Controlling Single Spins in Silicon Carbide. 11:15AM
S42.5 Koehl, William: Resonant optical spectroscopy and coherent control of Cr$^{4+}$ spin ensembles in SiC and GaN. 12:27PM

S44: Dirac and Weyl Semimetals: Theory IV  Room: 391
S44.1 Lucas, Andrew: Hydrodynamics of the Dirac fluid in graphene. 11:15AM

S47: Magnetization Dynamics II, Metals and Insulators  Room: 394
S47.4 Kelly, Paul J.: Applications of the scattering theory of magnetization damping. 11:51AM

S49: Patterns and Control in Animal Behavior  Room: 396
S49.1 Osborne, Leslie: Shared Sensory Estimates for Human Motion Perception and Pursuit Eye Movements. 11:15AM
S49.2 Berman, Gordon: Predictability and hierarchy in animal behavior. 11:51AM
S49.3 Leifer, Andrew: Whole-brain neural dynamics and behavior in a freely moving worm. 12:27PM
S49.4 Brown, Andre: Representation matters: quantitative behavioral variation in wild worm strains. 1:03PM
S49.5 Fee, Michale: Rhythmic Continuous-Time Coding in the Songbird Analog of Vocal Motor Cortex. 1:39PM

S51: Nonreciprocal Devices for Circulation, Amplification, and Readout  Room: 398
S51.1 Hatridge, Michael: Circulation and Directional Amplification in the Josephson Parametric Converter. 11:15AM

S53: Assembly of Particles on Fluid Interfaces  Room: 287
S53.2 Bevan, Michael: Feedback Controlled Colloidal Assembly at Fluid Interfaces. 11:27AM
S53.4 Manoharan, Vinodathan N.: How contact-line pinning affects the dynamics of colloidal particles at fluid interfaces. 12:15PM
S53.5 Griffiths, Ian: Mathematical modelling for improved control of magnetic particle interfacial assembly. 12:51PM

NOT=New Orleans Theater
V4: Neural Control of Behavior  Room: 263
V4.4 Ahrens, Misha: Probing the neural control of behavior with whole brain imaging in zebrafish.  3:06PM

V5: Physics of Cellular Organization  Room: 264
V5.1 Gramlich, Michael: Sharing is Caring: The Role of Actin/Myosin-V in Synaptic Vesicle Transport between Synapses in vivo.  2:30PM

V8: Special APS Presidential Session on Diversity: The Value of Diversity in Physics: Talking Points for Supreme Court Cases & Beyond  Room: 267
V8.2 Bertschinger, Ed: TBD.  2:42PM
V8.3 Levine, Sheen S.: TBD.  3:18PM
V8.4 Gates, Sylvestre J.: TBD.  3:54PM
V8.5 Otero, Valerie: TBD.  4:30PM

V9: Tough Hydrogels II  Room: 268
V9.11 Feinberg, Adam: Three-Dimensional Printing of Complex Structures by Freeform Reversible Embedding of Suspended Hydrogels (FRESH).  4:30PM

V10: Polymers Adsorbed onto Solids - Interplay Among Structures, Dynamics, and Properties II  Room: 269
V10.1 Napolitano, Simone: How irreversible adsorption affects segmental dynamics and glass transition temperature.  2:30PM

V11: Polymer Crystallization  Room: 270
V11.4 Miyoshi, Toshikazu: Chain Trajectory of Semicrystalline Polymers As Revealed by Solid-State NMR Spectroscopy.  3:06PM

V14: Noise and Stochastic Fluctuations in Biological Systems  Room: 273
V14.1 Mather, William: Excitable toxin-antitoxin modules coordinated through intracellular bottlenecks.  2:30PM
V14.5 Iyer-Biswas, Srividya: Emergent simplicity in stochastic single-cell dynamics.  3:42PM

V18: Function from Geometry: 3D Printing to Programmable Matter II  Room: 277
V18.1 Inamura, Chikara: High Fidelity Additive Manufacturing of Optically Transparent Glass Structures.  2:30PM

V19.1 Gonze, Xavier: Electronic structure of solids, including vibrational effects: Temperature dependence and zero-point motion.  2:30PM
V19.2 Allen, Philip: Electronic properties with and without electron-phonon coupling.  3:06PM
V19.3 Dreyer, Cyrus E.: The role of electron-phonon coupling in carrier capture at defects.  3:42PM
V19.5 Chan, Garnet: Predictive density matrix embedding theory of correlated systems.  4:30PM

V21: Statistical Physics of On-line Reputation  Room: 281-282
V21.2 Cimini, Giulio: Algorithms for reputation and quality in scientific e-communities.  2:42PM
V21.3 Ciampaglia, Giovanni: Comparing the diffusion of reliable and unreliable information.  3:18PM
V21.5 Aste, Tomaso: Distortion of on-line reputation by excess reciprocity: quantification and estimation of unbiased reputation.  4:06PM

V22: Nematic Superconductivity in Doped Topological Materials  Room: NOT A
V22.4 Li, Lu: Rotational Symmetry Breaking in a Trigonal superconductor Nb-doped Bi2Se3.  3:06PM
V22.5 Kim, Hyunsoo: Beyond Triplet: Unconventional Superconductivity in a Spin-3/2 Topological Semimetal.  3:42PM

V23: Novel Transport Properties of Electrons and Ions Near the Surface of the Helium Liquids  Room: NOT B
V23.2 Ikegami, Hiroki: Topological aspects of superfluid 3He investigated by ions trapped at the surface.  2:42PM
V23.5 Konstantinov, Denis: Strong coupling of an electron ensemble on the surface of liquid helium to a microwave cavity.  3:42PM

NOT=New Orleans Theater
March Meeting 2017 Invited Talks.

V24: Detection and Imaging of Magnetic Dynamics Using Nitrogen-Vacancy Centers in Diamond  Room: NOT C
V24.2 Berezovsky, Jesse: Coupling nitrogen-vacancy centers to a dynamic ferromagnetic vortex for fast, nanoscale spin addressability and control.  2:42PM
V24.3 Bhallamudi, Vidya: Detecting ferromagnetic dynamics using spinwave induced relaxation of NV spins in diamond.  3:18PM
V24.4 Jayich, Ania: Application of nitrogen vacancy centers for imaging superconducting vortices and spin-relaxation based magnetic resonance probes.  3:54PM
V24.5 Jacques, Vincent: Imaging complex magnetic textures with a single spin microscope.  4:30PM

V25: Focus Session Chemical Physics Frontiers at Interfaces III  Room: 288
V25.6 Lian, Tianquan: Efficient Hot Electron Transfer by Plasmon Induced Interfacial Charge Transfer Transition.  3:30PM

V26: Chemical Physics at the Edges II  Room: 289
V26.1 Huang, Libai: Ultrafast Microscopy of Energy and Charge Transport.  2:30PM
V26.2 Ginsberg, Naomi: Resolving ultrafast exciton migration in organic solids at the nanoscale.  3:06PM
V26.3 Papanikolas, John: Visualization of Transport Dynamics in Nanostructures with Pump-Probe Microscopy.  3:42PM

V29: FIAP Entrepreneurial Panel Discussion and Prize Session  Room: 292
V29.1 Panel, Entrepreneurial: FIAP Entrepreneurial Panel.  2:30PM
V29.3 Chen, Tze-Chiang (T.C): George E. Pake Prize Lecture: CMOS Technology Roadmap: Is Scaling Ending?.  3:18PM
V29.4 Khan, Asad: Prize for Industrial Applications of Physics: Reflective Cholesteric Liquid Crystals – Innovations in Materials, Display Technology, and Commercialization.  3:54PM

V31: Superconductivity and Correlated States in 2D Materials III  Room: 294
V31.4 Oezyilmaz, Barbaros: Tuneable highly-correlated phases in two-dimensional superconductors.  3:06PM

V37a: Dielectric and Ferroelectric Oxides VII  Room: 383
V37a.1 Kalinin, Sergei: Ferroionic states: coupling between surface electrochemical and bulk ferroelectric functionalities on the nanoscale.  2:30PM

V40: Marie Curie - A 150th Birthday Celebration  Room: 387
V40.1 Gueye, Paul: Marie Curie: the Curie Institute in Senegal to Nuclear Physics.  2:30PM
V40.2 Murray, Cherry: Marie Curie and Mildred Dresselhaus, inspirations to women in science.  3:06PM
V40.3 Howes, Ruth: Marie Curie: Physicist and Woman.  3:42PM

V41: Fe-based Superconductivity. Spectroscopies  Room: 388
V41.1 Carrington, Antony: Superconducting energy gap structure in KFe2As2 and BaFe2(As1−xP_x)2.  2:30PM

V49: Multiscale Physics of Cellular Remodeling  Room: 396
V49.1 Loerke, Dinah: Cell intercalation in morphogenesis.  2:30PM
V49.2 Digman, Michelle: Frontiers in Fluctuation Spectroscopy: Measuring protein dynamics and protein spatio-temporal connectivity.  3:06PM
V49.3 Kasza, Karen: Force generation within tissues during development.  3:42PM
V49.5 Curtis, Jennifer: Spreading and contraction in phagocytosis: The role of actin organization and curvature.  4:30PM

V50: Skyrmions  Room: 397
V50.4 Gilbert, Dustin: Probing depth-dependent spin textures in artificial skyrmions, magneto-ionic systems and HAMR media.  3:06PM

V51: Nonreciprocal Devices with Circuits and Optomechanics  Room: 398
V51.1 Lecocq, Florent: Experimental demonstrations of nonreciprocal microwave amplification.  2:30PM

NOT=New Orleans Theater
X6: **Physics of Development and Disease I**  Room: 265
X6.4 Enderling, Heiko: Local and systemic tumor immune dynamics.  8:36AM

X14: **Knotted Biomolecules**  Room: 273
X14.4 Jennings, Patricia: Pierced Lasso Proteins.  8:36AM

X18: **Continuum Descriptions of Discrete Materials**  Room: 277
X18.11 Behringer, Robert: How sand grains stop a high speed intruder.  10:00AM

X19: **Theory and Simulations of Defect Spin Qubits in Semiconductors**  Room: 278-279
X19.2 Ivdy, Viktor: First-principles theory on dynamic spin polarization of nuclei in solids.  8:12AM
X19.3 Alkauskas, Audrius: Marshak Lectureship: Vibrational properties of isolated color centers in diamond.  8:48AM
X19.4 Kortan, Victoria: Transition-Metal Dopants in Tetrahedrally Bonded Semiconductors.  9:24AM
X19.5 Doherty, Marcus: The physics and technology of Nitrogen-vacancy centers.  10:00AM

X21.1 Engel, Greg: Optical multiple-dimension spectroscopy of photosynthetic systems.  8:00AM
X21.3 Li, Huilin: Cryo-EM visualization of the protein machine that replicates the chromosome.  8:48AM
X21.4 Collins, Philip: Single Molecule Enzymology via Nanoelectronic Circuits.  9:24AM
X21.5 Hegemann, Peter: From channel rhodopsins to optogenetics.  10:00AM

X22: **Room Temperature Multiferroic BiFeO3**  Room: NOT A
X22.4 Lee, Jun Hee: Giant spin-induced polarization and optical-diode effect by electromagnons in BiFeO3.  8:36AM
X22.5 de Sousa, Rogério: Electric-field control of magnetism and magnons in the room temperature multiferroic BiFeO3.  9:12AM

X23: **Electron Correlations and Nematic Order in Iron-based Superconductors**  Room: NOT B
X23.1 Birgeneau, Robert: Electron correlations and magnetism in iron-based superconductors.  8:00AM
X23.2 Dagotto, Elbio: Unexpected Complexity in Iron Based Superconductors.  8:36AM
X23.3 Kreyssig, Andreas: Strong cooperative coupling of pressure-induced magnetic order and nematicity in FeSe.  9:12AM
X23.5 Fisher, Ian: Elastoresistance measurements as a probe of electronic nematicity in Fe-based superconductors.  10:00AM

X24: **Transport, Geometry and Entanglement in Fractional Quantum Hall Effect**  Room: NOT C
X24.1 Papic, Zlatko: Microscopic studies of geometry in the fractional quantum Hall effect.  8:00AM
X24.4 Bhatt, Ravindra: Disorder Driven Fractional Quantum Hall To Insulator Transitions.  9:00AM
X24.5 Eisenstein, James: Spin-dependent tunneling and particle-hole symmetry breaking in 2D electron systems in the fractional quantum Hall regime.  9:36AM

X25: **Focus Session Chemical Physics Frontiers at Interfaces IV**  Room: 288
X25.7 Koch, Norbert: Frontiers of controlling energy levels at interfaces.  9:12AM

X26: **Chemical Physics at the Edges III**  Room: 289
X26.1 Leone, Stephen: Attosecond electronic band gap dynamics.  8:00AM
X26.2 Chang, Zenghui: Isolated attosecond pulses in the water window.  8:36AM

X27: **Dipolar Interactions in Ultracold Gases**  Room: 290
X27.1 Ferlaino, Francesca: Extended Bose-Hubbard models with ultracold magnetic atoms.  8:00AM

X29: **The Butterfly Plot Turns 40**  Room: 292
X29.1 Hofstadter, Douglas: Bumping into the Butterfly, When I Was But a Bud.  8:00AM
X29.2 Claro, Francisco: The Hofstadter Butterfly and some physical consequences.  8:36AM
X29.5 Ketterle, Wolfgang: Ultracold atoms in strong synthetic magnetic fields.  9:36AM
<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Room</th>
<th>Speaker</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>X34</td>
<td><em>Plasmonic Metamaterials</em></td>
<td>297</td>
<td>Koenderink, Femius: Light-matter interaction in hybrid plasmonic-photonic resonators</td>
<td>8:36AM</td>
</tr>
<tr>
<td>X40</td>
<td>Division of Physics of Beams and Forum on International Physics Introduce the World's Newest Light Sources</td>
<td>387</td>
<td>Huang, Di-Jing: Status and Opportunities of Taiwan Photon Source</td>
<td>8:12AM</td>
</tr>
<tr>
<td>X40.2</td>
<td></td>
<td></td>
<td>Eriksson, Mikael: Status and Future Development Plans for the MAX IV Light Sources: pushing further towards high brightness and coherence.</td>
<td>8:48AM</td>
</tr>
<tr>
<td>X40.4</td>
<td></td>
<td></td>
<td>Ko, In: New Research Opportunities with PAL-XFEL Facility</td>
<td>9:24AM</td>
</tr>
<tr>
<td>X40.5</td>
<td></td>
<td></td>
<td>Paolucci, Giorgio: SESAME: an opportunity for science in the Middle-East</td>
<td>10:00AM</td>
</tr>
<tr>
<td>X41</td>
<td><em>Fe-based Superconductivity: Magnetic Excitations</em></td>
<td>388</td>
<td>Dai, Pengcheng: Uniaxial pressure dependence of the magnetic ordered moment and transition temperatures in BaFe2-xNixAs2</td>
<td>8:00AM</td>
</tr>
<tr>
<td>X42</td>
<td>Spin Transport in III-V and Group IV Semiconductors</td>
<td>389</td>
<td>Ciorga, Mariusz: Giant spin signals in two-terminal ferromagnet/2DEG/ferromagnet spin-valve devices.</td>
<td>8:00AM</td>
</tr>
<tr>
<td>X43</td>
<td>Defects and Structural Control in Magnetic Oxide Heterostructures</td>
<td>390</td>
<td>Kan, Daisuke: Interface engineering of metal-oxygen bonds as a new route for exploring functional properties of transition metal oxides.</td>
<td>9:24AM</td>
</tr>
<tr>
<td>X45</td>
<td>Two-Dimensional Topological Superconductors: II</td>
<td>392</td>
<td>Matos Abiague, Alex: Manipulating Majorana Bound States with Tunable Magnetic Textures.</td>
<td>8:00AM</td>
</tr>
<tr>
<td>X46</td>
<td>Topological Quantum Information</td>
<td>393</td>
<td>Car, Diana: Synthesis of InSb Nanowire Architectures – Building Blocks for Majorana Devices</td>
<td>8:00AM</td>
</tr>
<tr>
<td>X48</td>
<td>Frustrated Magnetism: 2D Antiferromagnets</td>
<td>395</td>
<td>Garlea, Ovidiu: Supersolid-like magnetic states in a mixed honeycomb-triangular lattice system.</td>
<td>9:00AM</td>
</tr>
<tr>
<td>X49</td>
<td>Robot Scientists and Machine Learning for Automated Modeling and Control of Complex Systems</td>
<td>396</td>
<td>King, Ross: The Adam and Eve Robot Scientists for the Automated Discovery of Scientific Knowledge.</td>
<td>8:00AM</td>
</tr>
<tr>
<td>X49.1</td>
<td></td>
<td></td>
<td>Lipson, Hod: Automated inference of biological and physical models</td>
<td>8:36AM</td>
</tr>
<tr>
<td>X49.3</td>
<td></td>
<td></td>
<td>Daniels, Bryan: Automated adaptive inference of phenomenological dynamical models.</td>
<td>9:12AM</td>
</tr>
<tr>
<td>X49.4</td>
<td></td>
<td></td>
<td>Brunton, Steven: Discovering governing equations from data by sparse identification of nonlinear dynamics.</td>
<td>9:48AM</td>
</tr>
<tr>
<td>X49.5</td>
<td></td>
<td></td>
<td>Marzen, Sarah: Thinking in machines, not statistics.</td>
<td>10:24AM</td>
</tr>
<tr>
<td>X50</td>
<td>Nanoscale Magnetic Dynamics</td>
<td>397</td>
<td>Kimel, Alexey: Femtosecond control and dynamics of magnetism at the nanoscale</td>
<td>8:36AM</td>
</tr>
<tr>
<td>X50.4</td>
<td></td>
<td></td>
<td>Keatley, Paul: The magnetization dynamics of nano-contact spin-torque vortex oscillators.</td>
<td>9:48AM</td>
</tr>
</tbody>
</table>

NOT=New Orleans Theater
Y6: Physics of Development and Disease II  Room: 265
Y6.7 Gilkes, Daniele: Hypoxia alters the physical properties of the tumor microenvironment.  12:27PM

Y19: Computational Approaches for Energy Materials  Room: 278-279
Y19.1 Ahuja, Rajeev: Beller Lectureship: Materials for Li & Na Batteries :A Computational Materials Science Point of View.  11:15AM
Y19.2 Jena, Puru: Rational design of nontoxic electrolytes for metal-ion batteries.  11:51AM
Y19.3 Neaton, Jeffrey B.: Discovery of new solar fuels photoanode materials with a combination of high-throughput theory and experiment.  12:27PM
Y19.5 Hoang, Khang: Defect physics as key to understanding complex battery electrode materials.  1:15PM

Y21: Emergent Magnetism at Oxide Interfaces  Room: 281-282
Y21.1 Bhattacharya, Anand: Tailoring non-collinear magnetism in oxide heterostructures, a path to novel memory.  11:15AM
Y21.2 Liu, Yaohua: Emergent Magnetic Phenomena at Oxide Interfaces.  11:51AM
Y21.3 Grutter, Alexander: Controlling Emergent Ferromagnetism at Complex Oxide Interfaces.  12:27PM
Y21.4 Han, Myung-Joon: Magnetism, spin-lattice-orbital coupling and exchange-correlation energy in oxide heterostructures: Nickelate, titanate, and ruthenate.  1:03PM
Y21.5 Gibert, Marta: Magnetic coupling through lanthanum nickelate in non-metallic (111) LaMnO$_3$/LaNiO$_3$ superlattices.  1:39PM

Y22: Experimental Progress of Valley Transport in 2D Materials  Room: NOT A
Y22.1 Mak, Kin Fai: Valley and spin dependent physics in two-dimensional materials.  11:27AM
Y22.2 Lau, Chun Ning: Tunable valley symmetries of quantum Hall states in few-layer graphene.  12:03PM
Y22.4 Ju, Long: Topological Valley Transport at Bilayer Graphene Domain Walls.  12:39PM

Y23: New Developments in Topological Photonics: Interactions, Non-Hermiticity and Beyond  Room: NOT B
Y23.2 Khanikaev, Alexander: Three-Dimensional All-Dielectric Photonic Topological Insulator.  11:27AM
Y23.3 Hafezi, Mohammad: Quantum transport properties in topological photonics.  12:03PM

Y24: Optomechanics with Fluids and Superfluids  Room: NOT C
Y24.1 Lu, Tao: Cavity Optical Spring Sensing.  11:15AM
Y24.2 Harris, Jack: Quantum optomechanics in a superfluid-filled cavity.  11:51AM
Y24.3 Bowen, Warwick: Probing the dynamics of two dimensional superfluids with cavity optomechanics.  12:27PM
Y24.4 Carmon, Tal: Ripplon Laser.  1:03PM
Y24.5 Favero, Ivan: Control of nano-optomechanical resonators in liquids.  1:39PM

Y34: Quantum Effects in Plasmonic Metamaterials  Room: 297
Y34.7 Mortensen, N. Asger: Quantum and nonlocal phenomena in plasmonic nanoparticles.  12:27PM

Y36: Thermoelectrics: Characterization, Nanostructures  Room: 299
Y36.1 He, Jian: TBD - Thermoelectric Materials and Novel Thermoelectric Phenomena.  11:15AM

Y40: Climate Change and Sea Level Rise  Room: 387
Y40.1 Corden, Pierce: Sea Level Rise and Its Effects on U.S. And European Cities.  11:15AM
Y40.2 Hannett, Michael P.: Climate Change in the Pacific Islands.  11:51AM
Y40.4 Kopp, Robert: Challenges of projecting local sea-level changes and their uncertainties.  12:39PM

Y41: Fe-based Superconductivity. C$_4$ and other Subjects  Room: 388
Y41.1 Chmaissem, Omar: Universal Properties of the C$_4$ Magnetic Phase in Hole Doped Ternary Superconducting Pnictides.  11:15AM

Y42: Solid-State Hole Spin Qubits  Room: 389
Y42.1 Korkusinski, Marek: Hole spins as qubits in gated lateral devices opportunities and challenges.  11:15AM

NOT=New Orleans Theater
Y45: Topological Superconductivity: Theory  Room: 392
Y45.1 Jiang, Yi-Fan: Edge quantum criticality and emergent supersymmetry in topological phases.  11:15AM

Y49: Environment-energy Nexus a Physics Perspective  Room: 396
Y49.1 Banavar, Jayanth: Metabolic scaling and biodiversity of forests.  11:15AM
Y49.3 Croze, Ottavio: Growing swimming algae for bioenergy.  12:03PM
Y49.4 Maranas, Janna: Cell wall science for a sustainable future.  12:39PM
Y49.5 Ostling, Annette: Inferring biodiversity maintenance mechanisms from ecological pattern.  1:15PM
March Meeting Invited Talks.

*Focus Sessions* in italics, *Invited Sessions* in bold.