

“Brookhaven Forum 2017: In Search of New Paradigms”
Brookhaven National Laboratory, Upton, NY, October 11-13, 2017

Wednesday, October 11, 2017		
PLENARY SESSION I, Berkner Hall, Auditorium, Chair: S. Dawson		
8:45-9:00 a.m.	Welcome	H. Ma (Chair, Physics Dept., BNL), H. Davoudiasl (BNL), A. Soni (BNL)
9:00-9:45 a.m.	CMS	Markus Klute (CMS, MIT)
9:45-10:30 a.m.	ATLAS	Simone Pagan Griso (ATLAS, LBL)
10:30-11:00 a.m.	Coffee Break	Berkner Hall Lobby
PLENARY SESSION II, Berkner Hall, Auditorium, Chair: G. Landsberg		
11:00-11:45 a.m.	“Status and Outlook for Precision Calculations Relevant to SM Measurements and New Physics Searches at the LHC (and Beyond)”	Giulia Zanderighi (Oxford)
11:45-12:30 p.m.	Ultra-light Scalar Dark Matter	Jeremiah Ostriker (Princeton)
12:30-2:00 p.m.	Lunch (on your own)	Berkner Hall Cafeteria

2:00-3:40 p.m. PARALLEL SESSION, Berkner Hall (Talks are 15' + 5' minutes)			
Electroweak Physics Location: Auditorium Chair: P.P. Giardino	Dark Sectors Location: A Chair: G. Krnjaic	Flavor Location: B Chair: M. Blanke	Beyond the SM Location: C Chair: E. Rinaldi
S.C. Hsu: LHC Results: Electroweak	D. Hitlin: Dark Sector Searches with BABAR	V. Gaur: Charmless Hadronic B Decays from Belle	G. Barone: Latest Results on the Beyond the Standard Model Higgs searches from ATLAS & CMS
S. Bar-Shalom: Model Independent Studies of New Physics in Higgs + Jet(b-jet)	D. Hitlin: Dark Sector Searches with LDMX	B. Pal: R(D*) and R(K*) at Belle	R. Ruiz: Left-Right Symmetry: At the Edges of Phase Space and Beyond
C. Murphy: A Statistical Approach to Higgs Couplings in the SMEFT	J. Kozaczuk: Dark Photons from Nuclear Transitions	O. Leroy: BSM Searches with Tests of LFU and Rare Decays at LHCb	Y. Aoki: Spectral Properties and S Parameter of Nf=8 QCD
T. Cheng: LHC Results: Standard Model Higgs	J-H Chang: Supernova 1987A Constraints on Low-Mass Hidden Sectors	O. Witzel: Lattice B-physics	
D. Ugrinovic: The Minimal Fermionic Model of Electroweak Baryogenesis	A. Wijangco: Higgs Boson Decays to Dark Photons through the Vectorized Lepton Portal	A. Di Canto: CP Violation Measurements in Beauty and Charm Hadrons at LHCb	
3:40-4:00 p.m.	Coffee Break		Berkner Hall Lobby
4:00-5:00 p.m.	BSA Distinguished Lecture: “The Warped Universe: The One Hundred Year Quest to Discover Einstein’s Gravitational Waves,” Prof. Nergis Mavalvala (MIT, LIGO)		Berkner Hall Auditorium Hosted by Peter Wanderer (BNL)
5:00-6:00 p.m.	BSA Welcome Reception		Berkner Hall Lobby

Thursday, October 12, 2017		
PLENARY SESSION I, Berkner Hall, Auditorium, Chair: O. Leroy		
9:00-9:45 a.m.	Highlights from Flavor Physics	Monika Blanke (Karlsruhe)
9:45-10:30 a.m.	Higgs Physics: Behind and Beyond the SM	Christophe Grojean (DESY)
10:30-11:00 a.m.	Coffee Break and Event Photo	Berkner Hall, Lobby
PLENARY SESSION II, Berkner Hall, Auditorium, Chair: W. Marciano		
11:00-11:45 a.m.	Present Status and Future of Neutrino Physics	Patrick Huber (Virginia Tech)
11:45-12:30 p.m.	New Ideas and Status of Dark Sector Theory and Searches	Gordan Krnjaic (Fermilab)
12:30-2:00 p.m.	Lunch (on your own)	Berkner Hall Cafeteria

*Please contact the event coordinator, Nicole Kelly at nkelly@bnl.gov, for assistance.

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Thursday, October 12, 2017 (continued)			
2:00-3:20 p.m. PARALLEL SESSION, Berkner Hall (Talks are 15' + 5' minutes)			
Higgs Location: Auditorium Chair: C-Y Chen	Dark Matter Location: A Chair: R. Dermisek	SM Location: B Chair: C. Murphy	Neutrinos Location: C Chair: C. Lehner
S. Homiller: Measuring the Higgs Trilinear Coupling at HE-LHC	Y. Zhang: Self Destructive Dark Matter	O. Behnke: TOP and QCD studies with ATLAS and CMS	A. Meyer: Lattice QCD and Neutrino Physics
P. Huang: Double Higgs at the LHC	P.P. Giardino: Dark Matter in the Exo Higgs scenario	K. Hatakeyama: Future Prospects of CMS/ATLAS	M. Sholapurkar: Neutrino Background for Sub-GeV Dark Matter-electron Scattering
M. Sullivan: Double Higgs Production in the Singlet Extended Standard Model	S. Shin: Dark Matter Collider: Relativistic Scattering of Boosted Dark Matter	M. Bruno: Towards a Non-Perturbative Calculation of Weak Hamiltonian Wilson Coefficients	C-T Chiang: Separate Universe Simulations with Massive Neutrinos
X. Wang: Radiative Decays of the Higgs Boson to a Pair of Fermions	Y-D Tsai: Optical, Gravitational, and Radio Signatures of DM-induced Neutron Star Implosions	I. Lewis: Double Gauge Boson Production in the SM EFT	C. Zhang: The Latest Daya Bay Results
3:20-3:50 p.m.	Coffee Break	Berkner Hall Lobby	
3:50-5:10 p.m. PARALLEL SESSION II, Berkner Hall (Talks are 15' + 5' minutes)			
Higgs + Naturalness Location: Auditorium Chair: S. Bar-Shalom	Intensity Frontier Location: A Chair: M. Bruno	Cosmology Location: B Chair: Y. Zhang	Beyond the SM Location: C Chair: I. Lewis
Z. Liu: Probing Higgs Physics Through Interference Effects	V. Tishchenko: Status of the Muon g-2 Experiment	E. Rinaldi: Dark Interactions and Supercomputers	J. Kim: Loop-induced Single Top Partner Production at the LHC
B. Carlson: LHC Results: SUSY+Exotics	C. Lehner: g-2 on the Lattice	M. Buen-Abad Najar: Interacting Dark Sector and Precision Cosmology	D. Debnath: Resolving combinatorial ambiguity using constrained M2 variable
R. Dermisek: Little Hierarchy in the Minimally Specified MSSM	S. Knapen: Searching for Long-lived Particles: A Compact Detector for Exotics at LHCb	G. White: Colour Breaking Baryogenesis	D. Wiegand: Radiative Corrections in Universal Extra Dimensions
	C-Y Chen: Muon Beam Experiments to Probe the Dark Sector	Y. Nakai: Entanglement Entropy and Decoupling in the Universe	T. Kohsaku: Diphoton Resonance Below Higgs Mass at LHC
Coach Transportation – Berkner Hall @ 6:00 p.m. <i>**Please arrive about 15 minutes prior for boarding.</i> Dinner 6:30-9:00 p.m.	BF2017 Banquet Dinner at Majestic Gardens (included in reg. fee) Transportation will be provided for all attendees by Hampton Jitney <i>The coach bus will depart from Berkner Hall promptly at 6:00pm. The bus will then depart Majestic Gardens at 9:00pm and return to Berkner Hall. For those staying at the Hampton Inn, the hotel shuttle has conveniently been scheduled to transport attendees from Berkner Hall back to the hotel at 9:30pm.</i>		

Friday, October 13, 2017		
PLENARY SESSION I, Berkner Hall, Auditorium, Chair: E. Sheldon		
9:00-9:45 a.m.	Cosmology and Neutrino Physics	Pasquale Di Bari (USouthampton)
9:45-10:30 a.m.	Testing the LCDM Paradigm with Large-scale Structure Probes	Katrin Heitmann (Argonne)
10:30-11:00 a.m.	Coffee Break	Berkner Hall Lobby
PLENARY SESSION II, Berkner Hall, Auditorium, Chair: G. Sterman		
11:00-11:45 p.m.	New Ideas and Status of Direct Detection of Dark Matter	Aaron Manalaysay (UC Davis)
11:45-12:30 p.m.	Status and Prospects of Theory	Joseph Lykken (Dep. Dir., Fermilab)
12:30-12:45 p.m.	Closing Remarks	H. Davoudiasl (BNL); A. Soni (BNL)
END OF FORUM		

Thank you for your participation in Brookhaven Forum 2017!