

Tri-Institute Summer School on Elementary Particles

July 6-17, 2015

Perimeter Institute

SCHEDULE

Monday, July 6, 2015

Time	Event	Location
8:30 – 9:00am	Registration	Reception
9:00 – 9:10am	<i>Welcome to TRISEP 2015</i>	Bob Room
9:10 – 10:30am	Michael Peskin, SLAC The Standard Model – Theory: <i>Electroweak Model</i>	Bob Room
10:30 – 11:00am	Coffee Break	Bistro – 1 st Floor
11:00 – 1:00pm	Mariangela Lisanti, Princeton University Astroparticle Physics – Theory: <i>WIMP Paradigm</i>	Bob Room
1:00 – 2:30pm	Lunch	Bistro – 2 nd Floor
2:30 – 3:45pm	Michael Peskin, SLAC The Standard Model – Theory: <i>Parton Model</i>	Bob Room
3:45 – 5:00pm	Mariangela Lisanti, Princeton University Astroparticle Physics – Theory: <i>Dark Matter Distribution in MW</i>	Bob Room
5:00 – 5:30pm	Coffee Break	Bistro – 1 st Floor
5:30 – 6:30pm	<i>Exercises</i>	Bob Room

Tuesday, July 7, 2015

Time	Event	Location
9:00 – 10:30am	Michael Peskin, SLAC The Standard Model – Theory: <i>Altarelli-Parisi evolution</i>	Bob Room
10:30 – 11:00am	Coffee Break	Bistro – 1 st Floor
10:30 – 1:00pm	Mariangela Lisanti, Princeton University Astroparticle Physics – Theory: <i>Direct detection</i>	Bob Room
1:00 – 2:30pm	Lunch	Bistro – 2 nd Floor

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2:30 – 3:45pm	Michael Peskin, SLAC The Standard Model – Theory: <i>Events and processes @ the LHC</i>	Bob Room
3:45 – 5:00pm	Mariangela Lisanti, Princeton University Astroparticle Physics – Theory: <i>Indirect detection</i>	Bob Room
5:00 – 5:30pm	Coffee Break	Bistro – 1 st Floor
5:30 – 6:30pm	<i>Exercises</i>	Bob Room

Wednesday, July 8, 2015

Time	Event	Location
9:00 – 10:15am	Michael Peskin, SLAC The Standard Model – Theory: <i>The Goldstone Boson Equivalence Theorem</i>	Bob Room
10:15 – 11:30am	Mathew Graham, SLAC Beyond the Standard Model – Experiment: <i>Precision measurements</i>	Bob Room
11:30 – 11:45	Coffee Break	Bistro – 1 st Floor
11:45 – 1:00pm	Mathew Graham, SLAC Beyond the Standard Model – Experiment: <i>Hidden sectors and dark photons</i>	Bob Room
1:00 – 2:30pm	Lunch	Bistro – 2 nd Floor
2:30 – 3:45pm	Michael Peskin, SLAC The Standard Model – Theory: <i>The Higgs boson</i>	Bob Room
3:45 – 5:00pm	Natalia Toro, Perimeter Institute Beyond the Standard Model – Theory: <i>Introduction and Motivation</i>	Bob Room
5:00 – 5:30pm	Coffee Break	Bistro – 1 st Floor
5:30 – 6:30pm	<i>Exercises</i>	Bob Room

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Thursday, July 9, 2015

Time	Event	Location
9:00 – 10:15am	Natalia Toro , Perimeter Institute Beyond the Standard Model – Theory: <i>Portals to new physics</i>	Bob Room
10:15 – 11:30am	Matias Zaldarriaga , Institute for Advanced Study Cosmology Theory: <i>Inflation</i>	Bob Room
11:30 – 11:45am	Coffee Break	Bistro – 1 st Floor
11:45 – 1:00pm	Mathew Graham , SLAC Beyond the Standard Model – Experiment: <i>BSM in neutrino experiments</i>	Bob Room
1:00 – 2:30pm	Lunch	Bistro – 2 nd Floor
2:30 – 3:45pm	Natalia Toro , Perimeter Institute Beyond the Standard Model – Theory: <i>Light dark matter</i>	Bob Room
3:45 – 5:00pm	Matias Zaldarriaga , Institute for Advanced Study Cosmology Theory: <i>Inflation</i>	Bob Room
5:00 – 5:05pm	Conference Photo	TBA
5:05 – 6:30pm	Poster Session	Atrium
6:30pm Onwards	BBQ	Bistro – 1 st Floor

Friday, July 10, 2015

Time	Event	Location
9:00 – 10:15am	Natalia Toro , Perimeter Institute Beyond the Standard Model – Theory: <i>BSM at high energy 1</i>	Bob Room
10:15 – 11:30am	Matias Zaldarriaga , Institute for Advanced Study Cosmology Theory: <i>Large Scale Structure</i>	Bob Room
11:30 – 11:45am	Coffee Break	Bistro – 1 st Floor

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11:45 – 1:00pm	Mathew Graham, SLAC Beyond the Standard Model – Experiment: <i>Other low energy experiments</i>	Bob Room
1:00 – 2:30pm	Lunch	Bistro – 2 nd Floor
2:30 – 3:45pm	Natalia Toro, Perimeter Institute Beyond the Standard Model – Theory: <i>BSM at high energy 2</i>	Bob Room
3:45 – 5:00pm	Matias Zaldarriaga, Institute for Advanced Study Cosmology Theory: <i>Large Scale Structure</i>	Bob Room
5:00 – 5:30pm	Coffee Break	Bistro – 1 st Floor
5:30 – 6:30pm	<i>Exercises</i>	Bob Room

Monday, July 13, 2015

Time	Event	Location
9:00 – 10:15am	Song He, Perimeter Institute Amplitudes: <i>Introduction and Motivation</i>	Bob Room
10:15 – 11:30am	Simona Murgia, University of California, Irvine Astroparticle Physics – Observations: <i>Cosmic rays</i>	Bob Room
11:30 – 11:45am	Coffee Break	Bistro – 1 st Floor
11:45 – 1:00pm	Gil Holder, McGill University Cosmology – Observations: <i>Observables in an expanding universe</i>	Bob Room
1:00 – 2:30pm	Lunch	Bistro – 2 nd Floor
2:30 – 3:45pm	David Kosower, Saclay Amplitudes <i>Overview of Jet Physics</i>	Bob Room
3:45 – 5:00pm	Simona Murgia, University of California, Irvine Astroparticle Physics – Observations: <i>Dark matter</i>	Bob Room
5:00 – 5:30pm	Coffee Break	Bistro – 1 st Floor

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5:30 – 6:30pm	<i>Exercises</i>	Bob Room
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Tuesday, July 14, 2015

Time	Event	Location
9:00 – 10:15am	Song He , Perimeter Institute Amplitudes: <i>Amplitudes in Yang-Mills</i>	Bob Room
10:15 – 11:30am	Simona Murgia , University of California, Irvine Astroparticle Physics – Observations: <i>Gamma rays and neutrinos</i>	Bob Room
11:30 – 11:45am	Coffee Break	Bistro – 1 st Floor
11:45 – 1:00pm	Gil Holder , McGill University Cosmology – Observations: <i>CMB temperature and polarization</i>	Bob Room
1:00 – 2:30pm	Lunch	Bistro – 2 nd Floor
2:30 – 3:45pm	David Kosower , Saclay Amplitudes <i>Spinor Helicity</i>	Bob Room
3:45 – 5:00pm	Simona Murgia , University of California, Irvine Astroparticle Physics – Observations: <i>Charged particles</i>	Bob Room
5:00 – 5:30pm	Coffee Break	Bistro – 1 st Floor
5:30 – 6:30pm	<i>Exercises</i>	Bob Room

Wednesday, July 15, 2015

Time	Event	Location
9:00 – 10:15am	Song He , Perimeter Institute Amplitudes: <i>Reformulation of Feynman diagrams</i>	Bob Room
10:15 – 11:30am	Pierre Savard , University of Toronto The Standard Model Experiment: <i>Detectors</i>	Bob Room

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11:30 – 11:45am	Coffee Break	Bistro – 1 st Floor
11:45 – 1:00pm	Gil Holder , McGill University Cosmology – Observations: <i>Galaxy clustering</i>	Bob Room
1:00 – 2:30pm	Lunch	Bistro – 2 nd Floor
2:30 – 3:45pm	David Kosower , Saclay Amplitudes <i>BCFW Recursion</i>	Bob Room
3:45 – 5:00pm	Gil Holder , McGill University Cosmology – Observations: <i>Gravitational lensing</i>	Bob Room
5:00 – 5:30pm	Coffee Break	Bistro – 1 st Floor
5:30 – 6:30pm	<i>Exercises</i>	Bob Room

Thursday, July 16, 2015

Time	Event	Location
9:00 – 10:30am	Song He , Perimeter Institute Amplitudes: <i>Soft Theorems</i>	Bob Room
10:30 – 11:00am	Coffee Break	Bistro – 1 st Floor
11:00 – 1:00pm	Pierre Savard , University of Toronto The Standard Model Experiment: <i>Experimental Tools</i>	Bob Room
1:00 – 2:30pm	Lunch	Bistro – 2 nd Floor
2:30 – 3:45pm	David Kosower , Saclay Amplitudes <i>Unitarity</i>	Bob Room
3:45 – 5:00pm	Pierre Savard , University of Toronto The Standard Model Experiment: <i>Electroweak Tests</i>	Bob Room
5:00 – 5:30pm	Coffee Break	Bistro – 1 st Floor
5:30 – 6:30pm	<i>Exercises</i>	Bob Room

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Friday, July 17, 2015

Time	Event	Location
9:00 – 10:30am	Song He , Perimeter Institute Amplitudes: <i>Applications</i>	Bob Room
10:30 – 11:00am	Coffee Break	Bistro – 1 st Floor
11:00 – 1:00pm	Pierre Savard , University of Toronto The Standard Model Experiment: <i>Higgs Discovery</i>	Bob Ro
1:00 – 2:30pm	Lunch	Bistro – 2 nd Floor
2:30 – 3:45pm	David Kosower , Saclay Amplitudes <i>Generalized Unitarity</i>	Bob Room
3:45 – 5:00pm	Pierre Savard , University of Toronto The Standard Model Experiment: <i>Experimental QCD</i>	Bob Room
5:00 – 5:30pm	Coffee Break	Bistro – 1 st Floor
5:30 – 6:30pm	<i>Exercises</i>	Bob Room