Events for:
Monday, August 14th - Friday, August 18th

Monday, August 14th

9:00am  **Workshop: Breakfast - SCGP Cafe**

Title: Breakfast

9:30am  **Workshop: Brett Parker - SCGP 102**

**Speaker:** Brett Parker

**Title:** Degenerations of holomorphic curves, tropical geometry, gluing theorems, and exploded manifolds

**Abstract:** Holomorphic curves play a central role in symplectic topology. They can be regarded as 2-dimensional analogues of a geodesics within a symplectic manifold, or as trajectories traced out by interacting strings in string theory, and provide a rich geometric framework for understanding symplectic topology. In many situations, holomorphic curves can be studied using 1-dimensional piecewise-linear objects called tropical curves. In the first lecture, I will explain the geometry behind the appearance of tropical curves, and explain why it is useful to employ a category blending tropical geometry with usual differential or algebraic geometry. In the remaining lectures, I will introduce the category of exploded manifolds, and explain how using such a category provides a guiding framework for proving gluing formulae and understanding holomorphic curves under a wide class of degenerations including normal crossing degenerations. I will also link this to log geometry and logarithmic Gromov—Witten invariants.

11:30am  **Workshop: Bernd Siebert - SCGP 102**

**Speaker:** Bernd Siebert

**Title:** Logarithmic and punctured Gromov-Witten invariants, tropicalization, and gluing formalism

**Abstract:** I. Introduction to logarithmic geometry for geometers

1:00pm  **Workshop: Lunch - SCGP 102**
Title: Lunch

3:30pm  **Tea time - SCGP Cafe**

Title: Tea Time

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**Tuesday, August 15th**

9:00am  **Workshop: Breakfast - SCGP Cafe**

Title: Breakfast

9:30am  **Workshop: Brett Parker - SCGP 102**

**Speaker:** Brett Parker

**Title:** Degenerations of holomorphic curves, tropical geometry, gluing theorems, and exploded manifolds

**Abstract:** Holomorphic curves play a central role in symplectic topology. They can be regarded as 2-dimensional analogues of a geodesics within a symplectic manifold, or as trajectories traced out by interacting strings in string theory, and provide a rich geometric framework for understanding symplectic topology. In many situations, holomorphic curves can be studied using 1-dimensional piecewise-linear objects called tropical curves. In the first lecture, I will explain the geometry behind the appearance of tropical curves, and explain why it is useful to employ a category blending tropical geometry with usual differential or algebraic geometry. In the remaining lectures, I will introduce the category of exploded manifolds, and explain how using such a category provides a guiding framework for proving gluing formulae and understanding holomorphic curves under a wide class of degenerations including normal crossing degenerations. I will also link this to log geometry and logarithmic Gromov—Witten invariants.

11:30am  **Workshop: Bernd Siebert - SCGP 102**

**Speaker:** Bernd Siebert

**Title:** Logarithmic and punctured Gromov-Witten invariants, tropicalization, and gluing formalism

**Abstract:** II. Kato-Nakayama spaces of log spaces, tropicalization, stable log maps

1:00pm  **Workshop: Lunch - SCGP 102**

Title: Lunch
4:00pm  **Workshop and Public Tea - Lobby**

**Title:** Public Tea

5:00pm  **SCGP 103**

**Title:** Summer Concert Series - Leon Livshin Concert - Dandy in New York

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**Wednesday, August 16th**

9:00am  **Workshop: Breakfast - SCGP Cafe**

**Title:** Breakfast

9:30am  **Workshop: Brett Parker - SCGP 102**

**Speaker:** Brett Parker

**Title:** Degenerations of holomorphic curves, tropical geometry, gluing theorems, and exploded manifolds

**Abstract:** Holomorphic curves play a central role in symplectic topology. They can be regarded as 2-dimensional analogues of geodesics within a symplectic manifold, or as trajectories traced out by interacting strings in string theory, and provide a rich geometric framework for understanding symplectic topology. In many situations, holomorphic curves can be studied using 1-dimensional piecewise-linear objects called tropical curves. In the first lecture, I will explain the geometry behind the appearance of tropical curves, and explain why it is useful to employ a category blending tropical geometry with usual differential or algebraic geometry. In the remaining lectures, I will introduce the category of exploded manifolds, and explain how using such a category provides a guiding framework for proving gluing formulae and understanding holomorphic curves under a wide class of degenerations including normal crossing degenerations. I will also link this to log geometry and logarithmic Gromov—Witten invariants.

12:00pm  **Workshop: Lunch - SCGP Cafe**

**Title:** Lunch

1:00pm  **Robert Moses State Park Field 3, Robert Moses State Pkwy, Babylon, NY 11702, USA**

**Title:** Beach Outing - Robert Moses State Park, Field 3, 1-5PM

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**Thursday, August 17th**

9:00am  **Workshop: Breakfast - SCGP Cafe**
Title: Breakfast

9:30am  Workshop: Bernd Siebert - SCGP 102

Speaker: Bernd Siebert

Title: Logarithmic and punctured Gromov-Witten invariants, tropicalization, and gluing formalism

Abstract: III. Logarithmic Gromov-Witten invariants, Artin fans, punctured Gromov-Witten invariants

11:30am Workshop: Brett Parker - SCGP 102

Speaker: Brett Parker

Title: Degenerations of holomorphic curves, tropical geometry, gluing theorems, and exploded manifolds

Abstract: Holomorphic curves play a central role in symplectic topology. They can be regarded as 2-dimensional analogues of a geodesics within a symplectic manifold, or as trajectories traced out by interacting strings in string theory, and provide a rich geometric framework for understanding symplectic topology. In many situations, holomorphic curves can be studied using 1-dimensional piecewise-linear objects called tropical curves. In the first lecture, I will explain the geometry behind the appearance of tropical curves, and explain why it is useful to employ a category blending tropical geometry with usual differential or algebraic geometry. In the remaining lectures, I will introduce the category of exploded manifolds, and explain how using such a category provides a guiding framework for proving gluing formulae and understanding holomorphic curves under a wide class of degenerations including normal crossing degenerations. I will also link this to log geometry and logarithmic Gromov—Witten invariants.

1:00pm  Workshop: Lunch - SCGP 102

Title: Lunch

3:30pm  Tea time - SCGP Cafe

Title: Tea Time

6:00pm  Workshop Banquet - Simons Center Cafe

Title: Workshop Banquet
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<td>Abstract: IV. The gluing formalism for log Gromov-Witten theory via punctured logarithmic maps</td>
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