

Contribution Title:	ANALYTICAL FOUNDATIONS OF SYMPLECTIC FIELD THEORY
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Invited speaker:	YRS
YRS seminar:	NO

Symplectic Field Theory (SFT) is the study of holomorphic curves in symplectic cobordisms and contains Gromov-Witten theory and symplectic Floer theory as special cases. The study of holomorphic curves is very complicated due to compactness and transversality issues. The algebraic invariants of SFT are obtained by a simultaneous study of infinitely interdependent first order elliptic systems. A treatment of SFT with classical (nonlinear) Fredholm theory, though possible, would be extremely cumbersome. This lead to the development of a new generalized Fredholm theory in a new classes of general spaces called polyfolds.