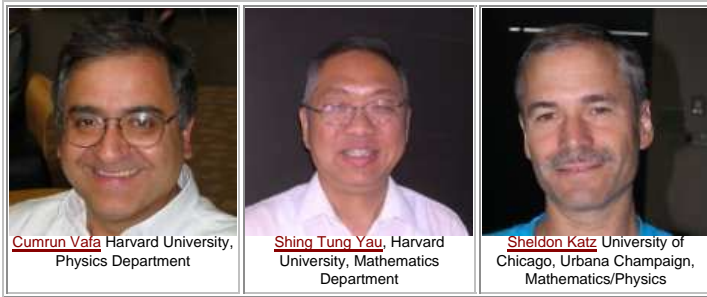# Black holes, topological strings, and invariants of holomorphic submanifolds

January 30-31, 2006

At the Harvard Mathematics Department and the Harvard Physics Department

Cumrun Vafa Harvard University, Physics Department

Shing Tung Yau, Harvard University, Mathematics Department

Sheldon Katz University of Chicago, Urbana Champaign, Mathematics/Physics

Organizers: Cumrun Vafa, Shing Tung Yau and Sheldon Katz

Date: January 30-31 2006

Place: Science center, lecture hall D, Harvard University, Cambridge, MA, 02138. Directions

Registration There is no registration and no registration fee for the conference.

Program:

Monday January 30, 2006

0800	BREAKFAST
0900-0955	**Hirosi Ooguri**: Chiral Baby Universes
1000-1055	**Erik Verlinde**: The topological string partition function and the counting of BPS states
1100-1115	BREAK
1115-1210	**Greg Moore**: Uncertainty and Fluxes
1215-1400	LUNCH
1400-1455	**Sir Michael Atiyah**: Analysis, Geometry, and Topology
1500-1555	**Shing Tung Yau**: Contribution of Raoul Bott in geometry
1600-1615	BREAK
1615-1710	**Daniel Freed**: Encounters with Raoul

Tuesday January 31, 2006

0800	BREAKFAST
0900-0955	**Rahul Pandharipande**: New calculations in Gromov-Witten Theory
1000-1055	**Albrecht Klemm**: Counting BPS states on the Enriques Calabi-Yau
1100-1115	BREAK
1115-1210	**Mina Aganagic**: Branes, Black Holes and Topological Strings
1210-1400	LUNCH
1400-1455	**Frederik Denef**: Counting D-brane ground states
1500-1555	**Kefeng Liu**: Localization and conjectures from string duality
1600-1615	BREAK
1615-1710	**Robbert Dijkgraaf**: A Universal Wave Function

Speakers:

Mina Aganagic, University of California-Berkeley

Sir Michael Atiyah, University of Edinburgh

Frederik Denef, Rutgers University

Robbert Dijkgraaf, University of Amsterdam

Daniel Freed, University of Texas at Austin

Albrecht Klemm, University of Wisconsin-Madison

Kefeng Liu - University of California, Los Angeles

Greg Moore, Rutgers University

Hirosi Ooguri, California Institute of Technology

Rahul Pandharipande, Princeton University

Erik Verlinde, University of Amsterdam

Shing Tung Yau, Harvard University

Memorial talks:

On Monday 2.00 pm as an addition to the conference, Sir Michael Atiyah, Shing Tung Yau and Daniel Freed will give lectures in memoriam of Raoul Bott who passed away on December 20, 2005.