

## **Session Program**

**27 June 2016 to 2 July 2016**



**String-Math 2016, Collège de France, Paris**

### ***Plenary session***

Collège de France, Amphithéâtre Marguerite de Navarre  
11, place Marcellin-Berthelot, 75231 Paris cedex

# Monday 27 June

09:30

## Plenary session: Session 1A (Chair: Ron Donagi)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

09:30–10:20

### Framed BPS States In Two And Four Dimensions

Speaker

Gregory Moore

10:30–10:55

### Exact WKB analysis, cluster algebras and Painlevé equations

Speaker

Kohei Iwaki

10:55

11:30

## Plenary session: Session 1B (Chair: Alessandro Chiodo)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

11:30–12:20

### Reduction for $SL(3)$ pre-buildings

Speaker

Carlos Simpson

12:30–12:55

### Meromorphic connections and quivers

Speaker

Daisuke Yamakawa

13:30

14:30

## Plenary session: Session 2A (Chair: Bernard Julia)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

14:30–15:20

### SUSY field theories and geometric Langlands: The other side of the coin

Speaker

Joerg Teschner

15:30–15:55

### Fredholm determinant and Nekrasov type representations for isomonodromic tau functions

Speaker

Oleg Lisovyy

15:55

16:30

## Plenary session: Session 2B (Chair: David Morrison)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

16:30–17:20

### Elliptically fibered Calabi-Yau threefolds: mirror symmetry and Jacobi forms

Speaker

Sheldon Katz

17:30-17:55

**Derivation of modular anomaly equation in compact elliptic Calabi-Yau spaces**

**Speaker**

Minxin Huang

18:00

## Tuesday 28 June

09:30

### Plenary session: Session 3A (Chair: Sergei Gukov)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

09:30–10:20

#### Quantized Coulomb branches of 3d $N=4$ gauge theories and difference operators

Speaker

Hiraku Nakajima

10:30–10:55

#### 3D supersymmetric gauge theories and Hilbert series

Speaker

Stefano Cremonesi

10:55

11:30

### Plenary session: Session 3B (Chair: Nikita Nekrasov)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

11:30–12:20

#### Cohomological Hall algebra actions and Kac polynomials

Speaker

Olivier Schiffmann

12:20–12:45

#### Plane partitions and W algebras

Speaker

Mikhail Bershtein

12:55

14:30

### Plenary session: Session 4A (Chair: Motohico Mulase)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

14:30–15:20

#### Spectral theory and topological strings

Speaker

Marcos Marino

15:30–15:55

#### Monopoles, Vortices, and Vermas

Speaker

Mathew Bullimore

15:55

16:30

### Plenary session: Session 4B (Chair: Constantin Bachas)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

16:30–17:20

#### Higgs branches, vertex operator algebras and modular differential equations

Speaker

Leonardo Rastelli

17:30–17:55

#### What Chern-Simons theory assigns to a point ?

17:55

**Speaker**  
André Henriques

## Wednesday 29 June

09:30

### Plenary session: Session 5A (Chair: Mariana Grana)

**Session** |

**Location:** Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

09:30–10:20

#### Period integrals of algebraic manifolds and their differential equations

**Speaker**

Shing-Tung Yau

10:30–10:55

#### Hexagons and 3-point functions

**Speaker**

Benjamin Basso

10:55

11:30

### Plenary session: Session 5B (Chair: Michela Petrini)

**Session** |

**Location:** Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

11:30–12:20

#### A Vafa-Witten invariant for projective surfaces

**Speaker**

Richard Thomas

12:30–12:55

#### Quantum Spectral Curve for AdS/CFT and its applications

**Speaker**

Nikolai Gromov

13:00

# Thursday 30 June

09:30

## Plenary session: Session 6A (Chair: Miranda Cheng)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

09:30–10:20

### Moduli spaces of holomorphic and meromorphic differentials

Speaker

Rahul Pandharipande

10:30–10:55

### The Chern character of the Verlinde bundle

Speaker

Dimitri Zvonkine

10:55

11:30

## Plenary session: Session 6B (Chair: Stefan Theisen)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

11:30–12:20

### Correlation Functions in Superconformal Field Theories

Speaker

Jaume Gomis

12:30–12:55

### Conformal constraints on defects

Speaker

Abhijit Gadde

13:00

14:30

## Plenary session: Session 7A (Chair: Philip Boalch)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

14:30–15:20

### Moduli spaces of curves with non-special divisors

Speaker

Alexander Polishchuk

15:30–15:55

### Higgs bundles, branes and applications

Speaker

Laura Schaposnik

15:55

16:30

## Plenary session: Session 7B (Chair: Ronen Plesser)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

16:30–16:55

### From the Hitchin component to opers

Speaker

Olivia Dumitrescu

17:00–17:25

### Chern-Simons theory on $S^3/G$ and topological strings

Speaker

Gaétan Borot

18:30

## Friday 1 July

09:30

### Plenary session: Session 8A (Chair: Eric Sharpe)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

09:30–10:20

#### Resurgence and exact quantization via holomorphic Floer cohomology

Speaker

Maxim Kontsevich

10:30–10:55

#### Derived equivalences from a duality of non-abelian GLSM's

Speaker

Jørgen Rennemo

10:55

11:30

### Plenary session: Session 8B (Chair: Washington Taylor)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

11:30–12:20

#### Analytical Approaches to Coalescing Binary Black Holes

Speaker

Thibault Damour

12:30–12:55

#### Poisson-Lie T-duality

Speaker

Pavol Severa

13:00

14:30

### Plenary session: Session 9A (Chair: Matthias Gaberdiel)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

14:30–15:20

#### Two mathematical applications of little string theory

Speaker

Mina Aganagic

15:30–15:55

#### Umbral symmetry groups and K3 CFTs

Speaker

Sarah Harrison

15:55

16:30

### Plenary session: Session 9B (Chair: Don Zagier)

Session |

Location: Collège de France, Amphithéâtre Marguerite de Navarre, 11, place Marcelin-Berthelot, 75231 Paris cedex

16:30–17:20

#### Geometric Langlands applications of boundary conditions for maximally supersymmetric Yang Mills theory

Speaker

Davide Gaiotto

17:30