



Universität Hamburg
Department Mathematik



WORKSHOP ON HOLONOMY GROUPS AND APPLICATIONS IN
STRING THEORY, HAMBURG JULY 14 - 18, 2008
SCHEDULE

Monday, July 14

MORNING

09:00-10:00 Registration

10:00-10:50 **M. Berger:** Holonomy Groups from 1924 to 1955

11:00-11:30 Coffee break

11:30-12:30 **C. Olmos:** The Skew-torsion holonomy theorem and the full isometry group of naturally reductive spaces

12:30-14:00 Lunch break

AFTERNOON

14:00-14:50 **G. Papadopoulos:** Holonomy groups and the heterotic string

15:00-15:30 Coffee break

15:30-16:20 **M. Günaydin:** Lorentzian, Conformal and Quasiconformal Geometries, Supersymmetry and Representation Theory

16:30-17:20 **P.-A. Nagy** Skew-symmetric prolongations of Lie algebras and applications

Tuesday, July 15

MORNING

09:00-09:50 R. Kobayashi: Ricci flow unstable cell centered at the Kähler-Einstein metric on the twistor space of positive quaternion Kähler manifolds

10:00-10:30 Coffee break

10:30-11:20 J. Figueroa-O'Farrill: Lie n -algebras and supersymmetry

11:30-12:30 B. Ammann: Parallel spinors and the spinorial Weierstrass representation in $3+1$ dimensions

12:30-14:00 Lunch break

AFTERNOON

14:00-14:50 S. Chiossi: Special geometry with solvable Lie groups

15:00-15:30 Coffee break

15:30-16:20 M. Cabrera: Harmonic almost contact structures via the intrinsic torsion

16:30-17:20 F. Witt: Deformations of associative submanifolds with boundary

Wednesday, July 16

MORNING

09:00-09:50 G. Cavalcanti: Genus 1 Lefschetz fibrations for generalized complex structures

10:00-10:30 Coffee break

10:30-11:20 K. Stelle: Life with 2 SUSYs in $D = 1$: M-theory reduced on Calabi-Yau 5-folds

11:30-12:30 V. Braun: Calabi-Yau Metrics and the Spectrum of the Laplace Operator

12:30-14:00 Lunch break

AFTERNOON

14:00-14:50 P. Nurowski: $GL(2, \mathbb{R})$ geometry of ODE's

15:00-15:30 Coffee break

16:30-18:00 Boat trip through the old storage town and the harbour. Meeting point at St. Pauli Landungsbrücken Brücke 3 at "Kapitän Prüsse"; with underground U3 from Schlump to Landungsbrücken.

18:30: Dinner at restaurant Yin-Yang in the old storage town, Kehrvieler 9a, walking distance from the boat trip

Thursday, July 17

MORNING

09:00-09:50 J. Erdmenger: AdS/CFT correspondence and differential geometry

10:00-10:30 Coffee break

10:30-11:20 K. Fredenhagen: The Time Slice Axion in Perturbative Quantum Field Theory

11:30-12:30 T. Mohaupt: Special Geometry, Black Holes and Instantons

12:30-14:00 Lunch break

AFTERNOON

14:00-14:50 Lorenz Schwachhöfer: Symplectic connections and extrinsic symplectic symmetric spaces

15:00-15:30 Coffee break

15:30-16:20 A. Galaev: On the holonomy of supermanifolds

16:30-17:20 S. Ivanov: Extremals for the Sobolev inequality on the quaternionic Heisenberg group and the quaternionic contact Yamabe problem

Friday, July 18

MORNING

09:00-09:50 M. Roček: Properties of hyperkahler manifolds and their twistor spaces

10:00-10:30 Coffee break

10:30-11:20 S Vandoren: Linear deformations of quaternionic-Kähler manifolds

11:30-12:30 D. Alekseevsky: Homogeneous para-Kähler Einstein manifolds

12:30-14:00 Lunch break

AFTERNOON

14:00-14:50 A. J. Di Scala: The symplectic duality of Hermitian symmetric spaces

15:00-15:30 Coffee break

15:30-16:20 A. Fino: Contact manifolds and $SU(n)$ -structures

16:30-17:20 S. Console: Complex Submanifolds and Holonomy
