

Cortona 2022

Dirac operators in Topology, Geometry and Representation Theory

Monday June 27th 2022

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| 09:00 – 09:40 | Werner Müller (Universität Bonn)
<i>Heat asymptotics and Weyl law for locally symmetric manifolds of finite volume.</i> |
| 09:55 – 10:35 | Nelia Charalambous (University of Cyprus)
<i>The L^p spectrum of the Dirac operator.</i> |
| 10:45 – 11:15 | Coffee break |
| 11:15 – 11:55 | Peter Hochs (Radboud University)
<i>Equivariant analytic torsion for proper actions.</i> |
| 13:00 | Lunch |
| 16:15 – 16:45 | Coffee break |
| 17:00 – 17:40 | Alexander Strohmaier (University of Leeds)
<i>The η-invariant on curved spacetimes.</i> |
| 18:00 – 18:40 | Michal Wrochna (Cergy Paris Université)
<i>Dynamical residues of spectral ζ-functions.</i> |

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Tuesday June 28th 2022

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| 09:00 – 09:40 | Simone Cecchini (Universität Göttingen)
<i>Metric inequalities with positive scalar curvature.</i> |
| 09:55 – 10:35 | Mehran Seyedhosseini (Universität Potsdam)
<i>Relative L^2-ρ-invariants and the moduli space of positive scalar curvature metrics on manifolds with boundary.</i> |
| 10:45 – 11:15 | Coffee break |
| 11:15 – 11:55 | Jonathan Glöckle (Universität Regensburg)
<i>Enlargeability obstruction for spacetimes with both big bang and big crunch.</i> |
| 12:10 – 12:50 | Thorsten Hertl (Universität Göttingen)
<i>Positive scalar curvature from a concordance viewpoint.</i> |
| 13:00 | Lunch |
| 16:15 – 16:45 | Coffee break |
| 17:00 – 17:40 | Boris Botvinnik (University of Oregon)
<i>$Spin^c$-manifolds, psc-metrics and manifolds with fibered singularities.</i> |
| 18:00 – 18:40 | Georg Frenck (Universität Augsburg)
<i>Spaces of positive scalar curvature metrics on totally nonspin manifolds.</i> |

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Wednesday June 29th 2022

- 09:00 – 09:40** Georges Skandalis (Université Paris Cité)
The Godbillon-Vey invariant in KK-theory with real coefficients.
- 09:55 – 10:35** Vito Felice Zenobi (Sapienza Università di Roma)
Interior Kasparov products for rho-classes on Riemannian foliated bundles.
- 10:45– 11:15** Coffee break
- 11:15 – 11:55** Omar Mohsen (Paris-Saclay University)
An introduction to maximally hypoelliptic differential operators.
- 12:10 – 12:50** Clément Cren (Université Paris-Est - Créteil)
Transversal index for transversally Rockland operators on filtered manifolds.
- 13:00** Lunch and free afternoon

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Thursday July 30th 2022

09:00 – 09:40	Valerio Proietti (East China Normal University, Shanghai) <i>Classification via index theory on the mapping torus.</i>
09:55 – 10:35	Frédéric Rochon (Université du Québec à Montréal) <i>L^2-cohomology of quasi-fibered boundary metrics.</i>
10:45 – 11:15	Coffee break
11:15 – 11:55	Bernd Amman (Universität Regensburg) <i>Self-adjoint codimension 2 boundary conditions for Dirac operators.</i>
13:00	Lunch
16:15 – 16:45	Coffee break
17:00 – 17:40	Francesco Bei (Sapienza Università di Roma) <i>On weakly Kähler hyperbolic manifolds and geometric applications.</i>
18:00 – 18:40	Shu Shen (Sorbonne Université) <i>Coherent sheaves, superconnection, and the Riemann-Roch-Grothendieck formula.</i>
20:00	Social dinner at <i>Taverna Pane e Vino</i>

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Friday July 1st 2022

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| 09:00 – 09:40 | Ursula Ludwig (Universität Münster)
<i>Bismut-Zhang theorem for singular spaces.</i> |
| 09:55 – 10:35 | Xiaonan Ma (Université Cité)
<i>Differential K-theory and localization formula for eta invariants.</i> |
| 10:45 – 11:15 | Coffee break |
| 11:15 – 11:55 | Yanli Song (Washington University St. Louis)
<i>Higher APS index theorem for proper Lie group action.</i> |
| 12:10 – 12:50 | Sebastian Goette (Universität Freiburg)
<i>Extra twisted connected sums and their η-invariants.</i> |
| 13:00 | Lunch and end of conference |