JMC2018 – Grenoble, 27-31 August 2018 https://jmc2018.sciencesconf.org/ and http://homepage.univie.ac.at/maxime.jacquet/grenobleworkshop.html

Analogue Gravity Workshop

Programme – version #3

The workshop will consist of three 90' oral sessions and a poster session. The latter will take place from 6:30 pm to 9:00 pm on *both* Tuesday 28 and Thursday 30.

Posters:

- Experimental evidences of light superfluidity in bulk nonlinear crystal – Omar Boughdad (Claire Michel's group in Nice)
- Superradiant scattering: from theory to experiment – Calum Maitland (Daniele Faccio's group in Glasgow)
- Quantum solitons as radiating black holes – Charles Robson (Fabio Biancalana's group in Edinburgh)
- Implementation of scattering matrix formalism at optical analogues – Vyome Singh (Friedrich König's group in St Andrews)
- The wiggly cosmic string as a waveguide model for propagating massless and massive fields – Frankbelson dos S. Azevedo (Sébastien Fumeron's group in Nancy)
- Analogue of cosmological particle creation in electromagnetic wave-guides – Sascha Lang (Ralf Schützhold's group in Duisburg-Essen)
- Quantum Simulation of Hawking Radiation with Surface Acoustic Waves – Raphael Schmit (Wilhelm group in Saarbücken)
- Complex Berry phase instability in PT-symmetric coupled waveguides – Rosie Hayward (Fabio Biancalana's group in Edinburgh)

Oral sessions

Wednesday day afternoon – Introduction to analogue gravity

1. **Invited presentation:** Analog models of gravity: quantum simulating fundamental theories in condensed matter and optical systems – **Iacopo Carusotto** (INO-CNR BEC Center in Trento)
2. Wave dynamics and superfluidity of light in a hot atomic vapour – Quentin Glorieux (LKB-UPMC in Paris)
3. Hawking Radiation and Quantum Fluctuations in BEC – Mathieu Isoard (LPTMS in Orsay)
4. Spontaneous emission in optical analogue gravity systems – Friedrich König (St Andrews)

Wednesday day afternoon – Beyond the horizon paradigm

5. The theory of optical black hole lasers – David Bermudez (Cinvestav in Mexico City)
6. Analogue Hawking radiation in BECS: recent results regarding the black-hole laser effect – Manuele Tettamanti (INO-CNR BEC Center in Trento)
7. Analogue quantum simulation of wormholes and exotic spacetimes – Sabin Carlos (CSIC in Madrid)
8. Classical analogue of an interstellar travel through a hydrodynamic wormhole – Germain Rousseaux (Institut Pprime in Poitiers)
9. Classical analogue of the Unruh effect – Ulf Leonhardt (Weizmann Institut of Science in Rehovot)

Thursday day afternoon – Analogue horizons

10. Polariton black-hole horizons – Alberto Amo (PhLAM Lille)
11. Reissner-Nordström black hole in Bose-Einstein condensates of light – Lei Liao (Stoof group, ITP UU in Utrecht)
12. Analogue physics with exciton-polaritons – Dmitry Solnyshkov (IP in Clermont-Ferrand)
13. Scattering of surface waves on an analogue black hole – Léo-Paul Euvé (Institut Pprime in Poitiers)
14. Non-shallow water waves on a vortex: a model for dispersive fields around rotating black holes – Theo Torres (Weinfurtner's group in Nottingham)

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