Ongoing Work at the University of Sannio, I

Optics (coatings)

New batch of nanolayered Silica/Titania films, featuring thinner layers (down to 2nm for Silica) [collaboration with NTHU, prof. S. Chao]

Mixture formulas for complex bulk and shear loss angles, in connection with new coating noise model proposed by Hong et al., PRD 87 (2013) 082001.

New coating thickness optimization code, allowing for nanolayered materials. Optimizes nanolayer thickness fractions as well.

[papers: Optics Express 22 (2014) 29847; PRD91 (2015) 022005; LIGO-P1500010]

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Ongoing Work at the University of Sannio, II

Data Analysis

Development of a new, partially firmware-implemented scalable Big-data storage and retrieval system [collaboration with prof. L. Troiano and coworkers].

Functional Ccomparison among different TF representation tools (Q-transform, Hilber-Huang, Wavelets, Smoothed Wigner, CS-Ske-letonized Wigner);

Efficient and physically driven glitch noise modeling.

[update presentations scheduled in Osaka Univ., Jan 17th 2015]

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