

Ansoldi Stefano

Position: researcher, University of Udine, Udine, Italy
Period covered: Academic year 2009/2010



I. Scientific Work

1. ANSOLDI S. (in print). Quantum gravitational signatures in MAGIC observations of a very high energy source?. In: Proceedings of the Twelfth Marcel Grossmann Meeting on General Relativity. Paris, France, July 13th-18th, 2009, SINGAPORE: World Scientific;
2. ANSOLDI S., GUENDELMAN E. I, ISHIHARA H (in print). Multivalued Lagrangians and non singular cosmologies. In: Proceedings of the Twelfth Marcel Grossmann Meeting on General Relativity. Paris, France, July 13th-18th, 2009, SINGAPORE: World Scientific;
3. ANSOLDI S., GUENDELMAN E. I, SHILON I (in print). Regularization of ultraviolet divergences and production of child universes. In: Proceedings of the Twelfth Marcel Grossmann Meeting on General Relativity. Paris, France, July 13th-18th, 2009, SINGAPORE: World Scientific;
4. ANSOLDI S. (2010). Invited review about the article "On conformal, $SL(4,R)$ and $Sp(8,R)$ and symmetries of massless fields". MATHEMATICAL REVIEWS, vol. 2010a:81153; p. MR2380394, ISSN: 0025-5629;
5. ANSOLDI S. (2010). Invited review about the article "The Euclidean gravitational action as black hole entropy, singularities, and spacetime voids". MATHEMATICAL REVIEWS, vol. 2010h:83087; p. MR2412283, ISSN: 0025-5629;
6. ANSOLDI S. (2009). Invited review about the article "Fractional brane state in the early Universe". MATHEMATICAL REVIEWS, vol. 2009b:83158; p. MR2319441, ISSN: 0025-5629;
7. ANSOLDI S. (2009). Invited review about the article "Walls of marginal stability and dyon spectrum in $N=4$ supersymmetric string theories". MATHEMATICAL REVIEWS, vol. 2009c:81086; p. MR2318090, ISSN: 0025-5629;
8. ANSOLDI S. (2009). Invited review about the article "Gravity duals of half-BPS Wilson loops". MATHEMATICAL REVIEWS, vol. 2009e:81176; p. MR2326588, ISSN: 0025-5629;
9. ANSOLDI S. (2009). Invited review about the article "Integrability of type II superstrings on Ramond-Ramond backgrounds in various dimensions". MATHEMATICAL REVIEWS, vol. 2009a:81125; p. MR2326566, ISSN: 0025-5629;
10. ANSOLDI S. (2009). Invited review about the article "Geometric Lagrangians for massive higher-spin fields". MATHEMATICAL REVIEWS, vol. 2009h:81182; p. MR2398201, ISSN: 0025-5629;
11. ANSOLDI S. (2009). Invited review about the article "Geometry and dynamics of higher-spin frame fields". MATHEMATICAL REVIEWS, vol. 2009j:81100; p. MR2425202, ISSN: 0025-5629;
12. ANSOLDI S. (2009). Invited review about the article "Higher-spin Chern-Simons theories in odd dimensions". MATHEMATICAL REVIEWS, vol. 2009g:81109; p. MR2358798, ISSN: 0025-5629;

II. Conferences and educational activities

II a. Conferences and Other External Scientific Works:

1. participation to the GC2010 long term Workshop *Gravity and Cosmology 2010*, Kyoto, Japan (May-August, 2010);
2. participation to the workshop *Inflation and cosmological perturbations*, Kyoto, Japan (June 1st-2nd, 2010);
3. participation to the *YKIS2010 Symposium*, Kyoto, Japan (June 28th – July 2nd, 2010).

II b. Work With Students

1. *PhD*, Idan Shilon, Eduardo I. Guendelman (full professor) [Ben Gurion University, Beer-Sheva, Israel]: “*Child Universe Formation*” (in progress);
2. *Master*, Tiziano Puppi [University of Udine, Italy]: “*Monte Carlo approaches for option pricing*” (in progress).

II c. Diploma thesis supervision

1. *Undergraduate*, Mathematics: Guglielmo Feltrin, “*I fondamenti matematici della teoria dell’interazione elettromagnetica*”, graduated September 20th, 2010 (110/110 with honor), University of Udine, Italy;
2. *Master*, Computational Physics: Tiziano Puppi, “*Monte Carlo methods for option pricing in Jump models*”, in progress, University of Udine, Italy.
3. *Master*, Computational Physics: Domenico Ferigo, a project in *numerical relativity*, just started, University of Udine, Italy.

II d. Other Teaching Duties:

1. Undergraduate course [Mathematics] Meccanica Razionale 2 (*Analytical Mechanics 2*) and master course [Computational Physics] Complementi di Meccanica (*Advanced Mechanics*), University of Udine, Italy;
2. Master course [Computational Physics] Meccanica Statistica (*Statistical Physics*) and master course [Biotechnology] Fisica 3 (*Physics 3*), University of Udine, Italy;
3. Master course [Computational Physics] Relativita` Generale (*General Relativity*), University of Udine, Italy.
4. Master thesis *examiner*: Sara De Faveri, “*Tensioni come misure singolari in sistemi continui non resistenti a trazione*”, University of Udine, Italy;
5. PhD thesis *examiner*: Michela De Maria, “*Searching for Intrinsic Anisotropies of the Universe Through the Study of Kaon Lifetimes*”, University of Udine, Italy;

II e. Work With Postdocs

1. Antonino Flachi [University of Kyoto, Japan]: “*Quasinormal modes of specific black hole solutions*” (recently started);
2. Viktor Czinner [University of Cape Town, South Africa]: “*A model for the dynamics of thick shells in General Relativity*” (in progress);
3. Nijil Mankuzhiyil [University of Udine, Italy] and Massimo Persic [astronomo associato, Trieste Observatory, Italy]: “*The spectral energy distribution of active galactic nuclei jets during quiescent, active and extremely bursting states*” (in progress);
4. Nijil Mankuzhiyil [University of Udine, Italy]: “*Implementation of a database for MAGIC data quality check*” (in progress).

III. Service activities

Member of the PhD board in Mathematics and Physics at the University of Udine, Italy.

IV. Other

Visiting researcher: Department of Physics, University of Victoria, Canada, December 14th 2009-January 5th 2010 (*host professor Werner Israel*).