

Perez Bergliaffa Santiago Esteban

Position: Professor – Department of Theoretical Physics, Institute of Physics, University of the State of Rio de Janeiro, since January 2008.



I Scientific Work

I am interested in alternative theories of gravity, such as $f(R)$ theories, and in the analogies between nonlinear electromagnetism and gravitation. A spinoff of the latter which also attracted my attention is the effective geometry, and the building of analog models of gravity.

II Conferences and educational activities

Conferences and Other External Scientific Work

I have been part of the Organizing Committee of several meetings, such as the *workshop "Analog Models of General Relativity"*, CBPF, Rio de Janeiro, Brazil, October 2000, the *X, XI, XII, and XIII editions of the Brazilian School of Cosmology and Gravitation*, the *Xth Marcel Grossmann Meeting*, Rio de Janeiro, July 2003.

Work With Students

I am currently working with several students at the graduate level, to complete their Graduation Thesis, in diverse topics in Gravitation and Cosmology.

III Other

I have visited the Pescara center three times, during which I managed to work in topics of my interest. During my last visit (October 2008), I worked on three different projects: (1) the relation between the effective metric and the energy-momentum tensor (in collaboration with E. Goulart – CBPF, Brazil), (2) the evolution of the polarization of the EM field interacting with a pseudoscalar field (in collaboration with J. Salim and M. Novello– CBPF, Brazil), (3) limits on charge loss using white dwarfs (in collaboration with H. Mosquera Cuesta, – CBPF, Brazil).

List of Publications

See

<http://www.slac.stanford.edu/spires/find/hep/wwwrawcmd=find+a+bergliaffa&FORMAT=WWW&SEQUENCE=>