

Geralico Andrea



Position: Postdoc

Period covered: October 1st, 2006 – present

I Scientific Work

- 1 $3+1$ splitting of spacetime: measurement processes and the role of observers in general relativity;
- 2 test particle dynamics in black hole spacetimes; motion of small extended bodies (neutral or charged test particle endowed with an internal structure described by its spin and quadrupole moment);
- 3 general relativistic perturbation theory of Einstein-Maxwell systems;
- 4 exact solutions of Einstein's field equations;
- 5 gravitational lensing techniques in strong gravitational fields;

II Conferences and educational activities

Conferences and Other External Scientific Work

ICRANet Workshops 2001-2009

Xth Brazilian School of Cosmology and Gravitation (Rio de Janeiro, Brazil, 2002)

XIth Marcel Grossmann Meeting (Berlin, DE, 2006)

APS April Meeting (Jacksonville, US, 2007)

XIIth Marcel Grossmann Meeting (Paris, FR, 2009)

Vth Australasian Conference on General Relativity and Gravitation (Christchurch, NZ, 2009)

2010 List of publications

Bini D., Geralico A., Kerr R. P.,

The Kerr-Schild ansatz revised,

International Journal of Geometric Methods in Modern Physics, vol. 7, 693–703, 2010.

Bini D, Cherubini C., Filippi S. and Geralico A.,

Effective geometry of the $n=1$ uniformly rotating self-gravitating polytrope,

Physical Review D, vol. 82, 044005, 2010.

Bini D., Geralico A.,

Spinning bodies and the Poynting-Robertson effect in the Schwarzschild spacetime,

Classical and Quantum Gravity, vol. 27, 185014, 2010.