

# MICHAEL FRANCIS IAN VEGA II

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## Education

University of Florida [Gainesville, FL, USA]	Ph.D. Physics, 2003-present (exp. May 2009) Supervisor: Steven Detweiler GPA: 3.95/4.00
Ateneo de Manila University [Quezon City, Philippines]	B.S. Physics, <i>Honorable Mention</i> , 1997-2001 Physics+Math GPA: 3.76/4.00
Xavier University High School [Cagayan de Oro, Philippines]	Diploma, <i>Class Valedictorian</i> , 1993-1997

## Research Interests

*General relativity and relativistic astrophysics*: self-force in curved spacetime; extreme-mass-ratio inspirals; black hole perturbation theory; gravitational waves; numerical relativity.

## Publications

- I. Vega and S. Detweiler, Regularization of fields for self-force problems in curved spacetime: Foundations and a time-domain application, *Phys.Rev.D* **77**, 084008 (2008); arXiv:0712.4405
- S. Detweiler and I. Vega, Self-force analysis in extreme-mass-ratio inspiral, Analytic approximations, perturbation methods, and their applications – Session Summary, Proceedings of the 18th International Conference on General Relativity and Gravitation (GRG18), Sydney, Australia, *Class. Quantum Grav.* 25 No 11 (7 June 2008) 114020

## Honors and Awards

- Blue Apple Award (2008) for best student presentation, 4th Gulf Coast Gravity Meeting, Topical Group in Gravitation, APS
- Student Travel Grant (2008), Topical Group in Gravitation, APS
- AAPT Outstanding Teaching Assistant Award (2006), American Association of Physics Teachers, College Park, MD
- Teaching Assistant of the Year (2004), Department of Physics, UF
- Summer School Scholarship (2004), Center for Gravitational Wave Astronomy, University of Texas at Brownsville
- Outstanding National Science Scholar (2001), Philippine Department of Science and Technology (DOST), for academic excellence in a science program
- AdMU Merit Scholarship (1997-2001), Top 50 out of  $\sim 15000$  in the Ateneo College Entrance Test
- AdMU Financial Aid Scholarship (1997-2001)
- National Science Scholarship (1997-2001), Philippine DOST
- National Finalist and Regional Champion (1997), National Mathematical Olympiad

## Invited Talks

- Particles moving around black hole spacetimes: opportunities in self-force problems, CCT Relativity Seminar, Department of Physics, Louisiana State University (May 2, 2008), Baton Rouge, Louisiana, USA
- The LISA Gravity Wave Mission and Modeling Binary Inspirals, Theoretical Astrophysics Seminar (April 17, 2006), Department of Astronomy, University of Florida, Gainesville, USA

## Contributed Talks

- Field regularization and smeared-out sources for self-force calculations, 11th Capra Meeting on Radiation Reaction (June 26, 2008), Orleans, France

Regularization of fields for self-force problems in curved spacetime, APS Meeting (April 12, 2008), St. Louis, Missouri, USA

Field regularization for self-force problems, 4th Gulf Coast Gravity Meeting (March 7, 2008), University of Mississippi, Oxford, MS, USA

Time-domain self-force calculation with smeared-out sources, 10th Capra Meeting on Radiation Reaction in General Relativity (June 25, 2007), University of Alabama-Huntsville, USA

Motion of a scalar charge around a Schwarzschild black hole, APS Meeting (April 17, 2007), Jacksonville, Florida, USA

Second-order gravitational perturbations due to a point mass, 9th Capra Meeting on Radiation Reaction in General Relativity (June 10, 2006), University of Wisconsin-Milwaukee, USA

Tidal Acceleration of a Schwarzschild Black Hole, 2nd Gulf Coast Gravity Meeting (March 17, 2006), Florida Atlantic University, Boca Raton, Florida, USA

2-body Einstein-Infeld-Hoffman equations from boosted Schwarzschild black holes, 72nd Annual Meeting of the Southeastern Section of the APS (November 10, 2005), Gainesville, Florida, USA

### Schools/Workshops

11th Capra Ranch Meeting on Radiation Reaction (June 26-29, 2008), Universite d'Orleans, Orleans, France

Orleans School on the Sciences of the Universe: OSSU08 (June 23-25, 2008), Universite d'Orleans, Orleans, France

10th Capra Ranch Meeting on Radiation Reaction (June 25-29, 2007), Department of Physics, University of Alabama-Huntsville, USA

9th Capra Ranch Meeting on Radiation Reaction (June 9-14, 2006), Center for Gravitation and Cosmology, Department of Physics, University of Wisconsin-Milwaukee, USA

1st Summer School in Gravitational Wave Astronomy (June 7-18, 2004), Center for Gravitational Wave Astronomy, University of Texas-Brownsville, USA

### Teaching/Service

Seminar Organizer, Graduate Student Seminar	2006-2007
Teaching Assistant, University of Florida - Lecture/lab in mechanics and electromagnetism	August 2003 - present
Assistant Instructor, Ateneo de Manila University - Lecture/lab in mechanics and electromagnetism to engineering students. - Lecture in mathematical methods to physics majors (linear algebra & differential equations; complex variable theory).	2001-2003

### References

Available upon request.