

# CURRICULUM VITÆ

## Emilio Romano-Díaz

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### Education

#### PhD:

In Mathematics and Natural Sciences: Astrophysics. Kapteyn Astronomical Institute, University of Groningen. Groningen, The Netherlands. Degree obtained on October 8th, 2004.

Ph. D. Thesis: *“Proving Cosmic Velocity Flows in the Local Universe”*

Supervisor: Prof. Dr. Rien van de Weygaert.  
1998 - 2004.

#### MSc:

In Astrophysics at the National Institute of Astrophysics, Optics and Electronics (INAOE). Puebla, México. Degree obtained on July 7th, 1997.

M. Sc. Thesis: *“Mass Determination in Globular Clusters using the Virial Theorem”*

Advisor: Dr. Alejandro González.  
1995 - 1997.

#### BSc:

Bachelor in Physics at the Benemérita Universidad Autónoma de Puebla, Puebla, México.  
1991 - 1995.

### Employment

- Postdoctoral Position at the Argelander Institute for Astronomy, University of Bonn, Germany.  
June 2011 - May 2013
- Postdoctoral Position at the Dep. of Physics & Astronomy, University of Kentucky, U.S.A.  
April 2006 - March 2011
- Postdoctoral Position at the Racah Institute for Physics, Hebrew University, Israel.  
October 2004 - March 2006.
- Graduate Research Assistant at Kapteyn Astronomical Institute, University of Groningen,  
October 1998 - October 2004.
- Graduate Research Assistant at Instituto Nacional de Astrofísica, Óptica y Electrónica,  
September 1997 - September 1998.
- School teacher at Instituto Universitario de Puebla, A.C. Puebla Puebla, México.  
September 1994 - June 1995.

## Honors and awards

- DARK Fellowship, Dark Cosmology Centre, University of Copenhagen, 2011 (Declined).
- Tera-Grid computational resources grant (2010, 2011).
- Golda Meir Postdoctoral Fellowship, Hebrew University.  
October 2004 - September 2006.
- Ubbo Emmius Graduate Fellowship, Rijksuniversiteit Groningen.  
October 2001 - February 2004.
- Grant from the Mexican National Council for Research and Technology (CONACyT) to carry out the PhD Program in Astrophysics at The Kapteyn Astronomical Institute.  
September 1998 - August 2001.
- Grant from the Mexican National Council for Research and Technology (CONACyT) to carry out the Master Science program in Astrophysics at INAOE.  
September 1995 - August 1997.
- Grant from the Mexican National Council for Research and Technology (CONACyT) for Thesis writing at BUAP.  
October 1995 - May 1996.

## Skills

### Languages:

- Spanish (mother tongue).
- English (reading, speaking, writing).
- Dutch (reading, elementary speaking, elementary writing).
- Italian (reading, intermediate speaking, intermediate writing).

### Computer Experience:

- UNIX, linux, MacOS X, C, C++, Fortran 77 & 90, Perl, IDL, Python, PGPLOT, HTML.
- Basic programming with MPI.
- Use of supercomputers CRAY J90, SV1e, Beowulf Linux Cluster, Centre for High Performance Computing and Visualization (HPC/V), University of Groningen. IBM HS21 blade cluster (BCX), Dell HPC Cluster (DLX), Center for Computational Sciences, University of Kentucky. Sun Constellation Linux Cluster (Ranger), TACC, University of Texas. Kraken, University of Tennessee.
- Expertise in  $N$ -body simulations and Hydro, hybrid  $N$ -body/SPH codes (HYDRA, Tree-SPH, GADGET2 and 3, FTM) and eulerian (Enzo & RAMSES).

- Use and development of unstructured interpolation meshes, (Delatunay Tessellation Field Estimator, DTFE).

## Teaching experience

- Galactic Dynamics. Level: Graduate (2009). University of Kentucky. (Teacher Substitute). Lexington KY, U.S.A.
- Stellar Structure. Level: Graduate (2008). University of Kentucky. (Teacher Substitute). Lexington KY, U.S.A.
- Astronomy 191: The Solar System. Level: Undergraduate (2007). University of Kentucky. (Teacher Substitute). Lexington KY, U.S.A.
- Astronomy 192: Stars, Galaxies and the Universe. Level: Undergraduate (2006). University of Kentucky. (Teacher Substitute). Lexington KY, U.S.A.
- Course: Cosmology II, Large Scale Structure of the Universe. Level: Undergraduate (2000). Kapteyn Astronomical Institute. (Werkcollege, Teaching Assistant). Groningen, The Netherlands.
- Course: Cosmology. Level: Undergraduate (1999). Kapteyn Astronomical Institute. (Werkcollege, Teaching Assistant). Groningen, The Netherlands.
- Course: Physics IV, Optics. Level: Undergraduate (1995). Universidad Autónoma de Puebla, Bachelor in Physics, (Teaching Assistant). Puebla, México.
- Course: Physics. Level: High-School (1994-1995). Instituto Universitario de Puebla, A.C. Puebla, México.
- Course: Mathematics. Level: High-School (1994-1995). Instituto Universitario de Puebla, A.C. Puebla, México.

## Professional public services

- NSF AST panel review member, 2011
- Referee for ApJ, ApJL

## Membership of professional associations

- International Astronomy Union
- Mexican Physics Society