lleyk El Mellah

http://homes.esat.kuleuven.be/~ileyk

Education

2013-16	PhD supervised by Fabien Casse & Andrea Goldwurm on Numerical simulations of wind accretion onto compact bodies AstroParticule & Cosmology laboratory (APC) - Univ. of Paris 7 Diderot
2012-13	Master degree in Astrophysics - Observatory of Paris Obtained with distinction
2010-12	Normalien at the Ecole Normale Supérieure of Cachan
2011-12	Research internship and graduate courses - MIT, Cambridge
2010-11	French Agrégation of Physics & Chemistry - ENS of Cachan, FR Rank : 2 nd in 1,409 candidates
2008-10	Bachelor degree in Fundamental Physics - ENS / Paris 6 University Obtained with honours
2006-08	Preparatory classes to Grandes Ecoles - Lycée Janson-de-Sailly, Paris

Research

Since 2016	FWO [Pegasus] ² Marie Skłodowska-Curie fellowship under the supervision of Rony Keppens Center for mathematical Plasma Astrophysics - KU Leuven
2013-16	PhD thesis supervised by Fabien Casse & Andrea Goldwurm on Numerical simulations of wind accretion onto compact bodies APC - Univ. of Paris 7 Diderot
2011-12	One-year internship supervised by Saul Rappaport on Monitoring of close-in binary stars and short period exoplanets Data analysis and models of light curves from the Kepler satellite Kavli Institute for Astrophysics - MIT
Ap-Ag 2010	Internship supervised by Jean-François Lestrade on Gravitational perturbations of debris discs by a passing-by star LERMA - Paris Observatory
Jn-Jl 2009	Internship supervised by Gérard Belmont & Patrick Robert on Resampling of the CLUSTER satellites data Plasma Physics Laboratory - Vélizy

Communication

Oral contributions Dc 2017 Radboud University Nijmegen - seminar ESAC Madrid - seminar Nv 2017 Sp 2017 Observatory of Paris - seminar Sp 2017 KU Leuven - Frontiers of Astrophysical Modeling Aq 2017 Köln - Numerical techniques in MHD simulations Jl 2017 Paris - Journées de la SF2A Brussels Royal Observatory - CHARM meeting Mr 2017 Fb 2017 Stellar winds in massive X-ray binaries - ISSI workshop Sp 2016 Arbatax - Super-Eddington accretion on compact objects Sp 2016 Aarhus University - seminar My 2016 Ecole des Houches - International school of Computational Astrophysics Ap 2016 Paris 7 University - seminar Ap 2016 KU Leuven - seminar Oc 2015 AIM laboratory (CEA, Paris) - Computational Astrophysics meeting Jn 2015 Toulouse - Journées de la SF2A Ecole des Houches - Turbulence, magnetic fields and self organization Mr 2015 **Posters** Clumpy wind accretion in Supergiant X-ray binaries Jn 2017 EWASS - Prague Dc 2015 Numerical simulations of wind accretion onto compact objects Texas symposium - Geneva Nv 2014 Numerical simulations of wind accretion undergoing flip-flop instability IAP - Paris

Grants & awards

2017	Computing time on the Tier-1 VSC cluster: 1 Mh·cpu
2016	3-years FWO $[Pegasus]^2$ Marie Skłodowska-Curie fellowship
2016	Computing time on the Tier-1 CINES cluster: 300 kh·cpu
2015	Computing time on the Tier-1 CINES cluster: 300 kh·cpu
2013	3-years PhD fellowship from the Ecole Normale Supérieure of Cachan
2013	3-years teaching assistant grant from the Université of Paris 7 Diderot
2012	1-week observing time at the Mont Mégantic Observatory (Canada)
2011	French <i>Agrégation</i> of Physics and Chemistry - Rank : 2 nd / 1,409
2010	2-years fellowship from the ENS of Cachan as a <i>normalien</i>

Selected skills

Programming languages

Fortran, C, C++, Python, Idl, Java, Perl, хмL, Csh, Bash, нтмL, css, JavaScript, CoffeeScript, нтмL5

Codes & softwares

MPI-AMRVAC, Mathematica, VisIt, Paraview, Vampir, VampirTrace, Atom, Emacs, Pyke, Inkscape, Gnuplot, DS9, xspec

Data analysis

Extended Fourier and wavelet analysis, resampling and interpolation of time/space series

Languages

French (native), English (fluent), Italian (B1)