
CONTACT INFORMATION	European Southern Observatories Garching bei München, D-85748, Germany	<i>Tel:</i> +49(0)15758902814 <i>E-mail:</i> ngentile@eso.org
RESEARCH INTERESTS	Observational astronomy, multiple aspects of white dwarfs science (e.g. magnetism, variability, metal-pollution), planetary remnants, large-area optical and infra-red surveys.	
EDUCATION	University of Warwick , Coventry, United Kingdom PhD, Astrophysics <ul style="list-style-type: none">• Topic: “Stellar and planetary remnants in large area surveys.”• Supervisor: Prof. Boris Gänsicke	October, 2011 - September, 2015
	University of Warwick , Coventry, United Kingdom MPhys. Thesis topic: ”Optical transients in the WASP orphan database”	October, 2007 - June, 2011
HONORS AND AWARDS	Winner of the italian scholarship for “United World College of the Atlantic“ for the school years 2005/06-2006/07.	
WORK AND ACADEMIC EXPERIENCE	University of Warwick , Coventry, UK <i>Postdoctoral researcher</i> Working on several aspects of white dwarf characterization via comparison with spectral models. Fitting UV, optical, and near infrared spectra and photometry of white dwarfs. Preparatory work for white dwarf population studies using Gaia. Development of machine learning algorithm for white dwarf spectra classification. <i>Postdoctoral researcher</i> Working on identification and characterization of planetary debris around white dwarfs. Exploitation of new large area surveys (VST ATLAS, PTF, PanSTARRS) in various areas of white dwarf science. <i>Graduate Student</i> Development of colour and proper motion based algorithm for selecting high-confidence white dwarf candidates. Large area surveys (e.g. SDSS, LAMOST) data mining for: identification of metal-polluted white dwarfs and multi-epoch photometry variability studies. <i>Laboratory Demonstrator</i> Duties included demonstrating undergraduate students through experiments in the teaching labs, marking their work and instructing other demonstrators on the details of the experiments.	August, 2016 - ongoing November, 2015 - July, 2016 October, 2011 - September, 2015 October, 2011 - 2013
	Observing programs Since 2014 I have been the PI of several successful observing programs at various facilities including:	

INT, WHT, Liverpool telescope, VLT and Magellan telescope. I have also been Co-I of various additional programs at ground and space based observatories.

Isaac Newton Group studentship, Santa Cruz de La Palma, Spain

Support astronomer at Isaac Newton Telescope

September 2013, - September, 2014

For a years during my PhD I also worked as support astronomer at the Isaac Newton Telescope (INT). Duties involved instrument calibration and maintenance, supervising and instructing visiting astronomers, performing service mode and technical nights observations. I was also involved in ING projects related to instrumental and software development and improvement.

Observing experience

I have performed over 70 nights of observation at INT and WHT and VLT for various types of programs (e.g. optical imaging, slit spectroscopy, high-cadence time-resolved photometry).

Member of the DESI, WEAVE and 4MOST consortia

I am involved in the selection of white dwarfs as flux calibrators in WEAVE and DESI and I lead the development of the white dwarf pipeline for 4MOST.

Conference talks

18th European White Dwarf Workshop, Krakow, Poland	August, 2012
National Astronomy Meeting, St Andrews, UK	July, 2013
19th European White Dwarf Workshop, Montreal, Canada	August, 2014
20th European White Dwarf Workshop, University of Warwick, UK	August, 2016
Gaia data workshop, Heidelberg, Germany	November, 2016
EWASS 2018, Liverpool, UK	April 2018
21th European White Dwarf Workshop, Austin, USA	July, 2018
ESO Workshop: A Revolution in Stellar Physics with Gaia and Large Surveys, Warsaw, Poland	September, 2018

ADDITIONAL ACADEMIC ACTIVITIES

Astronomy group seminar organizer

2015 - ongoing

I organize weekly seminars for the astronomy group at the university of Warwick. Speakers from other institutions are invited to give a one hour talk followed by an informal coffe-break discussion.

OUTREACH

- Talk for middle school students in Italy, *"Le tecniche dell'astronomia: nuovi occhi sul cielo"*, Scuola Media statale Luigi Gallo, Noci (BA), ITALY **March, 2016**
- Talk for middle school students in Italy, *"Oltre il sistema solare: l'era degli esopianeti"*, Scuola Media statale Luigi Gallo, Noci (BA), ITALY **April, 2017**

COMPUTER SKILLS

- Languages: Python, Unix shell scripts, SQL querying.
- Specific data reduction: Slit spectroscopy using the starlink packages molly and PAMELA. X-shooter data reduction using REFLEX reduction tools and molecfit.

FIRST AUTHOR PUBLICATIONS

- Gentile Fusillo, N. P. et al. (2015, MNRAS 448, 2260G) *A photometric selection of white dwarf candidates in Sloan Digital Sky Survey Data Release 10.*

- Gentile Fusillo, N. P. et al. (2015, MNRAS 452, 765G) *An independent test of the photometric selection of white dwarf candidates using LAMOST DR3.*
- Gentile Fusillo, N. P. et al. (2016, MNRAS, 455,2295) *A search for variable white dwarfs in large area surveys: a pilot study in SDSS Stripe 82.*
- Gentile Fusillo, N. P. et al. (2017, MNRAS 468,971) *Trace hydrogen in helium atmosphere white dwarfs as a possible signature of water accretion*
- Gentile Fusillo, N. P. et al. (2017, MNRAS 469,621) *A catalogue of white dwarf candidates in VST ATLAS*
- Gentile Fusillo, N. P. et al. (2017, MNRAS, 473, 3693) *Can magnetic fields suppress convection in the atmosphere of cool white dwarfs? A case study on WD2105-820*
- Gentile Fusillo, N. P. et al. (2018, arXiv:1807.03315, resubmitted after review to MNRAS) *The Gaia Data Release 2 catalogue of white dwarfs and a comparison with SDSS*

OTHER

PEER-REVIEWED PUBLICATIONS

- Raddi, R.; Hollands, M. A.; Gänsicke, B. T.; Townsley, D. M.; Hermes, J. J.; **Gentile Fusillo, N. P.**; Koester, D. (2018, MNRAS, 479, 96) *Anatomy of the hyper-runaway star LP 40-365 with Gaia*
- Hollands, M. A.; Tremblay, P.-E.; Gänsicke, B. T.; **Gentile-Fusillo, N. P.**; Toonen, S. (2018, MNRAS, tmp, 1997) *The Gaia 20 pc white dwarf sample*
- Green, M. J.; Hermes, J. J.; Marsh, T. R.; Steeghs, D. T. H.; Bell, Keaton J.; Littlefair, S. P.; Parsons, S. G.; Dennihy, E.; Fuchs, J. T.; Reding, J. S.; Kaiser, B. C.; Ashley, R. P.; Breedt, E.; Dhillon, V. S.; **Gentile Fusillo, N. P.**; Kerry, P.; Sahman, D. I. (2018, MNRAS, 477, 5646)
- Raddi, R.; Hollands, M. A.; Koester, D.; Gänsicke, B. T.; **Gentile Fusillo, N. P.**; Hermes, J. J.; Townsley, D. M. (2018, ApJ, 858, 3) *Further Insight on the Hypervelocity White Dwarf, LP 40-365 (GD 492): A Nearby Emissary from a Single-degenerate Type Ia Supernova*
- Vaduvescu, O.; Hudin, L.; Mocnik, T.; Char, F.; Sonka, A.; Tudor, V.; Ordonez-Etxeberria, I.; Díaz Alfaro, M.; Ashley, R.; Errmann, R.; et al. (2018, A&A, 609, 105) *280 one-opposition near-Earth asteroids recovered by the EURONEAR with the Isaac Newton Telescope*
- Hermes, J. J.; Gänsicke, B. T.; Kawaler, Steven D.; Greiss, S.; Tremblay, P.-E.; **Gentile Fusillo, N. P.**; Raddi, R.; Fanale, S. M.; Bell, Keaton J.; Dennihy, E.; et al. (2017, ApJS, 232, 23) *White Dwarf Rotation as a Function of Mass and a Dichotomy of Mode Line Widths: Kepler Observations of 27 Pulsating DA White Dwarfs through K2 Campaign 8*
- Geier, Stephan; Østensen, Roy H.; Nemeth, Peter; Heber, Ulrich; **Gentile Fusillo, Nicola P.**; Gänsicke, Boris T.; Telting, John H.; Green, Elizabeth M.; Schaffenroth, Johannes (2017, OAst, 26, 164) *Meet the family - the catalog of known hot subdwarf stars*
- Raddi, R.; **Gentile Fusillo, N. P.**; Pala, A. F.; Hermes, J. J.; Gänsicke, B. T.; Chote, P.; Hollands, M. A.; Henden, A.; Catalán, S.; Geier, S.; Koester, D.; Munari, U.; Napiwotzki, R.; Tremblay (2017, MNRAS, 472, 4173) *Multi-band photometry and spectroscopy of an all-sky sample of bright white dwarfs*
- Breedt, E.; Steeghs, D.; Marsh, T. R.; **Gentile Fusillo, N. P.**; Tremblay, P.-E.; Green, M.; De Pasquale, S.; Hermes, J. J.; Gänsicke, B. T.; Parsons, S. G.; Bours, M. C. P.; Longa-Peña, P.; Rebassa-Mansergas, A. (2017, MNRAS 468, 2910) *Using large spectroscopic surveys to test the double degenerate model for Type Ia supernovae*
- Hermes, J. J.; Gänsicke, B. T.; **Gentile Fusillo, Nicola Pietro**; Raddi, R.; Hollands, M. A.; Dennihy, E.; Fuchs, J. T.; Redfield, S. (2017, MNRAS 468, 1946) *When flux standards go wild: white dwarfs in the age of Kepler*
- Geier, S.; Østensen, R. H.; Nemeth, P.; **Gentile Fusillo, N. P.**; Gänsicke, B. T.; Telting, J. H.; Green, E. M.; Schaffenroth, J. (2017, A&A 600, 50) *The population of hot subdwarf stars studied with Gaia. I. The catalog of known hot subdwarf stars*
- Tremblay, P.-E.; **Gentile-Fusillo, N.**; Raddi, R.; Jordan, S.; Besson, C.; Gänsicke, B. T.;

- Parsons, S. G.; Koester, D.; Marsh, T.; Bohlin, R.; Kalirai, J.; Deustua, S. (2017, MNRAS 465, 2849) *The Gaia DR1 mass-radius relation for white dwarfs*
- Bell, Keaton J.; Hermes, J. J.; Montgomery, M. H.; **Gentile Fusillo, N. P.**; Raddi, R.; Gänsicke, B. T.; Winget, D. E.; Dennihy, E.; Gianninas, A.; Tremblay, P.-E.; Chote, P.; Winget, K. I. (2016, ApJ 829, 82) *Outbursts in Two New Cool Pulsating DA White Dwarfs*
 - Tremblay, P.-E.; Cummings, J.; Kalirai, J. S.; Gänsicke, B. T.; **Gentile-Fusillo, N.**; Raddi, R. (2016, MNRAS 461, 2100) *The field white dwarf mass distribution*
 - Tremblay, P.-E.; Cummings, J.; Kalirai, J. S.; Gänsicke, B. T.; **Gentile-Fusillo, N.**; Raddi, R. (2016, MNRAS 461, 2100) *The field white dwarf mass distribution*
 - Reindl, N.; Rauch, T.; Werner, K.; Kepler, S. O.; Gänsicke, B. T.; **Gentile Fusillo, N. P.** (2014, A&A 572, 117) *Analysis of cool DO-type white dwarfs from the Sloan Digital Sky Survey data release 10*
 - Carter, P. J.; Gänsicke, B. T.; Steeghs, D.; Marsh, T. R.; Breedt, E.; Kupfer, T.; **Gentile Fusillo, N. P.**; Groot, P. J.; Nelemans, G. (2014, MNRAS 439, 2848) *Two new AM Canum Venaticorum binaries from the Sloan Digital Sky Survey III*

DRIVING LICENCE Italian EU B driving license.

OTHER INTERESTS Black belt in full contact chinese kickboxing.

REFeree DETAILS Dr. Pier-Emmanuel Tremblay , Department of Physics, University of Warwick, Coventry CV4 7AL, UK. , tel: +442476528407, email: P-E.Tremblay@warwick.ac.uk

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