

Theodoros Anagnos

Curriculum Vitae



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PERSONAL INFORMATION

Name and Surname: Theodoros Anagnos
Birth date and place: 29/05/1991 in Arachova/Greece
Citizenship: Greek

LANGUAGE SKILLS

Greek – Native speaker
English – Proficient
Italian – Basics
German – Basics

EDUCATION - FULL TIME EXPERIENCE

1/6/2016 – until now

Co-tutelle Ph.D in Astronomy & Astrophysics – Zentrum für Astronomie, Landessternwarte – Member of the International Max Planck Research School for Astronomy and Cosmic Physics at the University of Heidelberg (IMPRS-HD) – Macquarie University, Sydney NSW.

Thesis project: *"Using astrophotonics to design new components for future telescopes"*

Supervisors: Prof. Dr. Andreas Quirrenbach, Dr. Robert J. Harris, Senior Lecturer Dr. Christian Schwab

28/1/2015 – 28/10/2015

Completed military tour in Hellenic Army Forces, became honorary lance corporal demonstrating outstanding discipline, team spirit and presence of mind, (<http://www.army.gr/default.php?la=2>).

1/9/2009 – 24/11/2014

Diploma (Ptychion) in Physics – Aristotle University of Thessaloniki - G.P.A: 7.87/10.0 (top 7%).

On the basis of a thesis entitled: *"Discovery probability of extragalactic planets via transit method and Habitable exoplanets statistics in the Milky Way"*

Supervisor: Prof. Dr. John H. Seiradakis, Co-Supervisor: Dr. Dimitris Mislis

1/9/2007 – 24/6/2009

High school of Arachova (Viotias) – Graduated with distinction

INTERESTS

- Astrophotonics, Adaptive Optics, instrumentation, fibers - waveguides, optical reformatters
- Time series analysis, spectroscopy, machine learning

KEY SKILLS

GitHub account: <https://github.com/thanagno/>

Operating Systems: Unix, Linux, Mac OS, Windows

Programming Languages: Python (Advanced) (matplotlib, numpy, astropy, scikit-learn, pandas), R (Intermediate), HTML(Intermediate), Java (Intermediate), C-shell (Intermediate)

Optical Software: Soapy, RSoft(BeamPROP, FemSIM), OSLO-EDU, Zemax

Mechanical Designing: Autodesk Inventor CAD

Graphics, Documents and Image Processing: L^AT_EX, OpenOffice, GIMP, Inkscape

Other: All commercial software

Software Development:

- De-trending algorithms
- Data Visualisation
- Data Modelling
- Statistical Inference
- Data Mining

GRANTS - AWARDS

1/9/2018 – 24/10/2019

Cotutelle International Macquarie University Research Excellence Scholarship (Cotutelle iMQRES) (www.mq.edu.au/research/phd-and-research-degrees/scholarships).

REVIEWER IN PEER REVIEW JOURNALS

- Journal: Optical Fiber Technology (Elsevier)

OBSERVATIONAL EXPERIENCE

Optical:

2019

Subaru telescope, Mauna Kea, Hawaii, USA

Telescope: 8.2 m

Observation Program: Testing the custom made injection fiber system on-sky with single-mode spectrograph in NIR in collaboration with SCEXAO team. (<https://www.naoj.org/Projects/SCEXAO/scexaoWEB/050devmodules.web/030rhea.web/indexm.html>).

2011 – 2014

Observatory of Aristotle University of Thessaloniki, Greece

Telescope: 20 cm

Supervisors: Prof John H. Seiradakis

Observation Program: Solar Observations: Sunspots, prominences, calculation of the Sun's differential motion. Photosphere, chromosphere (Ha region) (www.astro.auth.gr/gallery.html).

2012 – 2013

Holomon Astronomical Station, Greece (>150hours)

Telescopes: 7" Newtonian Astrograph, 11" Schmidt-Cassegrain, 8" Newtonian

Supervisors: Prof. John H. Seiradakis, Dr. Dimitris Mislis

Observation program: New variable stars follow - up observations. Photometry - Instrumentation (CCD - Filter etc) (<http://www.astro.auth.gr/~seeing-gr/HOLOMON/HOLOMON.html>).

PUBLICATIONS

Journal (peer reviewed)

2018

1. **Th. Anagnos**, R. J. Harris, M. K. Corrigan, A. P. Reeves, M. J. Townson, D. G. MacLachlan, R. R. Thomson, T. J. Morris, C. Schwab, A. Quirrenbach, *Simulation and Optimization of an Astrophotonic Reformatter*, MNRAS, 2018, (<https://doi.org/10.1093/mnras/sty1396>).

Proceedings (peer reviewed)

2019

1. R. J. Harris, **Th. Anagnos** and P. Hottinger, *Astrophotonic technologies for small telescopes*, Contrib. Astron. Obs. Skalnaté Pleso 49, 119-124, 2019, (<https://www.ta3.sk/caosp/Edition/FullTexts/vol49no2/pp119-124.pdf>).

Proceedings

2018

1. R. J. Harris, **Th. Anagnos** and P. Hottinger, *Astrophotonic technologies for small telescopes*, Contrib. Astron. Obs. Skalnaté Pleso 35, 1-6, 2018.
2. **Th. Anagnos**, R. J. Harris, M. K. Corrigan, A. P. Reeves, M. J. Townson, D. G. MacLachlan, R. R. Thomson, T. J. Morris, C. Schwab, A. Quirrenbach, *Optimizing astrophotonic spatial reformatters using simulated on-sky performance*, SPIE Astronomical Telescopes + Instrumentation Conference - Austin, Texas, United States 2018, (<https://doi.org/10.1117/12.2312017>).
3. M. K. Corrigan, T. J. Morris, R. J. Harris, **Th. Anagnos**, *Demonstration of a photonic lantern low order wavefront sensor using an adaptive optics testbed*, SPIE Astronomical Telescopes + Instrumentation Conference - Austin, Texas, United States 2018, (<https://doi.org/10.1117/12.2311336>).
4. R. J. Harris, J. Tepper, J. J. Davenport, E. Pedretti, D. M. Haynes, P. Hottinger, **Th. Anagnos**, A. Shankar Nayak, Y. Herrero Alonso, P. Jyoti Deka, S. Minardi, A. Quirrenbach, L. Labadie and R. Haynes, *NAIR: Novel Astronomical Instrumentation through photonic Reformatting*, SPIE Astronomical Telescopes + Instrumentation Conference - Austin, Texas, United States 2018, (<https://doi.org/10.1117/12.2312009>).

2013

1. **Th. Anagnos**, D. Mislis, K. Karpouzas, A. Tsiaras, J. H. Seiradakis, *Habitable ExoPlanets statistics in the Milky Way*, Hellenic Astronomical Conference - Athens 2013, (<http://adsabs.harvard.edu/abs/2013hell.conf...43A>).
2. A. Tsiaras, D. Mislis, **Th. Anagnos**, K. Karpouzas, J. H. Seiradakis, *Classification of Stellar Variability with Kepler Data*, Hellenic Astronomical Conference - Athens 2013, (<http://adsabs.harvard.edu/abs/2013hell.confR...46T>).

3. K.Karpouzas, D. Mislis, A. Tsiaras, **Th. Anagnos**, J. H. Seiradakis, *A new method for planetary transit light curve optimization*, Hellenic Astronomical Conference - Athens 2013, (<http://adsabs.harvard.edu/abs/2013hell.confS...18K>).

TALKS

2018

1. *Optimizing astrophotonic spatial reformatters using simulated on-sky performance*, SPIE Astronomical Telescopes + Instrumentation Conference - Austin, Texas, United States 2018.
2. *Improving astrophotonic spatial reformatters with on-sky simulated performance*, European Week of Astronomy and Space Science - Arena & Convention Centre (ACC), Liverpool, United Kingdom 2018.

2017

1. *Simulation and Optimization of an Astrophotonic Reformatter*, Haus der Astronomie - Heidelberg (<https://svn.mpia.de/trac/gulli/att/wiki/AstroTechTalk>).
2. *Photonic dicer - Simulation & Optimization*, NYRIA, Meudon Observatory - Paris (<http://astro-instrumentation.blogspot.de/p/about-us.html>).

2016

1. *Pulse broadening measurements from the galactic center Pulsar J1745-2900*, Spitler L.G. et al. (2014), IMPRS-HD seminar, Heidelberg.
2. *Introduction to Astrophotonics*, Zentrum für Astronomie, Landessternwarte, Heidelberg.

2013

1. *Statistical analysis of habitable exoplanets in the Milky Way*, University of Thessaloniki, Greece.

CONFERENCES - SEMINARS

2018

- SPIE Astronomical Telescopes + Instrumentation Conference - Austin, Texas, United States 2018.
- European Week of Astronomy and Space Science - Arena & Convention Centre (ACC), Liverpool, United Kingdom 2018, (<http://eas.unige.ch/EWASS2018/index.jsp>).

2013

- 11th Hellenic Astronomical Conference, Athens, (<http://www.helas.gr/>).

WORKSHOPS - SCHOOLS

2017

- Participant in the workshop of "Network of Young Researchers in Instrumentation for Astrophysics" (NYRIA), Meudon Observatory, Paris - France, (<http://astro-instrumentation.blogspot.de/p/about-us.html>).
- Participant in the workshop of "2nd Advanced School on Exoplanetary Science - Astrophysics of Exoplanetary Atmospheres", Vietri sul Mare, Italy, (<http://www.mpia.de/~ASES2/ases2>).

2013

- Participant in the workshop "The Role and the Origin of Magnetic Fields in Astrophysics". The workshop was organized by the Research Center for Astronomy & Applied Mathematics of the Academy of Athens, (<http://astro.academyofathens.gr/mf2013/>).
- Participant in the 13th Hellenic Seminar of Hellenic Physical Society, (<http://www.eef.gr/>).

2011

- Astrowinter school, Thessaloniki, (<http://www.astrowinterschool.gr/>).

TEACHING EXPERIENCE

2018 – 2019

Lecturing of "Introduction to Optical Science and Technology" course (PHYS221 - 1 teaching hour) of the Physics and Astronomy Department of Macquarie University.

Tutor of astronomical laboratory (ASTRO170 - 20 teaching hours) and lab-book marking of it (14 hours), Physics and Astronomy Department of Macquarie University.

2017 – 2018

Two times assistant in the Astrolab course of the Physics Department of the Heidelberg University, (<https://www.lsw.uni-heidelberg.de/users/jheidt/praktikum/index.html>).

2013

Examiner (Observational Astronomy and Data Reduction section) in 7th International Olympiad on Astronomy & Astrophysics Volos 2013, (<http://www.ioaa2013.gr/index.php?lang=en>).

2012 – 2013

Assistant in evaluating undergraduate students homework within the framework of the course "Introduction to Astronomy" of the Physics Department of the Aristotle University of Thessaloniki.

OUTREACH ACTIVITIES

2011-2015

Organizing Astronomy Presentations for high school students at the Aristotle University Observatory under the supervision of Professor John H. Seiradakis.

2011-2015

Outreach assistant in the monthly public nights in the Observatory of Thessaloniki.

2012-2014

Public lectures and presentation of Aristotle University's Observatory and sunspots observation at 2012 "Aristotle University of Thessaloniki on Sunday" events.

MISCELLANEOUS INTERESTS

Hang/para gliding, r/c modelling, skiing, hiking, mountain climbing, experimenting with computers (hardware, software).

REFERENCES

Professor Andreas Quirrenbach

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D-69117 Heidelberg, Germany
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