

# Maria Tsantaki

NATIONALITY: GREEK · DATE OF BIRTH: 17/04/1984

INAF - Osservatorio Astrofisico di Arcetri, Largo Enrico Fermi 5, I-50125, Florence, Italy

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## Research Interests

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- Atmospheric parameters and chemical abundances of FGK-type stars
- Spectroscopic methods and pipelines to characterize stars for large surveys
- Chemical evolution of the Galaxy and stellar populations
- Statistical properties of exoplanets and their hosts

## Research Experience

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### Istituto Nazionale di Astrofisica (INAF) - Researcher

OSSERVATORIO ASTROFISICO DI ARCETRI

Project: *Cross-calibration of Gaia and large spectroscopic surveys*, collaborator: E. Pancino

*Florence, Italy*

*2019 – Today*

### Centro de Astrofísica da Universidade do Porto (CAUP) - Researcher

INSTITUTO DE ASTROFÍSICA E CIÊNCIAS DO ESPAÇO

Project: *'The Gaia-ESO census of the Milky way: unlocking the secrets of stellar populations'*, collaborator: V. Adibekyan

*Porto, Portugal*

*2018 – 2019*

### Instituto de Radioastronomía y Astrofísica (IRyA) - Research fellow

UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO (UNAM), DGAPA FELLOWSHIP

Project: *'Galactic archaeology in the era of Gaia'*, collaborator: G. Bruzual

*Morelia, Mexico*

*2016 – 2018*

### Centro de Astrofísica da Universidade do Porto - Researcher

INSTITUTO DE ASTROFÍSICA E CIÊNCIAS DO ESPAÇO

Project: Stellar parameters in medium resolution

*Porto, Portugal*

*2015 – 2016*

## Education

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### Ph.D. in Astronomy awarded with Distinction

CENTRO DE ASTROFÍSICA DA UNIVERSIDADE DO PORTO, UNIVERSIDADE DO PORTO

Thesis: *'Precise spectroscopic analysis of solar-type stars with moderate and fast rotation'*,

funded by the ERC starting grant: *'EXtra-solar planets and stellar astrophysics: towards the detection of Others Earths'*

*ExoEarths*, Supervisors: Prof. N. C. Santos & Senior Researcher S. Sousa

*Porto, Portugal*

*2011 – 2015*

### Master in Advanced Physics

DEPARTMENT OF PHYSICS, UNIVERSITY OF CRETE

Specialization in Astrophysics. Thesis: *'Ultra-luminous X-ray sources in the most metal poor galaxies'*,

Supervisor: Assoc. Prof. A. Zezas

*Irakleio, Greece*

*2009 – 2011*

### Bachelor in Physics (4-year degree)

DEPARTMENT OF PHYSICS, NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS

Specialization in Astrophysics. Thesis: *'Photometric study of AC Bootis'*, Supervisor: Prof. P. Niarchos

*Athens, Greece*

*2002 – 2009*

## Grants & Awards

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### FUNDED RESEARCH PROJECTS

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2014–2018 Co-I, R&D Project: *The Gaia-ESO census of the Milky way: unlocking the secrets of stellar population*, 80 000€, Fundação para a Ciência e a Tecnologia

*Portugal*

### AWARDS

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2017	Award of excellence for top Mexican researchers, National Council of Science and Technology, 7 200€	<i>Mexico</i>
2012	Award of excellence, 2nd place in freshmen year among ~300 students, State Scholarships Foundation, Physics Department, University of Athens	<i>Greece</i>

## GRANTS

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2015	Travel grant, Gaia-ESO survey, Third Science Meeting, 400€	<i>Vilnius, Lithuania</i>
2014	Travel grant, The Milky Way Unravalled by Gaia, 400€	<i>Barcelona, Spain</i>
2011	Travel grant, Project: Spectroscopic Study of Kepler Asteroseismic Targets, 800€	<i>Wroclaw, Poland</i>
2011	Travel grant, 6th IMPRS summer school, 200€	<i>Heidelbeg, Germany</i>

## Research activities

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### PUBLICATION SUMMARY

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- 32 published papers in high-impact international journals
- 4 published papers as first author with 113 citations in total
- 2 papers as first author in preparation
- 8 publications in proceedings
- Total number of citations: 855
- h-index: 15 (refereed)
- 2 press/media releases
- For a complete list: [ADS](#)

### PROJECT MEMBERSHIP & REVIEWER COMMITTEES

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- Member of the [PLATO](#) mission for the WP122300 (Determination of classical parameters)
- Member of the WG of stellar characterization for the [Ariel](#) mission
- Member of the [Maunakea Spectroscopic Explorer](#) Science team
- Co-I of the [APOGEE](#) survey
- Co-I of the [Gaia-ESO](#) survey
- Referee service for The Astrophysical Journal (ApJ)
- Member of the Scientific Council of the Instituto de Astrofísica e Ciências do Espaço since 2015

### SCIENTIFIC VISITS

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2017	Instituto de Astronomía – UNAM, in collaboration with Y. Gómez Maqueo Chew (1 week)	<i>Mexico city, Mexico</i>
2017	CAUP, in collaboration with E. Delgado-Mena (1 week)	<i>Porto, Portugal</i>
2016	Instituto de Astronomía – UNAM, in collaboration with L. Aguilar (1 week)	<i>Ensenada, Mexico</i>
2011	Institut Astronomiczny Uniwersytetu Wroclawskiego, in collaboration with J. Molenda-Zakowicz, Project: Spectroscopic Study of Kepler Targets, (1 week)	<i>Wroclaw, Poland</i>
2010	Harvard - Smithsonian Center for Astrophysics, in collaboration with A. Prestwich (1 month)	<i>Boston, USA</i>

### OBSERVATIONAL EXPERIENCE

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- Observational experience with FEROS@2.2m telescope in La Silla, Chile (4 nights, visitor mode)
- 13 ESO accepted proposals (UVES, HARPS, FEROS, ESPRESSO)
- 3 OPTICON accepted proposals (TNG, FEROS, ESPADONS)

### ESO ACCEPTED PROPOSALS

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PI	ID	Instrument	Title
Mortier	092.C-0695	UVES	Detailed and homogeneous spectroscopic characterization of transit planet hosts
Mortier	094.C-0367	UVES	Detailed and homogeneous spectroscopic characterization of transit planet hosts
Tsantaki	094.C-0707	UVES	Stellar parameters and activity for the transiting planet hosts with K2
Mortier	095.C-0324	UVES	Detailed and homogeneous spectroscopic characterization of transit planet hosts
Mortier	096.C-0092	UVES	Detailed and homogeneous spectroscopic characterization of transit planet hosts
Santerne	096.C-0657	UVES	Probing the diversity of exo-Neptunes with HARPS and K2
Sousa	097.C-0280	UVES	Planet formation hints using detailed and homogeneous spectroscopic characterization of planet host stars
Delgado-Mena	097.D-0418	UVES	Searching for the fingerprints of planet engulfment in red giants
Sousa	098.C-0151	UVES	Know the star to know the planet: Building the largest catalog of exoplanet host star parameters and chemical abundances
Delgado-Mena	102.C-0812	UVES	RV variations in evolved stars in open clusters: planets, oscillations or stellar activity?
Sousa	102.C-0226	UVES	Know the star to know the planet: Building the largest catalog of exoplanet host star parameters and chemical abundances
Adibekyan	102.D-0185	ESPRESSO	ESPRESSO atlas of Gaia benchmark stars
Delgado-Mena	104.C-0358	HARPS	RV variations in evolved stars in open clusters: planets, oscillations or stellar activity? II

### OPTICON ACCEPTED PROPOSALS

PI	ID	Instrument	Title
Santerne	15B/023	TNG	Probing the diversity of exo-Neptunes with HARPS-N & K2
Mortier	14B020	FEROS	Detailed and homogeneous spectroscopic characterization of transit planet-hosts
Sousa	2013A/027	ESPADONS	Homogeneous characterization of northern planet-host stars

## Dissemination of science

### COMMUNICATIONS AND ORGANIZATION OF EVENTS

- 7 talks in conferences, 8 research seminars, and 6 poster presentations
- 2 press/media releases: [2015](#), [2018](#)
- LOC for the workshop: '[Software Tools for Mathematics](#)', 2018, ENES, Morelia, Mexico
- LOC for the [2DEMO](#)C, Towards the detection and characterization of other Earths, Thematic Line Internal Meeting, 2014, São Pedro do Sul, Portugal

### TEACHING EXPERIENCE

#### Lecturer

*IRyA, UNAM, Mexico*

COURSE: 'STELLAR ATMOSPHERES'

2017

Level: Master's in Astronomy, Duration: 1 academic semester, 6h per week

## Supervisor and Lecturer

COURSE: 'DETECTION AND CHARACTERIZATION OF EXOPLANETS'

Level: high school, Physics Summer School, University of Porto, Duration: 1 week

*Escola de Verão, Portugal*

2014

## Teaching Assistant

COURSE: 'OPTICS'

Level: Bachelor in Physics (3rd year students), Duration: 1 academic semester, 3h per week

*University of Crete, Greece*

2010

## TALKS

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|------|--|-------------------------------|
| 2019 | 'Improvements on spectroscopic surface gravities of cool stars with Gaia', European Week of Astronomy and Space Science (EWASS)              | <i>Lyon, France</i>           |
| 2019 | 'On the iron ionization balance of cool stars: the role of accurate surface gravities from Gaia' (pitch talk), ESLAB 53: 'The Gaia Universe' | <i>Noordwijk, Netherlands</i> |
| 2018 | 'On the ionization balance of cool stars', XXVIII Encontro Nacional de Astronomia e Astrofísica  | <i>Coimbra, Portugal</i>      |
| 2016 | 'Determination of stellar parameters from Gaia spectra', Gaia workshop   | <i>Mexico city, Mexico</i>    |
| 2014 | 'Spectroscopic parameters for solar-type stars with high rotation', The Gaia-ESO survey: Second Science Meeting                              | <i>Porto, Portugal</i>        |
| 2013 | 'Stellar parameters and their effect on planet searches', 6th Iberian Meeting on Asteroseismology  | <i>Valencia, Spain</i>        |
| 2012 | 'Deriving stellar parameters for cool stars', XXII Encontro Nacional de Astronomia e Astrofísica   | <i>Porto, Portugal</i>        |

## RESEARCH SEMINARS

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|------|--|-------------------------|
| 2019 | 'Machine learning techniques to retrieve stellar parameters', CAUP   | <i>Porto, Portugal</i>  |
| 2018 | 'From planetary systems to Galactic stellar populations: the role of atmospheric stellar parameters', Universidad Michoacana de San Nicolás de Hidalgo | <i>Morelia, Mexico</i>  |
| 2017 | 'FASMA: a new spectral synthesis tool', CAUP   | <i>Porto, Portugal</i>  |
| 2016 | 'Determination of stellar parameters from Gaia spectra', IA - UNAM   | <i>Ensenada, Mexico</i> |
| 2016 | 'Spectroscopic analysis of FGK-type stars in the era of large surveys', IRyA - UNAM  | <i>Morelia, Mexico</i>  |
| 2015 | 'Stellar characterization from medium resolution spectrographs', CAUP  | <i>Porto, Portugal</i>  |
| 2014 | 'How to derive stellar parameters with spectral synthesis', CAUP   | <i>Porto, Portugal</i>  |
| 2012 | 'Deriving spectroscopic stellar parameters for FGK stars', CAUP  | <i>Porto, Portugal</i>  |

## POSTERS

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|------|--|---------------------------|
| 2019 | 'Accurate surface gravities from the iron ionization balance and Gaia', The legacy of the Gaia-ESO survey  | <i>Florence, Italy</i>    |
| 2017 | 'Stellar parameters with FASMA', 13th Hellenic Astronomical Conference   | <i>Heraklio, Greece</i>   |
| 2017 | 'Stellar parameters with FASMA', Astrometry and Astrophysics in the Gaia sky, IAU 330  | <i>Nice, France</i>       |
| 2015 | 'A new approach to analyse mid-resolution spectra', Gaia-ESO Survey: Third Science Meeting ( <i>awarded travel grant</i> )                               | <i>Vilnius, Lithuania</i> |
| 2014 | 'Precise spectroscopic parameters for solar-type stars with moderate-to-high rotation', The Milky Way Unravalled by Gaia ( <i>awarded travel grant</i> ) | <i>Barcelona, Spain</i>   |
| 2014 | 'Precise parameters for moderate and fast rotating stars', Towards Other Earths II   | <i>Porto, Portugal</i>    |

## OUTREACH

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|------|---------------------------------|------------------------|
| 2014 | Student's day@CAUP (talk), CAUP | <i>Porto, Portugal</i> |
| 2012 | Student's day@CAUP (talk), CAUP | <i>Porto, Portugal</i> |

## MENTORING EXPERIENCE

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2019	T. Silva, current Master student, Thesis: Stellar parameters for M dwarfs in the NIR with the spectral synthesis technique	CAUP, Portugal
2015	D. Andreasen, former PhD student, Thesis: Determination of stellar parameters for M-dwarf stars: the NIR approach	CAUP, Portugal
2015	G. Teixeira, former Master Student, Thesis: Spectroscopic Calibrations for a Better Characterization of Stars and Planets	CAUP, Portugal

## Data analysis for astronomy

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**LANGUAGES** · python (e.g. sklearn, pandas, scipy, numpy, pyfits, astropy, pyraf, matplotlib), Level: excellent

· IDL, Level: excellent

· SQL, Level: advanced

**SOFTWARE** · IRAF, CIAO, ds9, topcat, various spectroscopic packages (SME, iSpec, FASMA, MOOG)

**SYSTEM** · Unix/Linux

· Microsoft

**OTHER** · L<sup>A</sup>T<sub>E</sub>X, git, bash, gnuplot, OpenOffice

## Languages

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**GREEK** · mother tongue

**ENGLISH** · Excellent (C2 level)

**PORTUGUESE** · Basic (conversational)

**SPANISH** · Basic (conversational)

**FRENCH** · Basic (conversational)

## Publication list

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### PUBLISHED/ACCEPTED PAPERS

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1. T. L. Campante, E. Corsaro, M. N. Lund, B. Mosser, A. Serenelli, D. Veras, V. Adibekyan, H. M. Antia, W. Ball, S. Basu, T. R. Bedding, D. Bossini, G. R. Davies, E. Delgado Mena, R. A. Garcia, R. Handberg, M. Hon, S. R. Kane, S. D. Kawaler, J. S. Kuszlewicz, M. Lucas, S. Mathur, N. Nardetto, M. B. Nielsen, M. H. Pinsonneault, S. Reffert, V. Silva Aguirre, K. G. Stassun, D. Stello, S. Stock, M. Vradar, M. Yıldız, W. J. Chaplin, D. Huber, J. L. Bean, Z. Çelik Orhan, M. S. Cunha, J. Christensen-Dalsgaard, H. Kjeldsen, T. S. Metcalfe, A. Miglio, M. J. P. F. G. Monteiro, B. Nsamba, S. Örtel, F. Pereira, S. G. Sousa, **Tsantaki, M.**, M. C. Turnbull, *TESS asteroseismology of the known red giant host stars HD212771 and HD203949*, accepted in The Astrophysical Journal, 2019 (arXiv:1909.05961)
2. **Tsantaki, M.**, Santos N. C., Sousa S. G., Delgado-Mena E., Adibekyan V. Zh., Andreasen, D. T. *On the ionization balance of cool stars*, MNRAS, Volume 485, Issue 2, p.2772-2782, 2019
3. Sousa, S. G., Adibekyan, V., Santos, N. C., Mortier, A., Barros, S. C. C., Delgado-Mena, E., Demangeon, O., Israelian, G., Faria, J. P., Figueira, P., Rojas-Ayala, B., **Tsantaki, M.**, Andreasen, D., Brandão, I., Ferreira, A. C. S., Montalto, M., and, Santerne, A., *The Metallicity-Period-Mass Diagram of low-mass exoplanets*, MNRAS, Volume 485, Issue 3, p.3981-3990, 2019

4. Delgado-Mena, E., Moya, A., Adibekyan, V. Zh., **Tsantaki, M.**, González Hernández, J. I., Israelian, G., Davies, G. R., Chaplin, W. J., Sousa, S. G., Ferreira, A. C. S., Santos, N. C., *Abundance-age ratios in the HARPS-GTO sample with Gaia DR2: Chemical clocks for a range of [Fe/H]*, A&A, Volume 624, id.A78, 24 pp., 2019
5. Adibekyan, V., de Laverny, P., Recio-Blanco, A., Sousa, S. G., Delgado-Mena, E., Kordopatis, G., Ferreira, A. C. S., Santos, N. C., Hakobyan, A. A., **Tsantaki, M.**, *The AMBRE Project: searching for the closest solar siblings*, A&A, 619, A130, 2018
6. Sousa, S. G., Adibekyan, V., Delgado-Mena, E., Santos, N. C., Andreasen, D. T., Ferreira, A. C. S., **Tsantaki, M.**, Barros, S. C. C., Demangeon, O., Israelian, G., Faria, J. P., Figueira, P., Mortier, A., Brandão, I., Montalto, M., Rojas-Ayala, B., and, Santerne, A., *SWEET-Cat updated. New homogeneous spectroscopic parameters*, A&A, 620, A58, 2018
7. Delgado-Mena, E., Adibekyan, V. Zh., Figueira, P., González Hernández, J. I., Santos, N. C., **Tsantaki, M.**, Sousa, S. G., Faria, J. P., Suárez-Andrés, L., Israelian, G., *Chemical Abundances of Neutron-capture Elements in Exoplanet-hosting Stars*, PASP, Volume 130, Issue 991, pp. 094202, 2018
8. Delgado Mena, E., Lovis, C., Santos, N. C., Gomes da Silva, J. Mortier, A., **Tsantaki, M.**, Sousa, S. G., Figueira, P., Cunha, M. S., Campante, T. L., Adibekyan, V., Faria, J. P., Montalto, M., *Planets around evolved intermediate-mass stars in open clusters II. Are there really planets around IC4651No9122, NGC2423No3 and NGC4349No127?*, A&A, 619, A2, 2018
9. **Tsantaki, M.**, D. T. Andreasen, G. D. C. Teixeira, S. G. Sousa, N. C. Santos, E. Delgado-Mena, G. Bruzual, *Atmospheric stellar parameters for large surveys using FASMA: a new spectral synthesis package*, MNRAS, 473, Issue 4, 2018
10. Delgado-Mena, E., Adibekyan, V. Z., Figueira, P., Hernandez, J. I. G., Santos, N. C., **Tsantaki, M.**, Sousa, S. G., Faria, J. P., Suarez-Andres, L., Israelian, G., *Chemical abundances of neutron-capture elements in exoplanet-hosting stars.*, Publ. Astron. Soc. Pac., Vol. 130, p. part no 9, 4202-94202, 2018
11. Delgado-Mena E., **Tsantaki, M.**, V. Zh. Adibekyan, S. G. Sousa, N. C. Santos, J. I. González Hernández, G. Israelian, *Chemical abundances of 1111 FGK stars from the HARPS GTO planet search program II: Cu, Zn, Sr, Y, Zr, Ba, Ce, Nd and Eu*, A&A, 606, A94, 2017
12. Andreasen, D. T., Sousa, S. G., **Tsantaki, M.**, Teixeira G. D., Mortier A., Santos N. C., Suarez-Andres L., Delgado-Mena, E., *SWEET-Cat update and FASMA: A new minimization procedure for stellar parameters using high quality spectra*, A&A, 600, A69, 2017
13. Bayliss, D., Hojjatpanah, S., Santerne, A., Dragomir, D., Zhou, G., Shporer, A., Colan, K. D., Almenara, J., Armstrong, D. J., Barrado, D., Barros, S. C. C., Bento, J., Boisse, I., Bouchy, F., Brown, D. J. A., Brown, T., Cameron, A., Cochran, W. D., Demangeon, O., Deleuil, M., Diaz, R. F., Fulton, B., Horne, K., Hebrard, G., Lillo-Box, J., Lovis, C., Mawet, D., Ngo, H., Osborn, H., Palle, E., Petigura, E., Pollacco, D., Santos, N., Sefako, R., Siverd, R., Sousa, S. G., **Tsantaki, M.**, *EPIC 201702477b: A Transiting Brown Dwarf from K2 in a 41 day Orbit*, ApJ, 153, 15B, 2017
14. Teixeira, G. D. C., Sousa, S. G., **Tsantaki, M.**, Monteiro, M. J. P. F. G., Santos, N. C., Israelian, G., *New  $T_{eff}$  and [Fe/H] spectroscopic calibration for FGK dwarfs and GK giants*, A&A, 595, A15, 2016
15. Lillo-Box, J., Demangeon, O., Santerne, A., Barros, S. C. C., Barrado, D., Hebrard, G., Osborn, H. P., Armstrong, D. J., Almenara, J.-M., Boisse, I., Bouchy, F., Brown, D. J. A., Courcol, B., Deleuil, M., Delgado Mena, E., Diaz, R. F., Kirk, J., Lam, K. W. F., McCormac, J., Pollacco, D., Rajpurohit, A., Rey, J., Santos, N. C., Sousa, S. G., **Tsantaki, M.**, Wilson, P. A., *K2-30 b and K2-34 b: Two inflated hot Jupiters around solar-type stars*, A&A, 594, A50, 2016

16. Santerne, A., Hebrard, G., Lillo-Box, J., Armstrong, D. J., Barros, S. C. C., Demangeon, O., Barrado, D., Debackere, A., Deleuil, M., Delgado Mena, E., Montalto, M., Pollacco, D., Osborn, H. P., Sousa, S. G., Abe, L., Adibekyan, V., Almenara, J.-M., Andre, P., Arlic, G., Barthe, G., Bendjoya, P., Behrend, R., Boisse, I., Bouchy, F., Boussier, H., Bretton, M., Brown, D. J. A., Carry, B., Cailleau, A., Conseil, E., Coulon, G., Courcol, B., Dauchet, B., Dalouzy, J.-C., Deldem, M., Desormieres, O., Dubreuil, P., Fehrenbach, J.-M., Ferratfiat, S., Girelli, R., Gregorio, J., Jaecques, S., Kugel, F., Kirk, J., Labrevoir, O., Lachurie, J.-C., Lam, K. W. F., Le Guen, P., Martinez, P., Maurin, L. P. A., McCormac, J., Pioppa, J.-B., Quadri, U., Rajpurohit, A., Rey, J., Rivet, J.-P., Roy, R., Santos, N. C., Signoret, F., Strabla, L., Suarez, O., Toubanc, D., **Tsantaki, M.**, Vienney, J.-M., Wilson, P. A., Bachschmidt, M., Colas, F., Gerteis, O., Louis, P., Mario, J.-C., Marlot, C., Montier, J., Perroud, V., Pic, V., Romeuf, D., Ubaud, S., Verilhac, D., *K2-29 b/WASP-152 b: An Aligned and Inflated Hot Jupiter in a Young Visual Binary*, ApJ, 824, 55S, 2016
17. Delgado Mena, E., **Tsantaki, M.**, Sousa, S. G., Kunitomo, M., Adibekyan, V., Zaworska, P., Santos, N. C., Israelian, G., Lovis, C., *Searching for Li-rich giants in a sample of 12 open clusters. Li enhancement in two stars with substellar companions*, A&A, 587, A66, 2016
18. Santerne, A., Moutou, C., **Tsantaki, M.**, Bouchy, F., Hebrard, G., Adibekyan, V., Almenara, J.-M., Amard, L., Barros, S. C. C., Boisse, I., Bonomo, A. S., Bruno, G., Courcol, B., Deleuil, M., Demangeon, O., Diaz, R. F., Guillot, T., Havel, M., Montagnier, G., Rajpurohit, A. S., Rey, J., Santos, N. C., *SOPHIE velocimetry of Kepler transit candidates. XVII. The physical properties of giant exoplanets within 400 days of period*, A&A, 587, A64, 2016
19. Figueira, P., Adibekyan, V. Zh., Oshagh, M., Neal, J. J., Rojas-Ayala, B., Lovis, C., Melo, C., Pepe, F., Santos, N. C., **Tsantaki, M.**, *Radial velocity information content of M dwarf spectra in the near-infrared*, A&A, 586, A101, 2016
20. Andreasen, D. T., Sousa, S. G., Delgado Mena, E., Santos, N. C., **Tsantaki, M.**, Rojas-Ayala, B.; Neves, V., *Near-infrared spectroscopy of the Sun and HD 20010. Compiling a new line list in the near-infrared*, A&A, 585, A143, 2016
21. Barros, S. C. C., Almenara, J. M., Demangeon, O., **Tsantaki, M.**, Santerne, A., Armstrong, D. J., Barrado, D., Brown, D., Deleuil, M., Lillo-Box, J., Osborn, H., Pollacco, D., Abe, L., Andre, P., Bendjoya, P., Boisse, I., Bonomo, A. S., Bouchy, F., Bruno, G., Cerda, J. Rey, Courcol, B., Diaz, R. F., Hebrard, G., Kirk, J., Lachurie, J. C., Lam, K. W. F., Martinez, P., McCormac, J., Moutou, C., Rajpurohit, A., Rivet, J.-P., Spake, J., Suarez, O., Toubanc, D.; Walker, S. R., *Photodynamical mass determination of the multiplanetary system K2-19*, MNRAS, 454, 4267B, 2015
22. Adibekyan, V., Figueira, P., Santos, N. C., Sousa, S. G., Faria, J. P., Delgado-Mena, E., Oshagh, M., **Tsantaki, M.**, Hakobyan, A. A., Gonzalez Hernandez, J. I., Suarez-Andres, L.; Israelian, G., *Identifying the best iron-peak and  $\alpha$ -capture elements for chemical tagging: The impact of the number of lines on measured scatter*, A&A, 583, A94, 2015
23. Armstrong, D. J., Santerne, A., Veras, D., Barros, S. C. C., Demangeon, O., Lillo-Box, J., McCormac, J., Osborn, H. P., **Tsantaki, M.**, Almenara, J.-M., Barrado, D., Boisse, I., Bonomo, A. S., Brown, D. J. A., Bruno, G., Rey Cerda, J., Courcol, B., Deleuil, M., Diaz, R. F., Doyle, A. P., Hebrard, G., Kirk, J., Lam, K. W. F., Pollacco, D. L., Rajpurohit, A., Spake, J.; Walker, S. R. *One of the closest exoplanet pairs to the 3:2 mean motion resonance: K2-19b and c*, A&A, 582, A33, 2015
24. Adibekyan, V. Z., Benamati, L., Santos, N. C., Alves, S., Lovis, C., Udry, S. Israelian, G., Sousa, S. G., **Tsantaki, M.**, Mortier, A. Sozzetti, A., and De Medeiros, J. R., *Chemical abundances and kinematics of 256 G-, K-type field giants. Setting a base for further analysis of giant-planet properties orbiting evolved stars*, MNRAS, 448, 2749, 2015
25. Sousa S. G., Santos, N. C., Montalto, M., Mortier, A., **Tsantaki, M.**, Adibekyan, V. Z.,

- Delgado-Mena, E., Israelian, G., Rojas-Ayala, B. and Neves, V., *Homogeneous spectroscopic parameters for bright planet-host stars from the northern hemisphere*, A&A, 576, A94, 2015
26. Delgado-Mena, E., Bertran de Lis, S., Adibekyan, V. Zh., Sousa, S. G., Figueira, P., Mortier, A., González Hernández, J. I., **Tsantaki, M.**, Israelian, G. and Santos, N. C., *Li abundances in hot stars: planets, rotation and chemical evolution*, A&A, 576A, A69, 2015
27. **Tsantaki, M.**, Sousa, S. G., Santos, N. C., Montalto, M., Delgado-Mena, E., Adibekyan, V. Z., Mortier, A. and Israelian, G., *Spectroscopic parameters for solar-type stars with moderate-to-high rotation. New parameters for ten planet hosts*, A&A, 570, A80, 2014
28. Molenda-Zakowicz, J., Sousa, S. G., Frasca A., Uytterhoeven, K., Briquet, M., Van Winckel, H., Drobek D., Niemczura, E., Lampens, P., Lykke, J., Bloemen, S., Gameiro J. F., Jean C., Volpi, D., Gorlova, N., Mortier, A., **Tsantaki, M.**, and Raskin, G., *Atmospheric Parameters of 169 F, G, K and M-type Stars in the Kepler Field*, MNRAS, 434, 1422, 2013
29. Mortier, A., Santos, N. C., Sousa, S. G., Adibekyan, V. Z., Delgado Mena, E., **Tsantaki, M.**, Israelian, G., Mayor, M., *New and updated stellar parameters for 71 evolved planet hosts. On the metallicity-giant planet connection*, A&A, 557, A70, 2013
30. Santos, N. C., Sousa, S. G., Mortier, A., Neves, V., Adibekyan V., **Tsantaki, M.**, Delgado-Mena, E., Bonfils, X., Israelian, G., Mayor, M. and Udry S., *SWEET-Cat: A catalogue of parameters for Stars With ExoplanETs I. New atmospheric parameters and masses for 48 stars with planets*, A&A, 556, A150, 2013
31. **Tsantaki, M.**, Sousa, S. G., Adibekyan, V. Z., Santos, N. C., Mortier, A. and Israelian, G., *Deriving precise parameters for cool solar-type stars. Optimizing the iron line list*, A&A, 555, A150, 2013
32. Prestwich, A. H., **Tsantaki, M.**, Zezas, A., Jackson, F., Roberts, T. P., Foltz, R., Linden, T. and Kalogera, V., *Ultra-luminous X-Ray Sources in the Most Metal Poor Galaxies*, ApJ, 769, 92, 2013

## PROCEEDINGS

---

1. **Tsantaki, M.**, N. C. Santos, S. G. Sousa, E. Delgado-Mena, V. Adibekyan, D. T. Andreaden, *On the iron ionization balance of cool stars: the role of accurate surface gravities from Gaia*, DOI:10.5281/zenodo.2634195, The Gaia Universe (53rd ESLAB Symposium), 2019
2. Meszaros, Sz., Troup, N., Stassun, K. G., Sobek, J., **Tsantaki, M.**, Shetrone, M., Johnson, J., Galbraith-Frew, J., Ivans, I., Mahadevan, S., *Determining the surface gravity of APOGEE solar-type dwarf stars using line-depth ratios*, American Astronomical Society, AAS Meeting 233, id.259.40, 2019
3. Delgado Mena, E., **Tsantaki, M.**, Zh. Adibekyan, V., Sousa, S. G., Santos, N. C., González Hernández, J. I., Israelian, G., *Abundance ratios & ages of stellar populations in HARPS-GTO sample*, Proceedings of IAU Symp. 330: Astrometry and Astrophysics in the Gaia Sky, Volume 330, pp. 156-159, 2018
4. **Tsantaki, M.**, D. T. Andreasen, G. D. C. Teixeira, S. G. Sousa, N. C. Santos, E. Delgado-Mena, G. Bruzual, *Stellar parameters with FASMA: a new spectral synthesis package*, Proceedings of IAU Symp. 330: Astrometry and Astrophysics in the Gaia Sky, Volume 330, pp. 271-272, 2018
5. Teixeira, G. D. C., Sousa, S. G., **Tsantaki, M.**, Monteiro, M. J. P. F. G., Santos, N. C., Israelian, G., *A new spectroscopic calibration to determine  $T_{eff}$  and  $[Fe/H]$  of FGK dwarfs and giants*, EPJ Web of Conferences, Volume 160, id.01013, 2017



6. Barros, S. C. C., Almenara, J. M., Demangeon, O., **Tsantaki, M.**, Santerne, A., Armstrong, D. J., Barrado, D., Brown, D., Deleuil, M., Lillo-Box, J., Osborn, H., Pollacco, D., Abe, L., Andre, P., Bendjoya, P., Boisse, I., Bonomo, A. S., Bouchy, F., Bruno, G., Cerda, J. R., Courcol, B., Díaz, R. F., Hébrard, G., Kirk, J., Lachurié, J. C., Lam, K. W. F., Martinez, P., McCormac, J., Moutou, C., Rajpurohit, A., Rivet, J.-P., Spake, J., Suarez, O., Toubanc, D., Walker, S. R., *K2-19, The first K2 multi-planetary system showing TTVs*, Astronomy in Focus, Proceedings of the IAU, Volume 29A, 2016
7. **Tsantaki, M.**, Sousa, S., Santos, N. C., Montalto, M., *Precise spectroscopic parameters for solar-type stars with moderate-to-high rotation*, EAS Publications Series, Vol. 67-68, 2014
8. Prestwich, A. H., Chandar, R., Kuraszewicz, J., Zezas, A., **Tsantaki, M.**, Foltz, R., Kalogera, V. and Linden, T., *Ultra-Luminous X-ray Sources in the Most Metal Poor galaxies*, American Astronomical Society Meeting Abstracts #218, 209.04, Vol. 43, 2011

## IN PREPARATION

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- **Tsantaki, M.**, Delgado-Mena, E., Sousa, S. G., Kunitomo, M., Adibekyan, V., Zaworska, P., Santos, N. C., et al., *Li-rich giants in open clusters.*, A&A, 2019
- **Tsantaki, M.**, Andreasen, D., Adibekyan, V., *Machine learning techniques for Gaia-RVS spectra.*, The Journal of Open Source Software, 2019

## WHITE PAPERS

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- Bergemann, M.; Huber, D.; Adibekyan, V.; Angelou, G.; Barría, D.; Beers, T. C.; Beck, P. G.; Bellinger, E. P.; Bestenlehner, J. M.; Bitsch, B.; Burgasser, A.; Buzasi, D.; Cassisi, S.; Catelan, M.; Escorza, A.; Fleming, S. W.; Gänsicke, B. T.; Gandolfi, D.; García, R. A.; Gieles, M.; Karakas, A.; Lebreton, Y.; Lodieu, N.; Melis, C.; Merle, T.; Mészáros, S.; Miglio, A.; Molaverdikhani, K.; Monier, R.; Morel, T.; Neilson, H. R.; Oshagh, M.; Rybizki, J.; Serenelli, A.; Smiljanic, R.; Szabó, G. M.; Toonen, S.; Tremblay, P.-E.; Valentini, M.; Van Eck, S.; Zwintz, K.; Bayo, A.; Cami, J.; Casagrande, L.; Gabdeev, M.; Gaulme, P.; Guiglion, G.; Handler, G.; Hillenbrand, L.; Yildiz, M.; Marley, M.; Mosser, B.; Price-Whelan, A. M.; Prsa, A.; Hernández Santisteban, J. V.; Silva Aguirre, V.; Sobeck, J.; Stello, D.; Szabo, R.; **Tsantaki, M.**; Villaver, E.; Wright, N. J.; Xu, S.; Zhang, H.; Anguiano, B.; Bedell, M.; Chaplin, B.; Collet, R.; Kamath, D.; Martell, S.; Sousa, S. G.; Ting, Y.-S.; Venn, K., *Stellar Astrophysics and Exoplanet Science with the Maunakea Spectroscopic Explorer (MSE)*, appears as a chapter for the Detailed Science Case of the Maunakea Spectroscopic Explorer, arxiv:1903.03157, 2019