

Dr. Ioannis Kontogiannis Postdoctoral Researcher ETH Zürich

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Curriculum

Vitae

Personal Information

Name:	Ioannis - Dimitrios
Surname:	Kontogiannis
Date of Birth:	March 16, 1981,
Place of Birth:	Volos, Greece
Nationality:	Greek
Military Service:	05/2012 – 02/2013
Home Address:	Schamendingenstrasse 77, 8050, Zürich, Switzerland
Work Address:	ETH Zürich
	Stefano-Franscini-Platz 5,
	Honggerberg
	8093, Zürich,
	Switzerland

Education

Degrees	
2008 - 2013:	PhD in Solar Physics Faculty of Physics, National and Kapodistrian University of Athens
	PhD Thesis title:
	"The role of chromospheric fine structure on the formation of the magnetic canopy and the propagation of waves"
	Supervisor:
	<i>Dr. Georgia Tsiropoula</i> , Research Director, Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing, National Observatory of Athens
2004 - 2006:	MSc in Astrophysics Faculty of Physics, National and Kapodistrian University of Athens
	Master Thesis title:
	"Detection of waves in the solar chromosphere"

Physics Degree

Faculty of Physics, National and Kapodistrian University of Athens

Dissertation title:

"A study of the chromospherically active binary UV Piscium"

Languages

- 1. Greek (native)
- 2. English (fluently, C2)
- 3. German (B1/B2)
- 4. French (elementary)

Skills

- 1. Software development in IDL, FORTRAN, MATLAB
- 2. Observations with ground-based solar (GREGOR, VTT, SST) and night telescopes.
- 3. Data reduction/process of solar observations obtained
 - by ground-based telescopes: DOT, SST, GREGOR, VTT
 - by the space missions: IRIS, SDO (AIA, HMI), Hinode (SOT/BFI, SOT/SP, EIS, XRT), SoHO (MDI), TRACE.
- 4. Image processing (SolarSoft IDL, MATLAB).
- 5. Time Series Analysis: FFT, wavelet analysis.
- 6. Line profile analysis (cloud model inversion, gaussian fitting).
- 7. Magnetic field extrapolation codes.
- 8. Stellar photometry.
- 9. Public outreach/Science communication.

Summer Schools / Workshops

- 1. **IAU Seminar on Public Engagement Training**, 22 February 2022 (Online), International Astronomical Union Office for Astronomy Outreach.
- 2. Protection against discrimination, harassment, and violence in work life and especially in the AIP. 22-23 July 2021, Institute for Astrophysics Potsdam (AIP), Germany (Online).
- 3. **SOLARNET Public Engagement Training Workshop** 12th 13th April 2021, Northumbria University, Newcastle, UK (Online)
- 4. **F-CHROMA Training Workshop**: Observations and Modelling of Solar Flares, October 31 November 4, 2016, Wroclaw, Poland.
- 1st Summer School of the Hellenic Astronomical Society, "Physical Processes and Data Analysis in Heliophysics", September 1 – 5, 2014, Athens, Greece.
- 6. USO School on Solar Magnetism, June 28 July 4, 2009, Dwingeloo, The Netherlands.
- 7. Solar Observational Data Analysis School, June 1 5, 2009, University of Glasgow, Scotland, UK.
- 1st Practical School on Spectroscopy, October 22 28, 2007, Bulgarian National Astronomical Observatory, Rozhen, Bulgaria.

Working Experience

2024 Dec. – present:	Postdoctoral Researcher
	Eidgenössische Technische Hochschule Zürich (ETH Zürich), Switzerland
2018 June – 2024 Nov.:	Postdoctoral Researcher
	Leibniz-Institute for Astrophysics in Potsdam (AIP, Germany
2015 July – 2017 Dec.:	Postdoctoral Researcher
	Research Center for Astronomy and Applied Mathematics of the Academy of Athens.
2014 Jan. – 2015 Oct.:	Postdoctoral Researcher
	Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing, National Observatory of Athens.
2016 Sep. – 2024 Jan.:	Editorial team
	"PRISMA" magazine for Science, Technology and Society, inlet with AVGI newspaper.
2013 March-December:	Research Associate
	Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing, National Observatory of Athens.
2007 Nov 2015 July:	Science Communicator
	Interactive Exhibition of Science and Technology, Eugenides Foundation.
2010 – 2013 <u>:</u>	Editorial team
	"Science Illustrated" popular magazine.
2008 – 2010:	Research Associate
	Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing, National Observatory of Athens.
2004 Sep. – Nov.:	Visiting graduate student
	Astrophysics Research Center, School of Mathematics and Physics, Queens University of Belfast.

Principal Investigator (PI) in third-party funded projects

 The evolution of solar active regions toward flares and coronal mass ejections and the role of the electric currents (2021-2024)
– Deutsche Forschungsgemeinschaft (DFG). Funding for a 3-year project (budget~300.000 Euro). 2. Detection and dynamics of small solar vortex flows (2020-2022) – DAAD/IKYDA Programme for Project-Related Personal Exchange. PI in Germany (budget ~12.000 Euro).

Participation in international working teams

- 1. International Team Meetings I & II on **"The nature and physics of vortex flows in solar plasmas"**, International Space Science Institute, Bern, Switzerland, February 2019 & 2020
- 2. FLARECAST Science Workshop, June 27-28, 2017, Meudon, Paris, France
- 3. 3rd FLARECST Full-Consortium Meeting, June 26-27, 2017, Meudon Paris France
- 4. 2nd FLARECSAT Full-Consortium Meeting, June 27-28, 2016, Genova, Italy
- 5. 1st FLARECAST Full-Consortium Meeting, January 14-15, 2016, Dublin, Ireland
- 6. International Team Meetings I & II on **"Solar Small Scale, Transient Phenomena"**, International Space Science Institute, Bern, Switzerland, January 2009 & 2010

Participation in projects

- 1. Detection and dynamics of small solar vortices DAAD / IKYDA (PI)
- 2. Quiet Sun magnetic fields and Newly Emerging Flux Dynamics, Energetics and Upper Atmospheric Response. Joint German-Czech Research Project funded by the DFG-GACR cooperation 2018-2020 (Postdoctoral Researcher)
- 3. FLARECAST, Horizon 2020 project of the European commission. (Postdoctoral Researcher)
- KRIPIS/PROTEAS, funded by the General Secretariat of Research and Technology, O.P. Competitiveness and Entrepreneurship, National Strategic Reference Framework (NSRF) 2007– 2013. (Postdoctoral Researcher)
- 5. **"Solar small-scale events and their role in the heating of the solar atmosphere"** in the framework of "ARISTEIA II" Action of the operational program "Education and Lifelong Learning", funded by the European Social Fund (ESF) and Greek national funds. (Postdoctoral Researcher)

Observing and Technical Campaigns at Solar Telescopes

- October 2024: Vacuum Tower Telescope (VTT)
- June July 2024: Vacuum Tower Telescope (VTT)
- September 2023: Swedish Solar Telescope (SST), PI (on site), funded by SOLARNET.
- May June 2023: Vacuum Tower Telescope (VTT) FAMuLUS Science verification and commissioning (on site)
- June August 2022: GREGOR, HiFI+ support (remotely)
- March 2022: GREGOR and VTT, HiFI+ and FAMuLUS instrument setup (on site)
- November 2021: GREGOR/VTT Technical campaign, HiFl and FAMuLUS instrument setup (on site)
- September 2021: GREGOR, support for coordinated observations with SolO (remotely).
- March April 2021: GREGOR, PI (remotely)
- September October 2020 GREGOR: Science Verification, Co-I and PI in two proposals (remotely)
- October 2019: Goode Solar Telescope, Co-I (service mode)
- August 2019: Swedish Solar Telescope (SST), Co-I (service mode)
- May 2019: GREGOR and VTT, observer (on site)
- November December 2018: GREGOR and Vacuum Tower Telescope (VTT), observer (on site)

Teaching and Supervision Experience

2022-2023 Winter Sem.:	Bachelor Thesis mentoring and Supervision: High-resolution spectroscopic observations of the quiet Sun, Colin Gebauer, Technical University of Applied Sciences Wildau
2022-2023 Winter Sem.:	Digital Image Processing postgraduate course, University of Potsdam
2021-2022 Winter Sem.:	Digital Image Processing postgraduate course, University of Potsdam
2021 Summer Sem.:	Solar-Terrestrial Relations postgraduate course, University of Potsdam.
2020-2021 Winter Sem.:	Solar Physics postgraduate course, University of Potsdam.
2007 – 2013:	Radiative Transfer in Stellar Atmospheres and the Interstellar Medium post- graduate course, National and Kapodistrian University of Athens.
2003 – 2013:	Teaching and supervision at the laboratories of the Faculty of Physics, National and Kapodistrian University of Athens.

Reviewer for peer-reviewed journals and proposals

- 1. Scientific Reports
- 2. Nature Communications
- 3. Astrophysical Journal
- 4. Astronomy & Astrophysics
- 5. Monthly Notices of the Royal Astrophysics Society
- 6. Solar Physics
- 7. Journal of Space Weather and Space Climate
- 8. Journal of Atmospheric and Solar-Terrestrial Physics
- 9. Astronomische Nachrichten
- 10. Entropy
- 11. Distributed Research utilizing Advanced Computing (DiRAC), Science and Technology Facility Council (STFC) UK
- 12. Loire Valley Institute for Advanced Studies (LE STUDIUM)

Conference Organization

- 1. Member of Scientific Organizing Committee (SOC) of the 17th European Solar Physics Meeting (ESPM-17), to be held on September 9-13, 2024, in Turin, Italy.
- 2. Convenor of the Splinter Meeting "Exploring the Causes and Consequences of Solar Flares, CMEs, and other Transient Events", during the "Annual Meeting of the German Astronomical Society 2023", Berlin 15 September 2023.
- 3. Local Organizing Committee member of the SOLARNET Conference: The Many Scales of the Magnetic Sun, Potsdam 8-12 May 2023.
- 4. Scientific Organizing Committee member of the COSPAR 2022 event "E2.4: The dynamic Sun at small scales", Athens, July 2022
- Convenor of the Splinter Meeting "From bright points to coronal mass ejections: the Sun at its various scales", during the "Annual Meeting of the German Astronomical Society 2020" (23.09.2020, Online).
- 6. Local Organizing Committee member of "Latest Progress in Astrophysics" Athens, 5-6 October 2007.

Contribution to the community

- 1. Member of the European Solar Physics Division (ESPD) for 2021-2024 (elected in September 2021) and 2024-2027 (elected in September 2024).
- 2. Member of the selection committee for the appointment of two postdoctoral positions at the Solar Physics Group of the Cosmic Magnetic Fields branch in AIP.

Research Interests

- 1. Emergence of magnetic flux in the Sun
- 2. Solar flares and flare/CME prediction
- 3. Chromospheric fine structure dynamics
- 4. Solar atmospheric oscillations and MHD waves
- 5. Solar Magnetism
- 6. Space Weather
- 7. Solar-stellar connection

Publications

Published in peer-reviewed journals

- 1. **Kontogiannis, I.** Pietrow, A.G.M., Druett, M. K., Dineva, E., Verma, M., and Denker, C., 2024, "Solar active region evolution and imminent flaring activity through a color-coded visualization of photospheric vector magnetograms", Astronomy & Astrophysics, 691, A119
- 2. **Kontogiannis, I.**, 2024, "The extremely strong photospheric net currents of the unique solar active region NOAA 13664", Astronomy & Astrophysics, 690, L10
- 3. Kontogiannis I., & Georgoulis M.K., 2024, "The temporal evolution of non-neutralized electric currents and the complexity of solar active regions", The Astrophysical Journal, 970, 162
- 4. Wisniewska, A., Korsós, M. B., **Kontogiannis, I.**, Soós, Sz., Erdélyi, R., 2024, "Long-period oscillations in the lower solar atmosphere prior to flare events", Astronomy & Astrophysics, 686, A224.
- 5. Georgoulis, M. K., et al., 2024, Prediction of Solar Energetic Events Impacting Space Weather Conditions (ISWAT S3 cluster Roadmap Paper). Advances in Space Research in press.
- 6. Pietrow, A.G.M., Cretignier, M., Druett, M. K., Alvarado-Gómez, J. D., Hofmeister, S. J., Verma, M., Kamlah, R., Baratella, M., Amazo-Gomez, E. M., **Kontogiannis**, I. et al., 2024, "A comparative study of two X2.2 and X9.3 solar flares observed with HARPS-N: Reconciling Sun-as-a-star spectroscopy and high-spatial resolution solar observations in the context of the solar-stellar connection", Astronomy & Astrophysics, 682, A46.
- Raouafi et al., 2023, "Firefly: The Case for a Holistic Understanding of the Global Structure and Dynamics of the Sun and the Heliosphere", Decadal Survey for Solar and Space Physics (Heliophysics) 2024-2033 white paper e-id. 333; Bulletin of the American Astronomical Society, Vol. 55, No. 3, e-id. 333
- 8. Denker, C., Verma, M., Wisniewska, A., Kamlah, R., **Kontogiannis I.**, et al., 2023, "Improved Highresolution Fast Imager (HiFI)", Journal of Astronomical Telescopes, Instruments, and Systems, 9, 015001.
- 9. Kontogiannis I., 2023, "The characteristics of flare- and CME-productive active regions", Advances in Space Research, 71, 2017
- 10. Tziotziou K., et al. (ISSI team). 2023, "Vortex flows on the Sun. Definitions, observations, modelling, and theory" (*Review Paper*), Space Science Reviews 219, 1.
- 11. Quintero Noda, C., et al. 2022, "The European Solar Telescope", Astronomy & Astrophysics, 666, 21Q.

- 12. Dakanalis, I., Tsiropoula, G., Tziotziou, K., **Kontogiannis**, I., 2022, "Chromospheric swirls I. Automated detection in Hα observations and statistical properties", Astronomy & Astrophysics, 663, A94.
- Kuckein, C., Balthasar, H., Quintero Noda, C., Diercke, A., Trelles Arjona, J. C., Ruiz Cobo, B., Felipe, T., Denker, C., Verma, M., Kontogiannis, I., and Sobotka, M, 2021, "Multiple Stokes I inversions to infer magnetic fields in the spectral range around Cr I 5782 Å", Astronomy & Astrophysics, 653, A165.
- 14. Georgoulis et al. (The FLARECAST Consortium), 2021, "The Flare Likelihood and Region Eruption Forecasting (FLARECAST) Project: Flarecasting in the Machine Learning Era", Journal of Space Weather and Space Climate, 11, 39.
- M. Verma, Matijevic, G., Denker, C., Diercke, A., Dineva, E., Balthasar, H., Kamlah, R., Kontogiannis,
 I., Kuckein, C., Pal, P.S., 2021, "Classification of High-resolution Solar Hα Spectra Using t-distributed Stochastic Neighbor Embedding", The Astrophysical Journal, 907, 54.
- 16. Tziotziou, K., Tsiropoula, G., and Kontogiannis I., 2020, "A persistent quiet-Sun tornado. III. Waves" Astronomy & Astrophysics, 643, A166.
- 17. Abbasvand, V., Sobotka, M., Heinzel, P., Svanda, M., Jurcak, J., Garcia-Rivas, M., Denker, C., Balthasar, H., Verma, M., **Kontogiannis**, I., Koza, J., Korda, D., & Kuckein, C., 2020, "Observational study of chromospheric heating by acoustic waves", Astronomy & Astrophysics, 642, A52.
- 18. Zouganelis, Y. et al. 2020, "The Solar Orbiter Science Activity Plan: Translating solar and heliospheric physics questions into action", Astronomy & Astrophysics, 642, A3.
- 19. Kontogiannis, I., Dineva, E., Diercke, A., Verma, M., Kuckein, C., Balthasar, H., Denker, C., 2020, "High-resolution Spectroscopy of an Erupting Minifilament and Its Impact on the Nearby Chromosphere". The Astrophysical Journal, 898, 144.
- 20. Verma, M., Denker, C., Diercke, A., Kuckein, C., Balthasar, H., Dineva, E., **Kontogiannis, I.**, Pal, P.S., and Sobotka M., 2020, "High-resolution spectroscopy of a surge in an emerging flux region", Astronomy & Astrophysics, 639, A19.
- 21. Palacios, J. et al. "Magnetic Flux Emergence in a Coronal Hole", 2020, Solar Physics, 295, 64 (Editor's Choice May 2020).
- 22. Kontogiannis, I., Tsiropoula, G., & Tziotziou, Gontikakis, C., Kuckein, C., Verma, M., & Denker, C., 2020, "Emergence of small-scale magnetic flux in the quiet Sun", A&A, 633, A67.
- 23. Kontogiannis, I., Georgoulis, M.K., Guerra, J.A., Park, S.-H., Bloomfield, S.D., 2019, "Which photospheric characteristics are relevant to eruptive flare CMEs?", Solar Physics, 294, 130 (Editor's Choice October 2019).
- 24. Tziotziou, K., Tsiropoula, G., and **Kontogiannis I.**, 2019, "A persistent quiet-Sun tornado. II. Oscillations", Astronomy & Astrophysics, 623, A160.
- 25. Tziotziou, K., Tsiropoula, G., **Kontogiannis I.**, Scullion, E., & Doyle, G., 2018, "A persistent quiet-Sun tornado. I. Characteristics and dynamics", Astronomy & Astrophysics, 618, A51.
- 26. Kontogiannis, I., Park, S.-H., Guerra, J.A., & Georgoulis, M.K., 2018, "Testing and improving a set of morphological predictors of flaring activity", Solar Physics, 293, 96.
- 27. Kontogiannis, I., Gontikakis, C., Tsiropoula, G., & Tziotziou, 2018, "Probing the quiet solar atmosphere from the photosphere to the corona", Solar Physics, 293, 56.
- 28. Florios. K., **Kontogiannis, I.**, Park, S.-H., Guerra, J.A., Benvenuto, F., & Georgoulis, M.K., 2018, "Forecasting solar flares using magnetogram-based predictors and machine learning", Solar Physics, 293, 28.
- 29. Guerra, J.A., Park, S.-H., Gallagher, P.T., **Kontogiannis, I.**, Georgoulis, M.K., & Bloomfield, S.D., 2018, "Active Region Photospheric Magnetic Properties Derived from Line-of-sight and Radial Fields", Solar Physics, 293, 9.
- 30. Kontogiannis, I., Georgoulis, M.K., Park, S.-H., & Guerra, J.A., 2017, "Non-neutralized electric currents in solar active regions and flare productivity", Solar Physics, 292, 159.

- 31. Park, S.-H., Tsiropoula, G., **Kontogiannis, I.**, & Tziotziou, K., 2016, "First simultaneous SST/CRISP and IRIS observations of a small-scale quiet Sun vortex", Astronomy & Astrophysics, 586, 25.
- 32. Kontogiannis, I., Belehaki, A., Tsiropoula, G., Tsagouri, I., Anastasiadis, A., & Papaioannou, A., 2016, "Building a new space weather facility at the National Observatory of Athens", Advances in Space Research, 57, 1.
- 33. **Kontogiannis, I.**, Tsiropoula, G., & Tziotziou, K., 2016, "Wave propagation in a solar quiet region and the influence of the magnetic canopy", Astronomy & Astrophysics, 585, 110.
- 34. Tziotziou, K., Park, S.-H., Tsiropoula, G., & **Kontogiannis**, I., 2015, "Energy and helicity injection in solar quiet regions", Astronomy & Astrophysics, 581, 61.
- 35. Kontogiannis, I., Tsiropoula, G., Tziotziou, K., 2014, "Transmission and conversion of magnetoacoustic waves on the magnetic canopy in a quiet Sun region", Astronomy & Astrophysics, 567, 62.
- 36. Tziotziou, K., Tsiropoula, G., Georgoulis, M.K., & Kontogiannis, I., 2014, "Energy and helicity budgets of solar quiet regions", Astronomy & Astrophysics, 564, A86.
- Tsiropoula, G., Tziotziou, K., Kontogiannis, I., Madjarska, M. S., Doyle, J. G., Suematsu, Y., 2012, "Solar fine-scale structures. I. Spicules and other small-scale, jet-like events at the chromospheric level: observations and physical parameters" (*Review Paper*), Space Science Reviews, 169, 181.
- 38. Kontogiannis, I., Tsiropoula, G., & Tziotziou, K., 2011, "Hinode SOT/SP and SoHO/MDI quiet Sun magnetic field. Implications of their differences on the extrapolated chromospheric field and the height of the magnetic canopy", Astronomy & Astrophysics, **531**, A66.
- Kontogiannis, I., Tsiropoula, G., Tziotziou, K., & Georgoulis M. K., 2010, "Oscillations in a network region observed in the Hα line and their relation to the magnetic field", Astronomy & Astrophysics, 524, A12.
- 40. **Kontogiannis, I**., Tsiropoula, G., & Tziotziou, K., 2010, "Power halo and magnetic shadow in a solar quiet region observed in the Hα line", Astronomy & Astrophysics, **510**, A41.

Accepted

Submitted to refereed journals

1. Wide-field Image Restoration of G-band and Ca II K Images Containing Large and Complex Active Regions, Kamlah et al. subm. Solar Physics

In preparation

- 1. Filament-induced changes in simulated Sun-as-a-star spectroscopic observations, I. Kontogiannis, A.G.M. Pietrow, et al. (to be submitted by 31/07/2024)
- 2. Pre-flare and C5.5-class flare ribbon formation captured at sub-second cadence on the IRIS spectrograph slit, M. Druett, I. Kontogiannis, A. Pietrow et al.

Research Notes

1. C. Denker, M. Verma, A. G. M., Pietrow, I. Kontogiannis, & R. Kamlah, 2023, "Spectral Background-subtracted Activity Maps", Research Notes of the AAS, Volume 7, Issue 10, id.224.

Conference proceedings

 Utz, D., Kuckein, C., Campos Rozo, J. I., González Manrique, S. J., Balthasar, H., Gömöry, P., Palacios J. H., Denker, C., Verma, M., Kontogiannis, I., Krikova, K., Hofmeister, S., Diercke, A., "Revisiting the building blocks of solar magnetic fields by GREGOR" Solar and Stellar Magnetic Fields: Origins and Manifestations, 30 June - 6 July 2019, Copiapo, Chile. Ed. by A. Kosovichev, K. Strassmeier and M. Jardine. Proceedings of the IAU, Volume 354, pp. 38-41

- Kontogiannis, I., Kuckein, C., González Manrique, S. J., Felipe, T., Verma, M., Balthasar, H., Denker, C., 2019, "The magnetic structure and dynamics of a decaying active region" Solar and Stellar Magnetic Fields: Origins and Manifestations, 30 June - 6 July 2019, Copiapo, Chile. Ed. by A. Kosovichev, K. Strassmeier and M. Jardine. Proceedings of the IAU, Volume 354, pp. 53-57
- 3. Kontogiannis, I., & Tsiropoula, G., 2016, *"The New Solar Telescope at the National Observatory of Athens"*, ASP Conference Series, Vol. 504, p.317
- 4. **Kontogiannis, I.**, Tsiropoula, G., Tziotziou, K., 2010, *"Study of Spicules from Space Observations"*, Universal Heliophysical Processes, Proceedings of the International Astronomical Union, IAU Symposium, Volume 257, p. 165-167
- 5. **Kontogiannis, I.**, Tsiropoula, G., Tziotziou, K., 2010, *"Comparative Analysis of Oscillations of a Solar Quiet Region Using Multi-Wavelength Observations"*, ASPC, Proceedings of the 9th International Conference of the Hellenic Astronomical Society, September 20-24, 2009, Athens, Greece
- 6. **Kontogiannis, I.**, Nanouris, N., Antonopoulou, E., Giannikakis, J., 2008, *"V1025 Herculi and V1071 Herculi: BVRI Photometry and Color Indices Estimation"*, Romanian Astronomical Journal, Vol, 18, Supplement, 73
- 7. **Kontogiannis, I.**, Bloomfield, S.D., McAteer, J.R.T., Mathioudakis, M., Antonopoulou, E., 2007, *"Detection of MHD waves in the solar chromosphere"*, AIP Conference Proceedings, Volume 895, Fifty Years of Romanian Astrophysics
- 8. Antonopoulou, E., Nanouris, N., **Kontogiannis, I**., Giannikakis, J., Dionatos, O., 2006, *"First Photometric Observations and Preliminary Results of Binaries FO Aurigae and V1025 Herculis"*, Astrophysics and Space Science, Volume 304, 1-4, 129
- 9. Antonopoulou, E., Nanouris, N., **Kontogiannis, I**., Giannikakis, J., Dionatos, O., 2006, *"First Photometric Observations of Recently Discovered Binaries"*, Romanian Astronomical Journal Supplement, Vol. 16, Bucharest, September 16-17.
- Antonopoulou, E., Kontogiannis, I., Nanouris, N., Giannikakis, J., Dionatos, O., 2006, "First Photometric Observations of Recently Discovered Binaries", AIP Conference Proceedings, Volume 848, Recent Advances in Astronomy and Astrophysics: 7th International Conference of the Hellenic Astronomical Society, Lixourion, September 8-11, 2005
- 11. Kontogiannis, I., Bloomfield, S.D., McAteer, J.R.T., Mathioudakis, M., Antonopoulou, E., 2005, *"Traveling Waves in Network Bright Points"*, AIP Conference Proceedings, Volume 848, Recent Advances in Astronomy and Astrophysics: 7th International Conference of the Hellenic Astronomical Society, Lixourion, September 8-11.

Talks

Invited talks

- 1. Solar active region complexity parameterizations and the prediction of flares and CMEs, 28th General Assembly of the IUGG, 11-19 July 2023, Berlin.
- 2. Parameterizing the evolution of active regions from emergence to eruption. Recent results and future work. EGU General Assembly 2023, Vienna 23-28 April 2023.
- 3. Magnetic properties of active regions and eruptive activity: recent results and future directions. Invited Colloquium talk at Leibniz-Institut für Sonnenphysik (KIS), 16 May 2022 (Online).
- 4. The characteristics of flare- and CME-productive active regions, 16th European Solar Physics Meeting, 6-10 September 2021, (Online).
- 5. "Predictors of flaring activity and their relevance to CMEs", European Space Weather Week 15, November 5-9, 2018, Leuven, Belgium. Topical Discussion Meeting SOLAR STORMS FORECASTING AND ANALYSIS: SOLAR FLARES, CORONAL MASS EJECTIONS AND SOLAR ENERGETIC PARTICLES.

Contributed talks

- 1. Kontogiannis I., The evolution of net electric currents in solar active regions hosting δ -spots. The 16th Hellenic Astronomical Conference, 26-26 June, 2023, Athens, Greece
- 2. Kontogiannis I., Net electric currents, flares, CMEs and the evolution of active regions, The Many Scales of the Magnetic Sun, 8-12 May 2023, Potsdam, Germany
- 3. Kontogiannis I., Coronal effects of small-scale dynamic phenomena and their traces in the lower solar atmosphere, 44th COSPAR Scientific Assembly, 16-24 July 2022, Athens, Greece.
- 4. **Kontogiannis I.**, Using sound and music in science shows to introduce fundamental physical concepts and modern research on space science, 44th COSPAR Scientific Assembly, 16-24 July 2022, Athens, Greece.
- Kontogiannis, I., Tsiropoula, Tziotziou, K., Gontikakis, C., Kuckein, C., Verma, M., Denker, C., Flux emergence in the quiet Sun, observed from the photosphere to the corona. 14th Hellenic Astronomical Conference, 8 – 11 July 2019, Volos, Greece.
- 6. **Kontogiannis, I**., Georgoulis, M., Park, S.-H., & Guerra J.A., *"Non-neutralized currents as predictors of solar activity"*, 13th Hellenic Astronomical Conference, 2 6 July, 2017, Heraklion, Greece.
- Kontogiannis, I., Gontikakis, C., Tsiropoula, G., Park, S.-H., Tziotziou, K., "Probing the quiet Sun structure and dynamics with ground- and space-based instruments", Coimbra Solar Physics Meeting: Ground-based Solar Observations in the Space Instrumentation Era, 5 – 9 October 2015, Coimbra, Portugal.
- 8. **Kontogiannis, I**., Gontikakis, C., Tsiropoula, G., Park, S.-H., Tziotziou, K., *"Probing the structure and dynamics of quiet Sun ground-based and space-born instruments"*, Hinode 9 Science Meeting, 14 18 September 2015, Belfast, UK.
- 9. Kontogiannis, I., Gontikakis, C., Tsiropoula, G., Park, S.-H., Tziotziou, K., "Probing the quiet Sun structure and dynamics with ground- and space-based instruments", 12th Hellenic Astronomical Conference, 28 June 2 July 2015, Thesaloniki, Greece
- 10. Kontogiannis, I., Tsiropoula, G., & Tziotziou, K., *"Transmission and conversion of magneto-acoustic waves in the quiet solar chromosphere"*, 11th Hellenic Astronomical Conference, 8 12 September 2013, Athens, Greece
- 11. Tsiropoula, G., **Kontogiannis, I.**, & Tziotziou, K., *"Mode conversion and transmission of waves in quiet solar regions"*, EGU General Assembly, 7 12 April 2013, Vienna, Austria.
- 12. Tsiropoula, G. and **Kontogiannis, I.** *"The formation of the magnetic canopy and its role on the propagation of waves"*, BUKS12, 4 7 July 2012, Fodele Beach, Crete.
- 13. **Kontogiannis, I.**, Tsiropoula, G., Tziotziou, K., *"The chromospheric magnetic field and the determination of the height of the magnetic canopy"*, 13th European Solar Physics Meeting, 12 16 September 2011, Rhodes, Greece.
- 14. **Kontogiannis, I.**, Tsiropoula, G., Tziotziou, K., *"Multi-wavelengths observations of oscillatory phenomena in a solar network region and their relation to the magnetic field"*, 10th Hellenic Astronomical Conference, 5 8 September 2011, Ioannina, Greece.

Poster presentations

- 1. **Kontogiannis, I.**, The temporal evolution of non-neutralized electric currents in solar active regions, SHINE 2023 workshop, 07-11 August 2023, Stowe, Vermont, USA.
- Kontogiannis, I., Kuckein, C., González Manrique, S. J., Felipe, T., Verma, M., Balthasar, H., Denker, C., 2019, "The magnetic structure and dynamics of a decaying active region" Solar and Stellar Magnetic Fields: Origins and Manifestations, 30 June - 6 July 2019, Copiapo, Chile
- 3. **Kontogiannis, I.,** Tsiropoula, G., and Tziotziou, K., "Flux Emergence in the Quiet Sun from the Photosphere to the Corona", EST Science Meeting, June 11 15, 2018, Giardini Naxos, Italy

- Kontogiannis, I., & Georgoulis, M., "Polarity-inversion-line properties in eruptive solar active regions and corresponding CME characteristics" 14th European Space Weather Week, November 27 – December 2, 2017, Oostende, Belgium
- Kontogiannis, I., Gontikakis, C., Georgoulis, M., Park, S.-H., & Guerra, J.A., "Combining photospheric and coronal observations to produce flare activity predictors" 14th European Space Weather Week, November 27 – December 2, 2017, Oostende, Belgium
- Kontogiannis, I., Park, S.-H., Guerra, J.A., & Georgoulis, M., "Morphological flaring activity predictors: Testing and improving", 13th Hellenic Astronomical Conference, July 2–6, 2017, Heraklion, Greece.
- Gontikakis, C., Guennou, C., Kontogiannis I., Georgoulis, M., Syntelis, P. "A new way to calculate solar flare precursors using time series of the Differential Emission Measure averaged over flaring active regions. An explorative FLARECAST analysis.", 13th Hellenic Astronomical Conference, July 2-6, 2017, Heraklion, Greece.
- 8. Kontogiannis, I., Georgoulis, M., Park. S.-H., & Guerra, J.A., *"Exploring the solar-flare predictive potential of non-neutralized currents and Ising energy in solar active regions"*, 13th European Space Weather Week, November 14-19, 2016, Oostende, Belgium.
- 9. Kontogiannis, I., Tsiropoula, G., Belehaki, A., Tsagouri, I., Anastasiadis, A., Papaioannou, A., *"Building a new space weather facility at the National Observatory of Athens"*, Coimbra Solar Physics Meeting: Ground-based Solar Observations in the Space Instrumentation Era, October 5-9, 2015, Coimbra, Portugal.
- Kontogiannis, I., Tsiropoula, G., Belehaki, A., Tsagouri, I., Anastasiadis, A., Papaioannou, A., *"Building a new space weather facility at the National Observatory of Athens"*, 12th Hellenic Astronomical Conference, June 28 – July 2, 2015, Thessaloniki, Greece.
- 11. Kontogiannis, I., Tsiropoula G., Tziotziou, K., *"Transmission and conversion of magnetoacoustic waves in a quiet Sun region"*. 14th European Solar Physics Meeting, September 8-12, 2014, Dublin, Ireland.
- 12. Kontogiannis, I., Tsiropoula, G., Belehaki, A., Tsagouri, I., Anastasiadis, A., Papaioannou, A., *"Building a new space weather facility at the National Observatory of Athens"*, 14th European Solar Physics Meeting, September 8-12, 2014, Dublin, Ireland.
- 13. Tziotziou, K., Tsiropoula, G., **Kontogiannis, I.**, Cauzzi, G., *"The Quest for On-disc High Velocity Spicules"*, 13th European Solar Physics Meeting, September 12-16, 2011, Rhodes, Greece
- 14. **Kontogiannis, I**., Tsiropoula, G., Tziotziou, K., *"Wave propagation in a solar network region inferred from a phase difference analysis"*, 13th European Solar Physics Meeting, September 12-16, 2011, Rhodes, Greece.
- 15. **Kontogiannis, I**., Tsiropoula, G., Tziotziou, K., *"Study of Spicules observed in the Call H and Hα lines with Hinode/SOT"*, 10th Hellenic Astronomical Conference, September 5-8, 2011, Athens, Greece
- 16. **Kontogiannis, I.,**Tsiropoula, G., *"Study of Spicules observed in the Call H and Hα lines with Hinode/SOT"*, 38th COSPAR Scientific Assembly, July 15-18, 2010, Bremen, Germany.
- 17. Tsiropoula, G., Tziotziou, K., **Kontogiannis, I.,** *"Power Halo and Magnetic Shadow Observed in a Network Region by Hinode SOT/SP and the Open Dutch Telescope"*, 38th COSPAR Scientific Assembly, July 15-18, 2010, Bremen, Germany.
- 18. Tsiropoula, G., **Kontogiannis, I.,** Tziotziou, K., *"Comparative analysis of oscillations of a solar quiet region from multi-wavelength observations"*, 3rd Solar Orbiter Workshop, May 25-29, 2009, Sorrento, Italy.
- 19. Tziotziou, K., **Kontogiannis, I.,** Tsiropoula, G., *"Study of H-alpha Spicule Profiles with Line Inversion Techniques"*, 12th European Solar Physics Meeting, September 8-12, 2008, Freiburg, Germany.
- 20. Kontogiannis, I., Tsiropoula, G., Tziotziou, K., *"Study of Spicules from Space Observations"*, 12th European Solar Physics Meeting, September 8-12, 2008, Freiburg, Germany.