

Asst. Prof. SERAY ŞAHİN SOLAKCI

Personal Information

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International Researcher IDs

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Education

Doctorate, University of Northumbria at Newcastle, Institute of Mathematics, Physics, and Electrical Engineering, Solar and Space Physics, England 2020 - 2023

Undergraduate, Akdeniz University, Faculty Of Science, Department Of Physics, Turkey 2018 - 2021

Postgraduate, Akdeniz University, Institute Of Science, Space Sciences and Technologies, Turkey 2016 - 2019

Undergraduate, Akdeniz University, Faculty Of Science, Department Of Space Sciences And Technologies, Turkey 2012 - 2016

Dissertations

Doctorate, An Observational Investigation of Coronal Rain in the Quiescent and Flaring Solar Corona, University of Northumbria at Newcastle, Institute of Mathematics, Physics and Electrical Engineering, Space Science, 2023

Postgraduate, Güneş atmosferindeki Lup yapıların incelenmesi, Akdeniz University, Institute Of Science, 2019

Research Areas

Astronomy and Astrophysics, Sun and Solar Systems

Academic Positions

Assistant Professor, Akdeniz University, Faculty Of Science, Department Of Space Sciences And Technologies, 2025 - Continues

Assistant Professor, Antalya Bilim University, 2024 - 2025

Courses

Undergraduate

Technical Writing and Presentation (ENEN401b), Undergraduate, 2024-2025

Physics I, Undergraduate, 2024-2025

Physics II, Undergraduate, 2024-2025

Journal articles indexed in SCI, SSCI, and AHCI

- I. **From Chromospheric Evaporation to Coronal Rain: An Investigation of the Mass and Energy Cycle of a Flare**
Şahin S., Antolin P.
Astrophysical Journal, vol.970, no.2, 2024 (SCI-Expanded)
- II. **Spatial and Temporal Analysis of Quiescent Coronal Rain over an Active Region**
Şahin S., Antolin P., Froment C., Schad T. A.
Astrophysical Journal, vol.950, no.2, 2023 (SCI-Expanded)
- III. **Prevalence of Thermal Nonequilibrium over an Active Region**
Şahin S., Antolin P.
Astrophysical Journal Letters, vol.931, no.2, 2022 (SCI-Expanded)
- IV. **Implications of spicule activity on coronal loop heating and catastrophic cooling**
Niiid V. N., Scullion E., Doyle J. G., Susino R., Antolin P., Spadaro D., Sasso C., Şahin S., Mathioudakis M.
Monthly Notices of the Royal Astronomical Society, vol.509, no.4, pp.5523-5537, 2022 (SCI-Expanded)
- V. **Thermal Instability-Induced Fundamental Magnetic Field Strands in the Solar Corona**
Antolin P., Martínez-Sykora J., Şahin S.
Astrophysical Journal Letters, vol.926, no.2, 2022 (SCI-Expanded)
- VI. **Spatial Distribution of the Origin of Umbral Waves in a Sunspot Umbra**
Yurchyshyn V., KILÇIK A., ŞAHİN S., Abramenko V., LIM E.
ASTROPHYSICAL JOURNAL, vol.896, no.2, 2020 (SCI-Expanded)
- VII. **Magnetic Field Dynamics and Varying Plasma Emission in Large-scale Coronal Loops**
ŞAHİN S., Yurchyshyn V., Kumar P., KILÇIK A., AHN K., YANG X.
ASTROPHYSICAL JOURNAL, vol.873, no.1, 2019 (SCI-Expanded)
- VIII. **The evolution of flaring and non-flaring active regions**
KILÇIK A., Yurchyshyn V., Şahin S., Sarp V., Obridko V., Özgüç A., Rozelot J. P.
MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.477, no.1, pp.293-297, 2018 (SCI-Expanded)

Articles Published in Other Journals

- I. **Possible variations in sunspot groups before flaring activity during solar cycles 23 and 24**
KILÇIK A., ŞAHİN S.
TURKISH JOURNAL OF PHYSICS, vol.41, no.4, pp.351-358, 2017 (ESCI)

Papers Presented at Peer-Reviewed Scientific Conferences

- I. **Solar Multipolar Moments: an up-to-date Pedagogical Approach. Implications for Stellar Properties. Part I: an Analytical Overview (TUTORIAL)**
Rozelot J., Kosovichev A., KILÇIK A., ŞAHİN S., Xu Y., Javaraiah J., Georgieva K., Özgüç A.
12th Workshop on Solar Influences on the Magnetosphere, Ionosphere and Atmosphere, 2020, Primorsko, Bulgaria, 3 - 07 June 2020, pp.1-24, (Full Text)
- II. **Evolution and Life Time Variations of Flaring and Nonflaring Sunspot Groups**
Şahin S., Sarp V., KILÇIK A.
Nineth Workshop Solar Influences on the Magnetosphere, Ionosphere and Atmosphere, Sunny Beach, Bulgaria, 30 May - 03 June 2017, (Summary Text)

Activities in Scientific Journals

Peer Reviews in Scientific Publications

ASTROPHYSICAL JOURNAL, Journal Indexed in SSCI, April 2024

ASTROPHYSICAL JOURNAL, Journal Indexed in SSCI, November 2023

Roles in Event Organizations

Şahin Solakci S., Session Organiser - Prominences and Coronal Rain: formation, evolution, and energy transport, Workshop Organization, Cardiff, England, July 2023

Antolin P., Şahin Solakci S., Waves and Instabilities in the Solar Atmosphere, Workshop Organization, England, June 2023

Şahin Solakci S., 5th IAGA Workshop on Vertical Coupling in the Atmosphere/Ionosphere System, Workshop Organization, Turkey, August 2015

Metrics

Publication: 11

Citation (WoS): 16

Citation (Scopus): 69

H-Index (WoS): 3

H-Index (Scopus): 5

Congress and Symposium Activities

RAS Specialist Discussion Meeting - Non-Equilibrium Thermodynamics in the Solar Atmosphere and Interior, Invited Speaker, London, England, 2024

Hinode-17/IRIS-15/SPHERE 3 Meeting, Attendee, Montana, United States Of America, 2024

11th Coronal Loops Workshop, Invited Speaker, Santa Cruz De Tenerife, Spain, 2024

The Coronal Cooling Conference: rain, prominences and eruptions, Invited Speaker, Leuven, Belgium, 2024

Hinode-16/IRIS-13 Meeting, Attendee, Niigata, Japan, 2023

National Astronomy Meeting, Attendee, Cardiff, England, 2023

Waves and Instabilities in the Solar Atmosphere, Attendee, Newcastle Upon Tyne, England, 2023

Multiphase plasmas across scales, Attendee, Bern, Switzerland, 2023

Hinode-15/IRIS-12, Invited Speaker, Praha, Czech Republic, 2022

National Astronomy Meeting, Attendee, Coventry, England, 2022

10th Coronal Loops Workshop, Attendee, Paris, France, 2022

Solar Orbiter School , Attendee, Sete, France, 2022

Hinode-14/IRIS-11 Joint Science Meeting, Attendee, Washington, United States Of America, 2021

16th European Solar Physics Meeting, Attendee, Rome, Italy, 2021

International Space Weather Initiative Workshop, Attendee, Trieste, Italy, 2019

Invited Talks

3rd China-Europe Solar Physics Meeting “Frontiers in Solar and Heliospheric Physic, Conference, China-Europe Solar Physics, China, September 2025

Hinode 18 - IRIS 16 Meeting: Shaping the Future of Solar Observations and Models, Conference, Hinode-18/IRIS-16

Meeting, England, June 2025

RAS Specialist Discussion Meeting - Non-Equilibrium Thermodynamics in the Solar Atmosphere and Interior, Conference, Royal Astronomical Society, England, October 2024

11th Coronal Loops Workshop, Conference, Instituto de Astrofísica de Canarias, Turkey, June 2024

The Coronal Cooling Conference: rain, prominences and eruptions, Conference, KU Leuven University, Belgium, May 2024

Awards

Şahin Solakci S., UKSP Early Career Researcher Poster Prize, National Astronomy Meeting, July 2023

Şahin Solakci S., METCALF Travel Award, The Solar Physics Division, September 2022

Şahin Solakci S., 16th European Solar Physics Meeting Student Poster 3rd Prize, European Solar Physics Division , September 2021