



SWATNet NEWSLETTER

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Editorial

Emilia Kilpua, SWATNet Coordinator

Doing a PhD is an incredible journey. The road ahead may be bumpy, but the hard work towards the degree develops a diverse set of skills and can be a life changing experience. It is also a unique chance to interact with new people and see the world. After being one year as a coordinator of a Marie Curie Innovative Training Network I'm convinced they are an excellent opportunity for all involved. I have been leading one of the doctoral programmes at the University of Helsinki, but this international network has opened whole new possibilities to learn about the PhD education and different practices abroad. What makes these ITNs so unique is a common theme all students and supervisors work with, internationality, joint training events and industrial involvement. For sure there have been many administrative things that were not easy to tackle with, but so far everything has been finally worked out. Hiring of skilled project management help has been crucial as well as help offered by the universities and the commission. The best part of the experience has been mentoring the students through their PhD adventures and introducing them more deeply to our fascinating field of research. I am looking forward the next year of SWATNet.

1. SWATNet Project

Space Weather Awareness Training Network (SWATNet) is a project funded by the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 955620.

SWATNet is a unique PhD network in the field of heliosphysics. It educates 12 PhD students

called Early Career Researchers (ESRs) who all work in cutting edge research projects. If you want to learn more about our students and their exciting research projects, check their interviews from our website! SWATNet offers a variety of joint training activities, industrial training period with recognised companies of the field and at the Gyula Bay Zoltan Solar Observatory.



All students work towards joint or double degrees, and they spend time at two universities/institutes in two different countries. SWATNet works towards more harmonized doctoral education in Europe and cultivates excellence in training to give ERSs vast options of career choices that benefit the society

The project aims at breakthroughs in our physical understanding of key agents of Space Weather at Earth.

The Consortium consists of nine Parties from eight European countries (Finland, Greece, Hungary, Belgium, UK, Italy, Poland and Portugal), as well as several recognized companies in the field. Learn more about the consortium here:

<https://swatnet.eu/consortium/>

2. Scientific Work Packages

Scientific work in SWATNet covers the whole chain from Sun to Earth. The ESRs use several state-of-the-art models and observations and develop new tools. The used techniques are selected to be interdisciplinary, including Machine Learning and Artificial intelligence to foster learning of research skills with wide applicability. The topics range from analyzing solar eruptions (flares and coronal mass ejections), background solar wind, solar energetic particles, and longer time variations in solar activity. The work is divided in three Work Packages (WPs): WP1: Modelling and forecasting solar activity; WP2: Coronal and heliospheric modelling and forecasting; WP3: Forecasting Space Weather with Artificial Intelligence.

3. Activities

SWATNet provides frequent network wide training activities, such as workshops, summer/winter schools and remote lectures with dedicated topics and targeted at different audiences.

The first school dedicated to "Introduction to Space Weather" took place in November 2021. It was organized fully online due to the pandemic.

The first Workshop with the subject "Communicating Science" was organized in January 2022 also online and it targeted how to effectively disseminate research results in the scientific community. All SWATNet ESRs participated in these trainings and School 1 was also open to 36 students outside the network. Both activities received very positive feedback from students.

4. External Advisory Board

SWATNet project is pleased to announce the composition of the External Advisory Board (EAB). The EAB consists of six members who have confirmed their eagerness to be involved in the Space Weather Awareness Training Network in the role of advisor. Meet the members and learn about their tasks here:

<https://swatnet.eu/meet-the-members-of-the-swatnet-external-advisory-board/>

Meet the External Advisory Board for SWATNet

Consuelo Cid Tortuero
Michail Mathioudakis
Francesca Zuccarello
Michele Piana
Mateja Dumbovic
Simon Mackovjak

<https://swatnet.eu/external-advisory-board/>

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5. Outreach Update

One of the aims of SWATNet is to communicate SWATNet activities and results to the general public effectively and raise the awareness about space weather. In order to reach this objective, one of the actions of SWATNet project is to

strongly encourage ESRs to be engaged in outreach activities and produce material for educational and outreach purposes.

During the group work of the [first SWATNet School](#), students produced plain-language texts about the topics related to their research projects in space weather that they will be working on in SWATNet. Building upon the texts produced in the previous training, during the next one - the [first workshop of SWATNet](#), our ESRs learned how to communicate science to academic and non-academic audiences successfully.

Thanks to this training, the students have produced exciting readings available through the SWATNet webpage, "Educational Material":

<https://swatnet.eu/educational-material/>.

Additionally, the [SWATNet blog](#) has already several entries that may be interesting to read to PhD students from any field of science. On top of this, the project has a lively Twitter account [@SWATNetProject](#) that posts regularly the news about project progress and through which extensive live coverage of the training events is done. Also, other material relevant to space weather, PhD education, STEM, women in science is published in this social medium.

6. Upcoming Events

- 28 February 2022 – Science breakfast with Hungarian Solar Physics Foundation
- 14 March 2022 – 1st Annual Project Meeting
- 15-16 March 2022 – SWATNet Workshop 2 "Research Project Management"
- 3 May 2022 – Mid-Term Check meeting with the European Commission
- June-September 2022 – 1st round of one-month-long observations to be performed by ESRs on-site, at the Gyula Bay Zoltán Solar Observatory (GSO) in Hungary
- June-October 2022 – three SWATNet training events (a summer school and two workshops)
- ...and more!

SWATNet organises its events in a safe and controlled manner to help prevent the spread of COVID-19 virus.

To stay updated on what is happening in the SWATNet project we invite you to follow us on Twitter (<https://twitter.com/SWATNetProject>) and LinkedIn (<https://www.linkedin.com/groups/12623482/>) and visit the project website <https://swatnet.eu/>. We would very much appreciate if you spread the word about the SWATNet project in your channels!