Doctoral theses of Modeling of the Atmosphere and Solar Radiation (MATRAS) (TEP-220)

Coordinator: Dr. Joaquín Tovar Pescador (jtovar [arroba] ujaen [punto] es)

Banner with images of a sun in space, wind turbines, some clouds, and a view from a satellite of a mountainous ar

The “Modeling of the Atmosphere and Solar Radiation (MATRAS)” research group carries out its activity in the field of meteorology and renewable energies.

This group has the following doctoral theses:

Analysis of the spatiotemporal balancing of solar and wind energy resources in Andalusia. Methods to reduce their power fluctuations

- Doctoral student: Francisco Santos Alamillos
- Doctoral advisors: Antonio David Pozo Vázquez y Joaquín Tovar Pescador. (Tesis con mención Europea)
- Mark: Summa cum laude
- University of Jaen, Physics Department, 2012

Algorithms and computational processes implementation for improving the solar radiation forecasting reliability

- Doctoral student: Samuel Quesada Ruiz
- Doctoral advisors: Rafael Segura Sánchez, J. Tovar Pescador Antonio David Pozo Vázquez. (Tesis con mención Europea)
- Mark: Summa cum laude
- University of Jaen, Physics Department, 2015

Estimation of the solar radiation based on satellite images and artificial neural networks

- Doctoral student: Alvaro Linares Rodrigue
- Doctoral advisors:J. Tovar Pescador Antonio, Jose Antonio Ruiz-Arias
- Mark: Summa cum laude
- University of Jaen, Physics Department, 2015

Combining MSG cloud estimates and the WRF NWP model dynamic to enhance short-term solar radiation forecasting

- Doctoral student: Clara Arbizu Barrena
- Doctoral advisors: J.A. Ruiz Arias y Antonio David Pozo Vázquez. (Tesis con mención Europea)
- Mark: Summa cum laude
- University of Jaen, Physics Department, 2017

Assessment and forecasting of solar resource: applications to solar energy industry

- Doctoral student: Vicente Lara Fanego
- Doctoral advisors: J.A. Ruiz Arias, J. Tovar-Pescador y Antonio David Pozo Vázquez. (Tesis con mención Europea)
- Mark: Summa cum laude
- University of Jaen, Physics Department, 2017

Improvements of short-term solar radiation forecasting techniques based on satellite and sky-camera imagery

- Doctoral student: Francisco Javier Rodríguez Benítez
- Doctoral advisors: Antonio David Pozo Vázquez.
- Thesis with European mention
- Mark: Summa cum laude
- University of Jaen, Physics Department, 2019