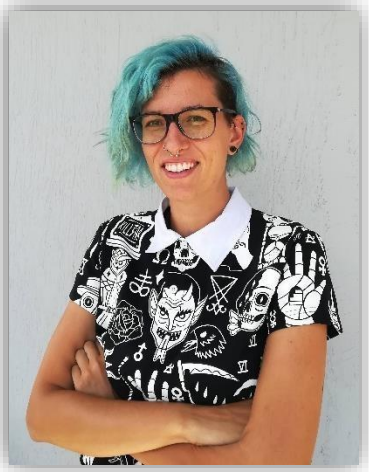
Curriculum Vitae of

# VASILIKI DASKALOPOULOU



Vasiliki Daskalopoulou was born in 1989 in Diavolitsi Messinia, Greece. She received her B.Sc. degree from the Department of Physics of the National and Kapodistrian University of Athens, in 2015 and completed her M.Sc. degree in 2017, in the field of Space Science Technologies and Applications, from the National Observatory of Athens and the University of Peloponnese. Since August 2017, she has been working as a research fellow/PhD Candidate in the ReACT team (Remote sensing of Aerosol Clouds and Trace gases) of the Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing.

## PERSONAL DETAILS

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|---|---|
| Last Name: | **Daskalopoulou** |
| First Name: | **Vasiliki** |
| Date of Birth: | **13/10/1989** |
| Place of Birth: | **Marousi, Athens** |
| Nationality: | **Greek** |

## CONTACT INFORMATION


Work Address: **National Observatory of Athens**, Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing (IAASARS)

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- ORCID: https://orcid.org/0000-0001-6774-5240
- ResearcherID: https://publons.com/researcher/AAF-5741-2019/
- Team website: https://react.space.noa.gr/index.php/people/vasiliki-daskalopoulou

## EDUCATION

**PhD Candidate** - Department of Physics, Faculty of Astrophysics and Space Physics, University of Crete, Greece **November 2017 – Present**

Three-member committee: **Dr. Vassilis Amiridis** – Research Director of IAASARS/NOA

**Dr. Konstantinos Tassis** – Professor in the Depart. of Physics/UoC & Researcher of the Institute of Astrophysics, FORTH

**Dr. Vassilis Charmandaris** – Director of the Institute of Astrophysics, FORTH & Professor of Observational Astrophysics in the Depart. of Physics/UoC

**Dissertation Title:** "*The impact of triboelectrification on desert dust flow dynamics*"

**MSc in Space Science Technologies and Applications** **September 2015 – July 2017**

Degree: 9.62/10

University of Peloponnese - Department of Informatics and Telecommunications, Tripoli, Greece

National Observatory of Athens, Greece

*First* Semester Key Modules:

- Space Environment ( A Very Good )
- Fundamentals of Remote Sensing ( A Good )
- Satellite Communications ( A Good )
- Applied Computer Science ( B Good/Fair )

*Second* Semester Key Modules:

- Signal/Image Processing and Pattern Recognition ( B Good/Fair )
- Big Data Management ( B Good/Fair )
- Space Applications ( A Good )
- Earth System Science ( A Good )

*Third* Semester Key Modules (Present):

- Advanced Space Applications ( A+ Excellent )
- Satellite Positioning and Navigation ( A Very Good )

- Advanced Space Applications related Project: **"Linear Spectral Unmixing Techniques on Multispectral Satellite Imagery of Southern Pindos"** , graded with A+ ( Excellent )

*Fourth* Semester Key Modules:

- Dissertation Title: "*Comparison of Hyperspectral Signal Transformation Techniques in Spectral Unmixing of the Historic ``1536-1669'' Torre del Filosofo volcanic products of the Mongibello Volcano of Mt. ETNA (Italy)*", graded with A+ (Excellent)

  **Advisors:**

  Dr. Athanasios Rontogiannis – **Research Director**, NOA/IAASARS

  Dr. Olga Sykioti – **Senior Researcher**, NOA/IAASARS

  Dr. Koutroumbas Konstantinos – **Senior Researcher,** NOA/IAASARS

**Introduction to Aerospace Engineering:** *Astronautics and Human Spaceflight*

Edx - Massachusetts Institute of Technology (MITx)

(Grade Achieved: 89%) **September 2016 – November 2016**

**BSc in Physics** (51 compulsory courses were passed) **September 2007 – September 2015**

National and Kapodistrian University of Athens - Department of Physics, Greece

(Delay due to strikes and closed department regularly)

Main Area of Concentration: **Astrophysics** - Department of Astrophysics, Astronomy and Mechanics

Minor: General Physics

Grade Achieved: 2:1 (6.98/10)

**Thesis Title:** "Study of the High Energy Spectrum of AGNs' Broad Line Region (BLR)"

**Advisor:** Prof. Apostolos Mastichiadis

Key Modules:

- Astrophysics I, distinction (80%)
- High Energy Astrophysics, distinction (70%)
- Electromagnetism I, distinction (80%)
- Astrophysics Lab. distinction (100%)
- Thesis: "Study of the High Energy Spectrum of AGNs' Broad Line Region (BLR)", distinction

# CURRENT PROFESSIONAL POSITION

**PhD Candidate** - Department of Physics, Faculty of Astrophysics and Space Physics, University of Crete, Greece **November 2017 – Present**

**Research Fellow** - Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing, National Observatory of Athens, Greece **August 2017 – Present**

## International Conferences

- 2nd PANACEA Web-Conference, Greece **28 September – 3 October 2020**
- AGU Fall Meeting, San Francisco, USA **9 – 13 December 2019**
- [COST] Working Groups Meeting – ELECTRONET, Sopron, Hungary **23 – 25 September 2019**
- European Geosciences Union (EGU) General Assembly 2019, Vienna, Austria **7 – 12 April 2019**
- 14th COMECAP, Alexandroupolis, Greece **15 – 17 October 2018**
- 1st European Lidar Conference (ELC), Thessaloniki, Greece **3 – 5 July 2018**
- 17th Electromagnetic and Light Scattering Conference (ELS XVII), Texas, USA **4 – 9 March 2018**
- LIP 2018 - Laser-Light and Interactions with Particles, Texas, USA **5 – 9 March 2018**

## Related Experience

- Participating and organizing various maintenance and field-work trips to the station of PANGEA in Antikythera **June 2018 – Present**
- Co-organized the pre-ASKOS (Aeolus Cal/Val campaign) in Cyprus **7 – 23 November 2019**
- Organizing the preparatory Cyprus campaign for the ASKOS June/July 2020 ESA campaign in Cape Verde, including the deployment of ground-based Atmospheric Electricity instrumentation and balloon borne and UAV tethered launches of novel Atmospheric Electricity sensors. Also conducting direct sun polarimetric measurements **4 – 19 November 2019**
- Organized the First preliminary Campaign of the D-TECT project in Antikythera, testing prototype **Atmospheric Electricity** sensor & operation of a **Direct sun Polarimeter** **September 2018**
- Oral presentation in the **PANACEA** conference
- Poster presentation in **AGU 2019**
- Oral presentation in the **COMECAP conference**, title: "Monitoring of Saharan dust electrification using a ground – based electrometer in Crete & Antikythera"
- Poster presentation in the **ELC conference**

- Participated in numerous **ACTRIS** - *Research Infrastructure for the observation of Aerosol, Clouds, and Trace gases*, annual meetings
- Poster presentations in the **«1st Workshop of Remote Sensing and Space Applications»**, Harokopio University, Athens **21 February 2018**
  With titles:
  - *Mapping of the Historic "1536-1669" volcanic products of Mt. Etna through Spectral Unmixing of Hyperion Hyperspectral data*, DOI: 10.13140/RG.2.2.21279.87208
  - *Land cover monitoring through spectral unmixing, classification and clustering on Multispectral Sentinel-2 data of Northern Pindos*, DOI: 10.13140/RG.2.2.33023.92329
- Participated and completed both days of the **First Greek FabSpace HackOnEarth** open innovation contest, hosted by the si-cluster/Corallia initiative. Received a three-month incubating program award, under the auspices of Geosystems Hellas Co. **21 – 22 April 2017**
- Accepted and admitted both days of the **First Space Generation Greek Workshop**, hosted by the si-cluster/Corallia initiative **17 – 18 February 2017**
- Attended all five days of the **European Week of Astronomy and Space Science 2016**, hosted in Greece (certificate attached per request) **4 – 8 July 2016**
- Attended several seminars/talks in relation to High Energy Astrophysics and Space Science in the Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing (IAASARS), National Observatory of Greece **September 2014 – Present**

## Research Interests

Investigation of the electric field effect on cloud and mineral dust flow dynamics. Parameterization of long dust transport due to electrification with the use of in-situ measurements.

- **Atmospheric Physics, Atmospheric Electricity & Planetary Science:**

Investigation of the effect of the Electric Field on mineral Dust flow dynamics

Atmospheric Electric field measurements

Research contact electrification physical mechanisms on lofted dust layers

Investigation of atmospheric electrical processes in Mars

Direct Sun polarimetric measurements, dust particle orientation

- **Aerosol Science:**

Quantification of aerosol columnar electrical properties

- **Ground-based & Air-borne Electric Field Measurements:**

  Operation of field electrometers and balloon borne radiosondes with attached atmospheric electricity sensors

## Projects

- **ESPA Medimnos** project
- **D-TECT** project: ERC consolidators grant 2017-2022, analysis of atmospheric electricity measurements, dust orientation measurements
- **EKAD**[1] project
- **MULTIPLY:** Development of a European HSRL airborne facility, ESA

## Academic Awards & Fellowships

- **State Scholarship Foundation (IKY)** PhD scholarship for a 3-year duration **24 April 2018 – Present**
- **Short Term Mission (STSM) Grant** by the COST Action InDUST for the Cyprus campaign **November 2019**
- **Short Term Mission (STSM) Grant** by the COST Action ELECTRONET for short term educational visit during the stated period. **22 – 28 April 2018**
- **Stavros Niarchos Foundation (SNF)** – scholarship for PhD students for the implementation of the EKAD project **December 2017 – November 2018**

## Selected Scientific Publications

Mallios, S. A., **Daskalopoulou, V.** and Amiridis, V.: Orientation of non spherical prolate dust particles moving vertically in the Earth's atmosphere, J. Aerosol Sci., 151(August 2020), 105657, doi:10.1016/j.jaerosci.2020.105657, 2021.

Proestakis E., Amiridis V, Marinou, Georgoulias A. K., Solomos S., Kazadzis S., Chimot J., Che H., Alexandri G., Binietoglou I., **Daskalopoulou V.**, Kourtidis K. A., de Leeuw G, and van der A R. J. (2017). *9-year spatial and temporal evolution of desert dust aerosols over South-East Asia as revealed by CALIOP, Atmospheric Chemistry and Physics*, EGU, https://doi.org/10.5194/acp-2017-797

[1] Creation of a national center for collection, analysis and dissemination of satellite data for monitoring land, air and sea in NOA

**Daskalopoulou V.,** Sykioti O., Karagiannopoulou C., Koutroumbas K. and Rontogiannis A. (2018). *Application of Spectral Unmixing on Hyperspectral data of the Historic volcanic products of Mt. Etna (Italy)*, ECRS-2 conference proceeding, DOI: 10.3390/ecrs-2-05142

Mylona E., **Daskalopoulou V.,** Sykioti O., Koutroumbas K. and Rontogiannis A. (2018). *Classification of Sentinel-2 Images Utilizing Abundances Representation,* ECRS-2 conference proceeding, DOI:0.3390/ecrs-2-05141

## Reviewer in scientific journals

Completed 2 reviews in **Atmospheric Measurement Techniques (AMT) - IF 3.248,** and 1 in **Atmospheric Chemistry and Physics (ACP) - IF 5.414,** Copernicus journals

## Computer Skills

- Matlab/Octave: Compulsory PhD module
- Python: Compulsory PhD module
- Fortran: Compulsory M.Sc. module
- C++: Compulsory undergraduate and M.Sc. module
- Maplesoft / Origin / LabView / CST / Adobe Illustrator

## Participation in Scientific Groups

- Member of the **NOA ReACT** – **Re**mote sensing of **A**erosols, **C**louds and **T**race **G**ases team (http://react.space.noa.gr/) since 2017. The group activities are targeted towards understanding the physical and chemical processes in the atmosphere, seizing the opportunity provided by the complex and vulnerable Mediterranean environment.
- Member of the **ELECTRONET COST Action** **September 2018 - Present**
- Member of the **European & American Geosciences Union (EGU / AGU)** **July 2019 - Present**
- Member of **PANACEA** (PANhellenic infrastructure for Atmospheric Composition and climatE change) **September 2018 - Present**
- Member of the **Astronomical Union of Sparta**, Greece

## Languages

Greek – native language

English – Examination for the **Certificate of Proficiency** in English (ECPE), University of Michigan

French – **Delf A1** to **A4** units

## Teaching Activities

**2012 – 2016** Physics, Chemistry and Mathematics in cram school

## Hobbies

Astrophotography / Amateur Astronomy

Semi-Professional Volleyball Player, A1 Women's National League, Cycling

Volunteered in several Researcher's Nights

Small Scale model building and miniature collecting

Attending seminars concerning Animal Behavioral Traits, Traveling, Enjoying good books