

GEORGIA VIRGINIA PANOPOULOU

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PROFESSIONAL APPOINTMENTS

NASA Hubble Postdoctoral fellow
California Institute of Technology, USA 2019 – Present

Staff Scientist
California Institute of Technology, USA 2017 – 2019

EDUCATION

Ph.D., Physics
University of Crete, Greece 2014 – 2017
Thesis: “*Structure and Evolution of Magnetic Molecular Clouds, Observational Consequences and Tests*”
Advisor: Kostas Tassis, University of Crete

M.Sc., Advanced Physics
University of Crete, Greece 2012 – 2014
Thesis: “*Study of filamentary structures in the Taurus molecular cloud*”
Advisor: Kostas Tassis, University of Crete

B.Sc., Physics
University of Crete, Greece 2007 – 2011
Thesis: “*Study of the accretion disk reflection spectra in compact objects*”
Advisors: Iossif Papadakis & Nick Kylafis, University of Crete

GRANTS, AWARDS & HONORS

NASA Hubble Postdoctoral Fellowship (2019 – 2022)
Funds for SOFIA Cycle 8 observing awarded as PI: \$ 67.5k (2020)
International Astronomical Union PhD Prize (2017)
Young Researcher Award for the year 2015 – 2016, University of Crete
Selected Participant, 65th Lindau Nobel Laureate Meeting, Lindau, Germany (2015)

OBSERVING TIME ALLOCATIONS

Co-I, South African Astronomical Observatory 1.9 m telescope, 6 nights (2021)
PI, SOFIA Cycle 8, 6.8 hours (2020)
Co-I, Nordic Optical Telescope, 1 night (2020)
PI, Palomar 200 inch telescope, 4 nights (2020)
Co-I, Boston University 1.83 m Perkins Telescope, 11 nights (2020)

Co-I, South African Astronomical Observatory 1.9 m telescope, 7 nights (2020)

PI, Arizona Radio Observatory Heinrich-Hertz Submillimeter Telescope, 377 hours (2016, 2017, 2019)

Co-I, Skinakas Observatory 1.3 m telescope, 71 nights (2013 – 2019)

COLLABORATION MEMBERSHIP

- RoboPol collaboration (robopol.org) (2013 – Present)
- PASIPHAE collaboration (pasiphae.science) (2016 – Present)
- The Interstellar Institute (interstellarinstitute.org) (2019 – Present)
- FUV NASA MIDEX mission concept *Polstar*, ISM science working group member (2020 – Present)

TEACHING & ADVISING

Instructor

1. Guest Lecturer, Cosmological Component Separation, graduate-level workshop, University of Oslo, Norway (August 2019)
2. Instructor, International Physicists' Tournament, 6-month preparatory program for undergraduates, University of Crete (2016, 2017)

Research Advisor

1. Sam Ponnada, Ph.D. research, Caltech, co-advisor (2021 – Present)
2. Aelin Preuss, undergraduate summer research project, Caltech, primary advisor (2020)
3. Samir Johnson, undergraduate summer research project, Caltech, primary advisor (2020)
4. Eirik Bratli, Master's thesis, University of Oslo, co-advisor (2019 – 2020)
5. Artem Basyrov, Ph.D. research, University of Oslo, co-advisor (2021 – Present)
6. Dhruv Paranjpye, visiting undergraduate & graduate research projects, Caltech, co-advisor (2018, 2019)
7. Raphael Skalidis, undergraduate, MSc & Ph.D. research, University of Crete, co-advisor (2016 – 2020)
8. Ioanna Psaradaki, Master's thesis, University of Crete, co-advisor (2016 – 2017)
9. Monica He, visiting undergraduate summer research project, University of Crete, co-advisor (2014)

Teaching Assistant

- Optics Lab course, University of Crete (2016)
- Mechanics & Thermodynamics Lab course, University of Crete (2016)
- Electromagnetism Lab course, University of Crete (2015)
- Introduction to Computing, University of Crete (2009)

Training received for professional development

- Principles of University Teaching and Learning in STEM, grad. course, Caltech (2019)
- Storytelling for Scientists, course, Caltech (2017)

PROFESSIONAL SERVICE

Organization

- SOC, conference ‘Looking at the Polarized Universe: past, present and future’, virtual (2021)
- Co-organizer, ‘The Galactic ISM in 3D’ parallel session, CMB-S4 Summer collaboration meeting, virtual (2021)
- Co-organizer, Caltech TAPIR seminar series (2020-2021)
- SOC, workshop ‘The Grand Cascade’, Université Paris-Saclay, Orsay, France (2021)
- IOC, International Physicists’ Tournament (2016 – 2020)

Reviewing

- Reviewer for *A&A*, *MNRAS*, *Nature Astronomy*, *PASA*
- Proposal reviewer, NASA Astrophysics Data Analysis Program
- Proposal reviewer, NSF Astronomy & Astrophysics Grants (AAG)
- Proposal reviewer, Future Investigators in NASA Earth and Space Science and Technology
- Proposal reviewer, California Institute of Technology Summer Undergraduate Research Fellowship

Outreach

- Lecturer, panelist & telescope volunteer, Caltech Astronomy Outreach Program (2017 – Present)
- Guest lectures at high schools (Eagle Rock High School Astronomy Club, Huntington Park High School & STEAM Magnet)
- Outreach volunteer, Skinakas Observatory & University of Crete (2012 – 2017)
- Outreach organizer, University of Crete Student Astronomy Club (2008 – 2011)

Diversity & Equity

- Caltech Postdoctoral Association Diversity committee member (2020)
- Caltech Diversity & Inclusion ambassador trainee (2020)
- Mentor, Pre-college Research Institute, www.pcriresearch.org (2021)

PUBLICATIONS

Number of refereed publications: 26 (9 as corresponding author)

H-index: 15, Total number of citations: 803 (Google Scholar)

Key: † publications involving student advisees, * corresponding author publications

Refereed Publications

1. * *Revisiting the distance to radio Loops I and IV using Gaia and radio/optical*

polarization data

- Panopoulou, G. V.**; Dickinson, C.; Readhead, A. C. S.; Pearson, T. J.; Peel, M. W.; 2021; ApJ; in press
2. *Evidence for line-of-sight frequency decorrelation of polarized dust emission in Planck data*
Pelgrims, V.; Clark, S. E.; Hensley, B. S.; **Panopoulou, G. V.**; Pavlidou, V.; Tassis, K.; Eriksen, H. K.; Wehus, I. K.; 2021; A&A; 647; A16
 3. *WALOP-South: A Four Camera One Shot Imaging Polarimeter for PASIPHAE Survey. Paper I – Optical Design*
Maharana, S.; Kypriotakis, J. A.; Ramaprakash, A. N.; Rajarshi, C.; Anche, R. M.; Shrish; Blinov, D.; Eriksen, H. K.; Ghosh, T.; Gjerløw, E.; Mandarakas, N.; **Panopoulou, G. V.**; Pavlidou, V.; Pearson, T. J.; Pelgrims, V.; Potter, S. B.; Readhead, A. C. S.; Skalidis, R.; Tassis, K.; Wehus, I. K.; 2021; J. Astron. Telesc. Instrum. Syst. 7(1); 014004; doi: 10.1117/1.JATIS.7.1.014004.
 4. *RoboPol AGN Polarimetric monitoring data*
Blinov, D.; Kiehlmann, S.; Pavlidou, V.; **Panopoulou, G. V.**; Skalidis, R.; Angelakis, E.; Casadio, C.; Einoder, E. N.; Hovatta, T.; Kokolakis, K.; Kougen-takis, A.; Kus, A.; Kyritsis, E.; Lalakos, A.; Liodakis, I.; Maharana, S.; Makry-dopoulou, E.; Mandarakas, N.; Maragkakis, G. M.; Myserlis, I.; Papadakis, I.; Paterakis, G.; Pearson, T. J.; Ramaprakash, A. N.; Readhead, A. C. S.; Reig, P.; Słowikowska, A.; Tassis, K.; Xexakis, K.; Żejmo, M.; Zensus, J. A.; 2021; MNRAS; 501; 3715
 5. * *Maps of the Number of H I Clouds along the Line of Sight at High Galactic Latitude*
Panopoulou, G. V.; Lenz, D.; 2020; ApJ; 902; 120P
 6. † *Eliminating Artefacts from Polarimetric Images using Deep Learning*
Paranjpye, D.; Mahabal, A.; Ramaprakash, A. N.; **Panopoulou, G. V.**; Cleary, K.; Readhead, A. C. S.; Blinov, D.; Tassis, K.; 2020; MNRAS; 491; 5151P
 7. * *RoboPol: a four-channel optical imaging polarimeter*
Ramaprakash, A. N. et al.; incl. **Panopoulou, G. V.**; 2019; MNRAS; 485; 2355R
 8. * *Extreme starlight polarization in a region with highly polarized dust emission*
Panopoulou, G. V.; Hensley, B. S.; Skalidis, R.; Blinov, D.; Tassis, K.; 2019; A&A; 624L; 8P
 9. *Search for AGN counterparts of unidentified Fermi-LAT sources with optical polarimetry: Demonstration of the technique*
Mandarakas, N.; Blinov, D.; Liodakis, I.; Kouroumpatzakis, K.; Zezas, A.; **Panopoulou, G. V.**; Myserlis, I.; Angelakis, E.; Hovatta, T.; Kiehlmann, S.; Kokolakis, K.; Paleologou, E.; Pouliasi, A.; Skalidis, R.; Pavlidou, V.; 2019; A&A; 623A; 61M
 10. * *Demonstration of magnetic field tomography with starlight polarization towards a diffuse sightline of the ISM*

- Panopoulou, G. V.**; Tassis, K.; Skalidis, R.; Blinov, D.; Liodakis, I.; Pavlidou, V.; Potter, S. B.; Ramaprakash, A. N.; Readhead, A. C. S.; Wehus, I. K.; 2019; ApJ; 872; 56P
11. [†]*Local measurements of the mean interstellar polarization at high Galactic latitudes*
Skalidis, R.; **Panopoulou, G. V.**; Tassis, K.; Pavlidou, V.; Blinov, D.; Komis, I.; Liodakis, I.; 2018; A&A; 616A; 52S
 12. *RoboPol: connection between optical polarization plane rotations and gamma-ray flares in blazars*
Blinov, D. et al.; incl. **Panopoulou, G. V.**; 2018; MNRAS; 474; 1296B
 13. *Synchrotron emission from the blazar PG 1553+113. An analysis of its flux and polarization variability*
Raiteri, C. M. et al.; incl. **Panopoulou, G. V.**; 2017; MNRAS; 466; 3762R
 14. ^{*†}*A closer look at the “characteristic” width of molecular cloud filaments*
Panopoulou, G. V.; Psaradaki I.; Skalidis R.; Tassis K.; Andrews J. J.; 2017; MNRAS; 466; 2529P
 15. *RoboPol: the optical polarization of gamma-ray-loud and gamma-ray-quiet blazars*
Angelakis, E. et al.; incl. **Panopoulou, G. V.**; 2016; MNRAS; 463; 3365A
 16. *Optical polarization of high-energy BL Lacertae objects*
Hovatta, T.; Lindfors, E.; Blinov, D.; Pavlidou, V.; Nilsson, K.; Kiehlmann, S.; Angelakis, E.; Fallah Ramazani, V.; Liodakis, I.; Myserlis, I.; **Panopoulou, G. V.**; Pursimo, T.; 2016; A&A; 596A; 78H
 17. *RoboPol: do optical polarization rotations occur in all blazars?*
Blinov, D. et al.; incl. **Panopoulou, G. V.**; 2016; MNRAS; 462; 1775B
 18. ^{*†}*The magnetic field and dust filaments in the Polaris Flare*
Panopoulou G. V.; Psaradaki I.; Tassis K.; 2016; MNRAS; 462; 1517P
 19. *RoboPol: optical polarization-plane rotations and flaring activity in blazars*
Blinov, D. et al.; incl. **Panopoulou G. V.**; 2016; MNRAS; 457; 2252
 20. *RoboPol: First season rotations of optical polarization plane in blazars*
Blinov, D. et al.; incl. **Panopoulou G. V.**; 2015; MNRAS; 453; 1669
 21. *Magnetic Field - Gas Density Relation and Observational Implications Revisited*
Tritsis A.; **Panopoulou G. V.**; Mouschovias T. Ch.; Tassis K.; Pavlidou V.; 2015; MNRAS; 451; 4384
 22. ^{*}*Optical polarization map of the Polaris Flare with RoboPol*
Panopoulou G. V. et al.; 2015; MNRAS; 452; 715
 23. *Early-time polarized optical light curve of GRB 131030A*
King O. G. et al.; incl. **Panopoulou, G. V.**; 2014; MNRAS; 445; L114
 24. ^{*13}*CO Filaments in the Taurus Molecular cloud*
Panopoulou, G. V.; Tassis K.; Goldsmith P. F.; Heyer M.; 2014; MNRAS; 444; 2507

25. *The RoboPol optical polarization survey of gamma-ray-loud blazars*
Pavlidou V. et al.; incl. **Panopoulou G. V.**; 2014; MNRAS; 442; 1693
26. *The RoboPol pipeline and control system*
King O. G. et al.; incl. **Panopoulou G. V.**; 2014; MNRAS; 442; 1706

White papers

1. *The need for better tools to design future CMB experiments*
Rocha, G.; Banday, A. J.; Barreiro, R. B.; Challinor, A.; Górski, K. M.; Hensley, B.; Jaffe, T.; Jewell, J.; Keating, B.; Kogut, A.; Lawrence, Charles; **Panopoulou, G. V.**; Partridge, B.; Pearson, T.; Silk, J.; Steinhardt, P.; Wehus, I.; Bock, J.; Crill, B.; Delabrouille, J.; Doré, O.; Fernandez-Cobos, R.; Ijjas, A.; Keskitalo, R.; Kritsuk, A.; Mangilli, A.; Monceli, L.; Myers, S.; Steinbach, B.; Tristram, M.; 2019; BAAS; 51g; 221R
2. *PASIPHAE: A high-Galactic-latitude, high-accuracy optopolarimetric survey*
Tassis, K.; Ramaprakash, A. N.; Readhead, A. C. S.; Potter, Stephen B.; Wehus, I. K.; **Panopoulou, G. V.**; Blinov, D.; Eriksen, H. K.; Hensley, B.; Karakci, A.; Kypriotakis, J. A.; Maharana, S.; Ntormousi, E.; Pavlidou, V.; Pearson, T. J.; Skalidis, R.; 2018; arXiv:1810.05652

INVITED TALKS

LOFAR Magnetism Key Science Project (remote) (2021), *Distance measurements to Loop I/IV using B-field alignments and Gaia*

15th Hellenic Astronomical Society conference (remote) (2021), *Galactic spurs of synchrotron emission: new distance constraints*

B fields and the structure of the filamentary ISM (remote) (2021), *The North Polar Spur puzzle: feedback near vs feedback far*

The University of Chicago High Energy Astrophysics journal club (remote) (2021), *The North Polar Spur puzzle: feedback near vs feedback far*

Astronomical Polarimetry 2020 IAU symposium (remote), Hiroshima, Japan (2021), *Observations of magnetic fields in the diffuse ISM*

UCSD-CASS Astrophysics Seminar (remote), University of California - San Diego, CA, USA, *Improving CMB foreground dust modeling by 3D mapping the magnetized ISM*

Astronomy colloquium (remote), Pennsylvania State University, PA, USA (2020), *Mapping the Galactic magnetic field in 3D*

Astrophysics colloquium (remote), Radboud University, Netherlands (2020), *Clearing the path to primordial B-modes by 3D mapping the magnetized ISM*

SOFIA colloquium (remote), NASA Ames, CA, USA (2020), *3D mapping of the dusty, magnetized ISM with starlight polarization*

Kavli Institute for Particle Astrophysics & Cosmology seminar (remote), Stanford University, CA, USA (2020), *3D mapping of the dusty, magnetized ISM with starlight polarization*

Galaxies & Cosmology seminar, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, USA (2020), *3D mapping of the dusty, magnetized ISM with starlight polarization*

B-mode from Space, Munich, Germany (2019), *3D mapping of the dusty, magnetized ISM with starlight polarization*

Crete III: From dark lanes to new stars, Hersonissos, Greece (2019), *Magnetic fields in star formation: Observations*

Informal Seminar, Institute for Advanced Study, Princeton, NJ, USA (2019), *Studying the Magnetic Field of the Diffuse ISM in 3D*

Interstellar Filament Paradigm, Nagoya, Japan (2018), *Formulating a null hypothesis for molecular cloud filaments*

Radio/submm lunch talk, California Institute of Technology, Pasadena, CA, USA (2018), *Insights on the diffuse magnetized ISM of the Milky Way*

XXVIIIth IAU General Assembly, Vienna, Austria (2018), PhD prize talk

Astrophysics Luncheon Seminar, Jet Propulsion Laboratory, Pasadena, CA, USA (2018), *Insights on the Structure and Dynamics of Magnetized Interstellar Filaments*

Keck Institute for Space Studies workshop: Designing Future CMB Experiments, Pasadena, CA, USA (2018), *Probing the magnetic field in Galactic structures*

University of California, San Diego, Center for Astrophysics and Space Sciences Seminar, San Diego, CA, USA (2018), *Insights on the diffuse magnetized ISM through starlight polarimetry*

The ISM beyond 3D, Institut d'Astrophysique Spatiale, Orsay, France (2017), *Do molecular cloud filaments really have a "characteristic" width?*

RoboPol and Polarimetry in Astronomy, Inter-University Center for Astronomy and Astrophysics, Pune, India (2015), *Magnetic Fields in Galactic Molecular Clouds*

CONTRIBUTED TALKS

Grand Cascade, Institut Pascal, Paris, France (2021), *Revisiting an old puzzle of the filamentary ISM: Distance measurements to synchrotron spurs*

NASA Hubble Fellows Symposium, remote (2020)

NASA Hubble Fellows Symposium, Washington D.C., USA (2019)

The Milky Way in the Age of Gaia, Paris, France (2018), *Magnetic tomography of the ISM with starlight polarization and Gaia*

The Olympian Symposium on Star Formation: Gas and Stars from milli to mega parsecs, Katerini, Greece (2018), *The ISM magnetic field in 3D along a diffuse sightline*

13th Hellenic Astronomical Conference, Heraklion, Greece (2017), *Molecular cloud filaments: do they really have a “characteristic” width?*

European Week of Astronomy and Space Science, Prague, Czech Republic (2017), *Molecular Cloud Filaments: No evidence for a “characteristic” width*

6 years of ISM-SPP 1573: What have we learned?, Cologne, Germany (2017), *Molecular Cloud Filaments: No evidence for a “characteristic” width*

European Week of Astronomy and Space Science, Athens, Greece (2016), *^{13}CO filaments in the Taurus molecular cloud*

Filamentary Structure in Molecular Clouds, Charlottesville, VA, USA (2014), *^{13}CO Filaments in the Taurus Molecular cloud*

The Olympian Symposium on Star Formation, Katerini, Greece (2014), *^{13}CO Filaments in the Taurus Molecular cloud*