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## Research outputs

### Polarimetry of Didymos-Dimorphos: Unexpected Long-term Effects of the DART Impact

Gray, Z., Bagnulo, S., Granvik, M., Cellino, A., Jones, G. H., Kolokolova, L., Moreno, F., Muinonen, K., Muñoz, O., Opitom, C., Penttilä, A. & Snodgrass, C., 1 Jan 2024, In: *The Planetary Science Journal*. 5, 1, 18 p., 18.

### Taxonomic Analysis of Asteroids with Artificial Neural Networks

Luo, N., Wang, X., Gu, S., Penttilä, A., Muinonen, K. & Liu, Y., 1 Jan 2024, In: *Astronomical Journal*. 167, 1, 13 p., 13.

### Toward a European Facility for Ground-Based Radar Observations of Near-Earth Objects

Pupillo, G., Righini, S., Orosei, R., Bortolotti, C., Maccaferri, G., Roma, M., Mastrogiovanni, M., Pisanu, T., Schirru, L., Cicalò, S., Tripodo, A., Harju, J., Penttilä, A., Virkki, A. K., Bach, U., Kraus, A., Margheri, A., Ghiani, R., Iacolina, M. N., Valente, G., & 3 others Koschny, D., Moissl, R. & Sessler, G., Jan 2024, In: *Remote Sensing*. 16, 1, 23 p., 38.

### Gaia Focused Product Release: Asteroid orbital solution: Properties and assessment

Gaia Collaboration, David, P., Mignard, F., Muinonen, K., Fedorets, G., Granvik, M., Penttilä, A. & Siltala, L., 1 Dec 2023, In: *Astronomy and Astrophysics*. 680, 24 p., A37.

### Extension of Radiative Transfer Coherent Backscattering RT-CB code to dense discrete random media

Markkanen, J. & Penttilä, A., Dec 2023, In: *Journal of Quantitative Spectroscopy and Radiative Transfer*. 310, 7 p., 108733.

### Gaia Focused Product Release: Spatial distribution of two diffuse interstellar bands

Gaia Collaboration, Schultheis, M., Zhao, H., Muinonen, K., Fedorets, G., Granvik, M., Penttilä, A. & Siltala, L., Dec 2023, In: *Astronomy and Astrophysics*. 680, 33 p., A38.

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Gaia Collaboration, Trabucchi, M., Mowlavi, N., Muinonen, K., Fedorets, G., Granvik, M., Penttilä, A. & Siltala, L., Dec 2023, In: *Astronomy and Astrophysics*. 680, 38 p., A36.

### Gaia Focused Product Release: Sources from Service Interface Function image analysis: Half a million new sources in omega Centauri

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### Optical Constants of Martian Dust Analogs at UV–Visible–Near-infrared Wavelengths

Martikainen, J., Muñoz, O., Jardiel, T., Gómez Martín, J. C., Peiteado, M., Willame, Y., Penttilä, A., Muinonen, K., Wurm, G. & Becker, T., 1 Oct 2023, In: *Astrophysical Journal Supplement Series*. 268, 2, 13 p., 47.

### Deep learning-based asteroid surface temperature evaluation from disk-resolved near-infrared spectra for thermal excess correction

Lind, L., Penttilä, A., Riihiaho, K. A., MacLennan, E. & Pölönen, I., Oct 2023, In: *Planetary and Space Science*. 235, 14 p., 105738.

### (433) Eros and (25143) Itokawa surface properties from reflectance spectra

Korda, D., Kohout, T., Flanderova, K., Vincent, J-B. & Penttilä, A., 3 Jul 2023, In: *Astronomy & Astrophysics*. 675, 32 p., A50.

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**Gaia Data Release 3: A golden sample of astrophysical parameters**

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**Coherent backscattering by aggregates of spherical constituents**

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**The effect of particle shape on scattering - A study with a collection of axisymmetric particles and sphere clusters**

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**Light scattering by large densely-packed aggregates: A wave-optical approach**

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**The effect of particle shape on scattering - A study with a collection of axisymmetric particles and sphere clusters**

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## Activities

**Advances in Space Research (Journal)**

Antti Penttilä (Reviewer)  
2024

**Applied Optics (Journal)**

Antti Penttilä (Reviewer)  
2023

**Astronomical Journal (Journal)**

Antti Penttilä (Reviewer)  
2023

**Geo-spatial information science (Journal)**

Antti Penttilä (Reviewer)  
2023

**Icarus (Journal)**

Antti Penttilä (Reviewer)  
2023

**Icarus (Journal)**  
Antti Penttilä (Reviewer)  
2023

**Journal of Quantitative Spectroscopy & Radiative Transfer (Journal)**  
Antti Penttilä (Reviewer)  
2023

**Modeling the asteroid polarization of the DART mission impact ejecta**  
Antti Penttilä (Speaker)  
2023

**Nature Communications (Journal)**  
Antti Penttilä (Reviewer)  
2023

**Nature Communications (Journal)**  
Antti Penttilä (Reviewer)  
2023

**Remote Sensing (Journal)**  
Antti Penttilä (Reviewer)  
2023

**Scientific Reports (Journal)**  
Antti Penttilä (Reviewer)  
2023

**Earth and Planetary Science Letters (Journal)**  
Antti Penttilä (Reviewer)  
2022

**Frontiers in Physics (Journal)**  
Antti Penttilä (Reviewer)  
2022

**Icarus (Journal)**  
Antti Penttilä (Reviewer)  
2022 → ...

**Remote Sensing (Journal)**  
Antti Penttilä (Reviewer)  
2022

**Remote Sensing (Journal)**  
Antti Penttilä (Reviewer)  
2022

**Remote Sensing (Journal)**  
Antti Penttilä (Reviewer)  
2022

**The Planetary Science Journal (Journal)**

Antti Penttilä (Reviewer)

2022

**Journal of Quantitative Spectroscopy & Radiative Transfer (Journal)**

Antti Penttilä (Reviewer)

2021

**Journal of Quantitative Spectroscopy & Radiative Transfer (Journal)**

Antti Penttilä (Reviewer)

2021

**Optics Letters (Journal)**

Antti Penttilä (Reviewer)

2021

**Remote Sensing (Journal)**

Antti Penttilä (Reviewer)

2021

**Tähtienväiset vierailijat aurinkokunnassamme**

Antti Penttilä (Speaker)

3 Mar 2020

**Remote Sensing (Journal)**

Antti Penttilä (Reviewer)

2020

**Remote Sensing (Journal)**

Antti Penttilä (Reviewer)

2020

**Science (Journal)**

Antti Penttilä (Reviewer)

2020

**Astronomy & Astrophysics (Journal)**

Antti Penttilä (Reviewer)

2019

**Astrophysical Journal Supplement Series (Journal)**

Antti Penttilä (Reviewer)

2019

**Icarus (Journal)**

Antti Penttilä (Reviewer)

2019

**Journal of Quantitative Spectroscopy & Radiative Transfer (Journal)**

Antti Penttilä (Reviewer)

2019

**Journal of Quantitative Spectroscopy & Radiative Transfer (Journal)**

Antti Penttilä (Reviewer)

2019

**Remote Sensing (Journal)**

Antti Penttilä (Reviewer)

2019

**Astronomy & Astrophysics (Journal)**

Antti Penttilä (Reviewer)

2018

**Monthly Notices of the Royal Astronomical Society (Journal)**

Antti Penttilä (Reviewer)

2018

**Remote Sensing (Journal)**

Antti Penttilä (Reviewer)

2018

**Research in astronomy and astrophysics (Journal)**

Antti Penttilä (Reviewer)

2018

**Laboratory Measurements of Single-Particle Polarimetric Spectrum**

Antti Penttilä (Invited speaker)

11 Dec 2017

**WORKSHOP ON SPECTROSCOPY, PHOTOMETRY, AND POLARIMETRY OF AIRLESS SOLAR SYSTEM OBJECTS**

Karri Olavi Muinonen (Chair), Maria Gritsevich (Chair of organizing committee) & Antti Penttilä (Secretary of organizing committee)

14 Sept 2017 → 15 Sept 2017

**FINNISH URSI CONVENTION ON RADIO SCIENCE**

Karri Olavi Muinonen (Chair), Antti Penttilä (Chair of organizing committee) & Maria Gritsevich (Secretary of organizing committee)

8 Sept 2017 → 9 Sept 2017

**Europlanet Consortium (External organisation)**

Antti Penttilä (Board member)

2017 → ...

**Journal of Laser Applications (Journal)**

Antti Penttilä (Reviewer)

2017

**Journal of Quantitative Spectroscopy & Radiative Transfer (Journal)**

Antti Penttilä (Reviewer)

2017

**Journal of Quantitative Spectroscopy & Radiative Transfer (Journal)**

Antti Penttilä (Reviewer)

2017

**Journal of Quantitative Spectroscopy & Radiative Transfer (Journal)**

Antti Penttilä (Reviewer)

2017

**BigSkyEarth WG2 and 4 Meeting in Finland**

Maria Gritsevich (Chair of organizing committee), Antti Ilmari Penttilä (Member of organizing committee), Jouni Ilmari Pelttoniemi (Member of organizing committee), Nataliya Zubko (Member of organizing committee), Jarkko Koskinen (Member of organizing committee) & Karri Muinonen (Member of organizing committee)

10 Oct 2016 → 11 Oct 2016

**Planetary and Space Science (Journal)**

Antti Penttilä (Reviewer)

2015

**Laser-light and Interactions with Particles**

Antti Penttilä (Poster Presentation)

25 Aug 2014 → 29 Aug 2014

**Asteroids, Comets, Meteors**

Antti Penttilä (Chair of organizing committee)

30 Jun 2014 → 4 Jul 2014

**Conference on Electromagnetic and Light Scattering**

Antti Penttilä (Attendee)

17 May 2013 → 21 May 2013

**Journal of Quantitative Spectroscopy & Radiative Transfer (Journal)**

Antti Penttilä (Reviewer)

2012

**Journal of Laser Applications (Journal)**

Antti Penttilä (Reviewer)

2011

**Journal of Quantitative Spectroscopy & Radiative Transfer (Journal)**

Antti Penttilä (Reviewer)

2011

**Brazilian Journal of Chemical Engineering (Journal)**

Antti Penttilä (Reviewer)

2010

**Conference on Electromagnetic and Light Scattering**

Antti Penttilä (Chair of organizing committee)

2010

**Conference on Electromagnetic and Light Scattering XII**

Antti Penttilä (Attendee)

2010

**International Conference on Electromagnetic and Light Scattering (Journal)**

Antti Penttilä (Editor)

2010

**International Conference on Electromagnetic and Light Scattering (Journal)**

Antti Penttilä (Editor)

2010

**Journal of Quantitative Spectroscopy & Radiative Transfer (Journal)**

Antti Penttilä (Reviewer)  
2010

**Unknown**

Antti Penttilä (Visiting lecturer)  
1 Dec 2008 → 6 Dec 2008

**Conference on Electromagnetic and Light Scattering by Nonspherical Particles**

Antti Penttilä (Poster Presentation)  
17 Jun 2007

**DDA-workshop**

Antti Penttilä (Speaker: Presenter)  
23 Mar 2007

**International Space Science Institute (External organisation)**

Antti Penttilä (Expert member)  
2007 → 2008

**Journal of Quantitative Spectroscopy & Radiative Transfer (Journal)**

Antti Penttilä (Reviewer)  
2007

**Conference on Electromagnetic and Light Scattering by Nonspherical Particles**

Antti Penttilä (Speaker: Presenter)  
5 Jun 2006 → 10 Jun 2006

**Conference on Electromagnetic and Light Scattering by Nonspherical Particles**

Antti Penttilä (Poster Presentation)  
5 Jun 2006 → 10 Jun 2006

**Finnish-Estonian vegetation remote sensing seminar**

Antti Penttilä (Speaker: Presenter)  
18 Apr 2006

**International Conference on Electromagnetic and Light Scattering (Journal)**

Antti Penttilä (Reviewer)  
2006

**Conference on Electromagnetic and Light Scattering by Nonspherical Particles**

Antti Penttilä (Speaker: Presenter)  
15 May 2005 → 23 May 2005

**TEKES C-Coat seminar**

Antti Penttilä (Poster Presentation)  
16 Feb 2005

**International Conference on Electromagnetic and Light Scattering (Journal)**

Antti Penttilä (Reviewer)  
2005

**Conference on Electromagnetic and Light Scattering by Nonspherical Particles**  
Antti Penttilä (Speaker: Presenter)  
6 Sept 2003 → 14 Sept 2003

**Tartu Conference on Multivariate Statistics-konferenssi**  
Antti Penttilä (Attendee)  
8 Aug 2003 → 12 Aug 2003

**Suomen avaruustutkijoiden COSPAR kokous**  
Antti Penttilä (Poster Presentation)  
30 Oct 2002

**Unknown**  
Antti Penttilä (Visiting lecturer)  
1 Aug 2002 → 31 Aug 2002

## Prizes

**JQSRT Peter C. Waterman Award: Scattering & Remote Sensing**  
Penttilä, Antti (Recipient), 2012

**Lancelot M. Berkeley – New York Community Trust Prize for Meritorious Work in Astronomy**  
Muinonen, Karri (Recipient), Granvik, Mikael (Recipient), Penttilä, Antti (Recipient), Fedorets, Grigori (Recipient), Siltala, Lauri (Recipient) & Collaboration, Gaia (Recipient), 12 Jan 2023

## Press/Media

**Coating the synergy, yield and sequel**  
Antti Penttilä  
01/03/2006  
1 Media contribution

**NASA:n luotain iskeytyi voimalla kaukaiseen asteroidiin – miksi koe tehtiin?**  
Antti Penttilä & Tomas Kohout  
11/10/2022  
1 Media contribution

**Painopaperin kirkkaus kiinnostaa tähtitieteilijöitä**  
Antti Penttilä  
01/06/2007  
1 Media contribution