

Lakshmi Pradeep Chitta

Curriculum Vitae

Max Planck Institute for
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Employment

- 01/2019 – **Postdoctoral Researcher**, *Solar Physics*, Max Planck Institute for Solar System Research (MPS), Göttingen, Germany.
- 01/2017 – **Horizon 2020 Marie Skłodowska-Curie Postdoctoral Fellow**, *Solar Physics*, MPS.
12/2018
- 03/2015 – **Postdoctoral Researcher**, *Solar Physics*, MPS.
12/2016
- 06/2014 – **Postdoctoral Researcher**, *Solar Physics*, Indian Institute of Astrophysics (IIA), Bangalore, India.
02/2015

Education

- 2009–2014 **Doctoral Student**, *Solar Physics*, IIA, Bangalore, India.
- 2007–2009 **Master of Science, M.Sc.**, *Physics*, University of Hyderabad, Hyderabad, India.
- 2003–2006 **Bachelor of Science, B.Sc.**, *Physics, Mathematics, Chemistry*, Andhra Loyola College, Acharya Nagarjuna University, Vijayawada, India.

Ph.D Thesis

Title *Fine-Scale Magnetic Features in the Solar Atmosphere* (Supervisor: Prof. R. Kariyappa)

Academic Fellowships and Achievements

- 2019 Early Career Researcher Prize by the European Solar Physics Division
(awarded "For ground breaking observational analysis highlighting the crucial role of small-scale photospheric magnetic fields in the structure and dynamics of the solar corona.")
- 2017–2018 Horizon 2020 Marie Skłodowska-Curie Actions Individual Fellowship for postdoctoral research
- 2016–2018 Two times ESA appointed Science Planner for the NASA-led IRIS Mission
- 2011–2013 Predoctoral Fellowship, Smithsonian Astrophysical Observatory, Cambridge, MA, USA, October 2011–August 2013

Travel Grants and Support

- 08/2017 One week support under High Altitude Observatory Scientific Visitor Program
- 2015–2016 A total of €1500 funding from ESA/IRIS support to attend IRIS-4 and IRIS-6 Workshops
- 06/2011 \$3000 travel support under the Physics Student Visitation Program supported by the Indo-U.S. Science and Technology Forum and the American Physical Society

Conferences

- 2019 Organizer, *Loops and Jets Workshop*, Göttingen, Germany, 4–8 March
- 2018 Contributed talk, *Hinode-12*, Granada, Spain, 10–13 September
- 2018 Invited talk, *IRIS-9*, Göttingen, Germany, 25–29 June
- 2018 Contributed talk, *Meeting of the Max-Planck/Princeton Center for Plasma Physics*, Princeton, USA, 23–26 April
- 2018 Seminar, University of Dundee, Dundee, Scotland, UK, 20 February
- 2018 Seminar, University of St Andrews, St Andrews, Scotland, UK, 14 February
- 2017 Contributed talk, *Meeting of the Max-Planck/Princeton Center for Plasma Physics*, Greifswald, Germany, 19–22 September
- 2017 Poster, *ESPM-15*, Budapest, Hungary, 4–8 September
- 2017 Poster, *AAS/SPD Meeting*, Portland, USA, 22–25 August
- 2017 Colloquium, High Altitude Observatory, Boulder, USA, 16 August
- 2017 Contributed talk, *8th Coronal Loops Workshop*, Palermo, Italy, 27–30 June
- 2017 Invited participation and talk, *Solar UV Bursts*, ISSI, Switzerland, 6–10 March
- 2017 Contributed talk, *Solarnet IV Meeting*, Lanzarote, Spain, 16–20 January
- 2016 Contributed talk, *Meeting of the Max-Planck/Princeton Center for Plasma Physics*, Princeton, USA, 05–08 December
- 2016 Seminar, NASA Goddard Space Flight Center, Greenbelt, USA, 30 November
- 2016 Seminar, Lockheed Martin Solar and Astrophysics Laboratory, Palo Alto, USA, 9 November
- 2016 Contributed talk, *IRIS-6: The Chromosphere*, Stockholm, Sweden, 20–23 June
- 2016 Seminar, Princeton Plasma Physics Laboratory, Princeton, USA, 22 March
- 2015 Contributed talk, *Hinode-9 - International Science Meeting*, Belfast, UK, 14–18 September
- 2015 Poster, *IRIS-4 Workshop*, Boulder, USA, 18–22 May
- 2014 Contributed talk, *Coupling and Dynamics of the Solar Atmosphere*, Pune, India, 10–14 November
- 2013 Contributed talk, *NLST-ADITYA Meeting*, Bangalore, India, 18 November
- 2012 Poster, *AAS/SPD Meeting*, Anchorage, USA, 10–14 June
- 2011 Colloquium, National Solar Observatory, Sacramento Peak, USA, 21 June
- 2011 Contributed talk, *1st International workshop on small-scale solar magnetic fields*, Bairisch Kölldorf, Austria, 29 April
- 2011 Poster, *3rd Indo-China Workshop on Solar Physics and 1st Asia-Pacific Solar Physics Meeting*, Bangalore, India, 21–24 March
- 2011 Poster, *Space Climate 4*, Goa, India, 16–21 January
- 2010 Colloquium, Southwest Research Institute, Boulder, USA, 11 August
- 2008 Poster, *Magnetic Coupling between the Interior and the Atmosphere of the Sun*, Bangalore, India, 2–5 December

Supervision

- Since 2018 Cosima Breu – Ph.D. thesis on the Release of energy at the footpoints of coronal loops, Georg-August-Universität, Göttingen (assistance to Prof. Hardi Peter at MPS)
- 2018 Ayu Ramada Cindera Sukarmadji – Six weeks summer internship at the MPS – Small-scale flux emergence in 3D MHD simulations – June and July 2018 (supervision)

- 2015–2018 Alessandro Cilla – Ph.D. thesis on the Connection between sunspots and coronal loops, Georg-August-Universität, Göttingen (assistance to Prof. Hardi Peter at MPS)
- 2015–2017 Krzysztof Barczynski – Ph.D. thesis on the Small-scale structures in the upper atmosphere of the Sun, Georg-August-Universität, Göttingen (assistance to Prof. Hardi Peter at MPS)
- 2016 Lazar Živadinović – Two months summer internship at the MPS – Photospheric dynamics at the footpoints of coronal loops – July and August 2016 (supervision)
- 2016 Christopher Lieberum – Bachelor thesis on the Width of structures in the corona and the transition region on the Sun, Georg-August-Universität, Göttingen (co-supervision with Prof. Hardi Peter at MPS)
- 2011–2015 Kumara S. T. – Ph.D. thesis on the Investigations on the Solar Variability from Spatially Resolved Images, Bangalore University, Bangalore (assistance to Prof. R. Kariyappa at IIA)
- 2013 Pavan D. Gramapurohit – Six months visiting student internship at IIA – Emission measure properties of solar coronal loops – November 2013 to April 2014 (co-supervision with Prof. R. Kariyappa)
- 2012 Gabriel Giono – Three months visiting student internship at IIA – Segmentation of coronal features to study solar EUV variability – November 2012 to January 2013 (assistance to Prof. R. Kariyappa)

Community

- Service Referee for the *Astrophysical Journal*
- Planner Four weeks of science planning for the NASA-led IRIS Mission (2016–2018)

Organisational skills

- 2019 Organised Loops and Jets Workshop with Prof. Hardi Peter (15 participants), 4–8 March, Göttingen, Germany, 4–8 March
- 2018 Member of the Local Organising Committee for the *IRIS-9* meeting, Göttingen, Germany, 25–29 June
- 2014 Member of the Coordinating Committee, IIA-Paris Observatory Collaborative Meeting, Bangalore, India, 19 December

Publications ([NASA ADS](#); [Google Scholar](#); [ORCID](#))

Refereed articles

1. **L. P. Chitta**, A. R. C. Sukarmadji, L. Rouppe van der Voort, and H. Peter: *Energetics of magnetic transients in a solar active region plage*, *A&A* (in press), arXiv:1902.01650 (2019)
2. P. Syntelis, E. R. Priest, and **L. P. Chitta**: *A Cancellation Nanoflare Model for Solar Chromospheric and Coronal Heating II. 2D Theory and Simulations*, *ApJ*, 872, 32 (2019)
3. P. R. Young, H. Tian, H. Peter, R. J. Rutten, C. J. Nelson, Z. Huang, B. Schmieder, G. J. M. Vissers, S. Toriumi, L. H. M. Rouppe van der Voort, M. S. Madjarska, S. Danilovic, A. Berlicki, **L. P. Chitta**, M. C. M. Cheung, C. Madsen, K. P. Reardon, Y. Katsukawa, and P. Heinzel: *Solar Ultraviolet Bursts*, *SSRv*, 214, 120 (2018)
4. L. Li, J. Zhang, H. Peter, **L. P. Chitta**, J. Su, H. Song, C. Xia, and Y. Hou: *Quasi-periodic Fast Propagating Magnetoacoustic Waves during the Magnetic Reconnection Between Solar Coronal Loops*, *ApJ*, 868, L33 (2018)
5. K. Barczynski, H. Peter, **L. P. Chitta**, and S. K. Solanki: *Emission of solar chromospheric*

- and transition region features related to the underlying magnetic field, *A&A*, 619, A5 (2018)
6. H. N. Smitha, **L. P. Chitta**, T. Wiegmann, and S. K. Solanki: *Observations of solar chromospheric heating at sub-arcsec spatial resolution*, *A&A*, 617, A128 (2018)
 7. L. Li, J. Zhang, H. Peter, **L. P. Chitta**, J. Su, C. Xia, H. Song, and Y. Hou: *Coronal Condensations Caused by Magnetic Reconnection between Solar Coronal Loops*, *ApJ*, 864, L4 (2018)
 8. E. R. Priest, **L. P. Chitta**, and P. Syntelis: *A Cancellation Nanoflare Model for Solar Chromospheric and Coronal Heating*, *ApJ*, 862, L24 (2018)
 9. **L. P. Chitta**, H. Peter, and S. K. Solanki: *Nature of the energy source powering solar coronal loops driven by nanoflares*, *A&A*, 615, L9 (2018)
 10. **L. P. Chitta**, H. Peter, P. R. Young, and Y.-M. Huang: *Compact solar UV burst triggered in a magnetic field with a fan-spine topology*, *A&A*, 605, A49 (2017)
 11. **L. P. Chitta**, H. Peter, S. K. Solanki, P. Barthol, A. Gandorfer, L. Gizon, J. Hirzberger, T. L. Riethmüller, M. van Noort, J. Blanco Rodríguez, J. C. Del Toro Iniesta, D. Orozco Suárez, W. Schmidt, V. Martínez Pillet, and M. Knölker: *Solar Coronal Loops Associated with Small-scale Mixed Polarity Surface Magnetic Fields*, *ApJS*, 229, 4 (2017)
 12. **L. P. Chitta**, H. Peter, and P. R. Young: *A closer look at a coronal loop rooted in a sunspot umbra*, *A&A*, 587, A20 (2016)
 13. H. Peter, J. Warnecke, **L. P. Chitta**, and R. H. Cameron: *Limitations of force-free magnetic field extrapolations: Revisiting basic assumptions*, *A&A*, 584, A68 (2015)
 14. P. Kharb, M. Das, Z. Paragi, S. Subramanian, and **L. P. Chitta**: *VLBI Imaging of the Double Peaked Emission Line Seyfert KISSR 1494*, *ApJ*, 799, 161 (2015)
 15. **L. P. Chitta**, R. Kariyappa, A. A. van Ballegoijen, E. E. DeLuca, and S. K. Solanki: *Nonlinear Force-free Field Modeling of the Solar Magnetic Carpet and Comparison with SDO/HMI and Sunrise/IMaX Observations*, *ApJ*, 793, 112 (2014)
 16. Kumara, S. T., R. Kariyappa, J. J. Zender, G. Giono, V. Delouille, **L. P. Chitta**, L. Damé, J.-F. Hochedez, C. Verbeeck, B. Mampaey, and V. H. Doddamani: *Segmentation of coronal features to understand the solar EUV and UV irradiance variability*, *A&A*, 561, A9 (2014)
 17. **L. P. Chitta**, R. Kariyappa, A. A. van Ballegoijen, E. E. DeLuca, S. S. Hasan, and A. Hanslmeier: *Observations and Modeling of the Emerging Extreme-ultraviolet Loops in the Quiet Sun as Seen with the Solar Dynamics Observatory*, *ApJ*, 768, 32 (2013)
 18. **L. P. Chitta**, A. A. van Ballegoijen, L. Ruppe van der Voort, E. E. DeLuca, and R. Kariyappa: *Dynamics of the Solar Magnetic Bright Points Derived from Their Horizontal Motions*, *ApJ*, 752, 48 (2012)
 19. **L. P. Chitta**, R. Jain, R. Kariyappa, and S. M. Jefferies: *Observations of the Interaction of Acoustic Waves and Small-scale Magnetic Fields in a Quiet Sun*, *ApJ*, 744, 98 (2012)
 20. S. T. Kumara, R. Kariyappa, M. Dominique, D. Berghmans, L. Damé, J. F. Hochedez, V. H. Doddamani, and **L. P. Chitta**: *Preliminary Results on Irradiance Measurements from Lyra and Swap*, *AdAst*, 2012, 623709 (2012)

[Invited refereed reviews](#)

1. **L. P. Chitta**, H. N. Smitha, and S. K. Solanki: *Solar Photosphere*, Oxford Research Encyclopedia of Physics, ed. B. Foster (Oxford: Oxford University Press) (submitted) (2019)