

## NADEJDA BLAGORODNOVA

### Research positions

- 2018 – now **VENI Postdoctoral fellow**  
Radboud University, Nijmegen, The Netherlands
- 2015 – 2018 **Postdoctoral scholar**  
California Institute of Technology, Pasadena, CA, USA
- 2012 – 2015 **Ph.D., student in Astrophysics**  
Institute of Astronomy, Cambridge, UK

### Industry positions

- 2009 – 2012 **Scientific Software Test Manager for the Gaia ESA mission**  
Faculty of Physics and Chemistry, Barcelona, Spain
- 2007 – 2009 **Consultant in information technologies**  
Synergic Partners, S.L., Barcelona, Spain

### Education

- 2012 – 2015 **Ph.D., Astrophysics**  
Institute of Astronomy, Cambridge, UK
- 2009 – 2011 **M.S., Astrophysics, particle physics and cosmology**  
Faculty of Physics and Chemistry, Barcelona, Spain
- 2008 **M.S. in Information Technologies**  
Barcelona School of Informatics, Barcelona, Spain
- 2003 – 2008 **B.A., Computer Science**  
Barcelona School of Informatics, Barcelona, Spain

### Prize Fellowships and awards

- 2018 **Innovational Research Incentives Scheme VENI fellowship**
- 2015 **Finnish Centre for Astronomy (FINCA) fellowship** (declined)
- 2015 European Science Foundation grants for exchange visits
- 2012 **Marie Curie Early Stage Researcher fellowship**  
Gaia Research for European Astronomy Training – Initial Training Network (GREAT ITN)
- 2001 National Chemistry Olympiad, Gijon, Spain - silver tier

### Conferences and workshops

- Sep. 2018 Invited Talk: Caltech-Swinburne data science workshop, Pasadena, USA
- Sep. 2018 Talk: Keck Science Meeting, Pasadena, USA
- Jul. 2017 Invited talk: Unveiling the Physics Behind Extreme AGN Variability, ST. Thomas, US. Virgin Islands
- July 2017 Talk: European Week of Astronomy and Space Science, Prague, Czech Republic
- Jan. 2017 Talk: 229<sup>th</sup> American Astronomical Society meeting, Grapevine, USA
- Nov. 2015 Talk: Jerusalem TDE Workshop
- Nov. 2015 Talk: Gaia Science Alerts Workshop, Liverpool, UK
- Sep. 2014 Talk: Gaia Science Alerts Workshop, Warsaw, Poland
- Aug. 2014 Talk: CAASTRO Annual Scientific Conference, Coffs Harbour, Australia
- Jul. 2014 Talk: European Week of Astronomy and Space Science, Geneva, Switzerland
- Feb. 2014 Talk: Gaia-PESSTO GREAT ESF Workshop, Belfast, UK
- Sep. 2013 Invited talk: Workshop on High Energy Tidal Disruption Events, Favignana, Italy
- Jul. 2012 Talk: European Week of Astronomy and Space Science, Rome, Italy

### Colloquium and seminars

- May 2018 Seminar: SRON, Utrecht, The Netherlands
- Jan. 2018 Colloquium: Radboud University, Nijmegen, The Netherlands
- Jan. 2018 Seminar: Technion – Israel Institute of Technology, Haifa, Israel
- Jul. 2017 Seminar: Faculty of Physics and Chemistry, University of Barcelona, Spain
- Jun. 2017 Seminar: Liverpool John Moores University, Liverpool, UK
- Jun. 2017 Seminar: Caltech, Pasadena, USA
- Feb. 2017 Invited seminar: University of Washington, Seattle, USA

Nov. 2016	Invited seminar: San Diego State University, San Diego, USA
Jun. 2016	Seminar: Faculty of Physics and Chemistry, University of Barcelona, Spain
Apr. 2016	Seminar: Institute of Astronomy, Cambridge, UK
Feb. 2015	Seminar: Institute of Astronomy, Cambridge, UK
Jan. 2015	Seminar: Tuorla Observatory, University of Turku, Finland
Nov. 2014	Invited colloquium: University of Warwick, Coventry, UK
May 2014	Seminar: Astronomical Observatory, University of Warsaw, Warsaw, Poland
Feb. 2013	Seminar: Institute of Astronomy, Cambridge, UK
Aug. 2012	Seminar: Faculty of Physics and Chemistry, University of Barcelona, Barcelona, Spain

## Press releases

Sep. 2016	“New observations of rare cosmic explosion provide hints about stars' companionship”, for Blagorodnova et. al. 2017, GROWTH press
Sep. 2014	“Gaia discovers its first supernova”, ESA

## Awarded observing time

2019	<b>Keck</b> – ½ night (PI)
2018	<b>LCO</b> – 42 hours (PI)
2018	<b>Keck</b> – 3 nights (PI)
2017	<b>HST GO Cycle 25</b> – 70 orbits (co-I)
2017	<b>Keck</b> – 1.25 nights (PI) + 1 night (co-I)
2016	<b>HST DDT Cycle 23</b> – 5 orbits (co-I)
2016	<b>Keck</b> – 1 night (PI) + 0.5 nights (co-I)
2016	<b>P200</b> – 3 nights (PI)
2016	<b>P60</b> – 35 h (PI)
2016	<b>P48</b> – 24 h (PI)
2016	<b>VLT</b> – 5h (co-I)
2014	<b>Liverpool Telescope</b> – 92 h (co-I)

## Observing experience

<b>Keck 1 and Keck 2</b>	25 nights. Instruments: LRIS, DEIMOS, NIRC2, NIRSPEC, ESI, OSIRIS
<b>P200</b>	10 nights. Instruments: DBSP, WIRC
<b>WHT</b>	3 nights. Instruments: ACAM
<b>NTT</b>	16 nights. Instruments: EFOSC2, SOFI
<b>NOT</b>	3 nights. Scheduling of Target of Opportunity observations
<b>Copernico Telescope (1.8m)</b>	5 nights. Instruments EFOSC2

## Supervision, teaching and mentoring of students

Jun – Sep 2018	Supervision of an undergraduate research project within the SURF project at Caltech
Jul – Sep. 2017	Supervision of an undergraduate research project within the GROWTH programme, Caltech
Oct. 2016 – Sep. 2018	Mentoring a graduate student in a junior technical position, Caltech
2016, 2017	Teaching of Astronomy 101 (part), Caltech
2016	Teaching assistant at hands-on sessions for the iPTF summer school, Caltech
2013	Supervision of course “Stellar structure and Evolution”, University of Cambridge
2012	Co-supervision of a master’s degree project, University of Barcelona

## Membership of large and medium-size collaborations

Since 2018	Black GEM collaboration
Since 2016	Global Relay of Observatories Watching Transients Happen (GROWTH)
Since 2015	Intermediate Palomar Transient Factory (iPTF) and Zwicky Transient Facility collaboration (ZTF)
2012 – 2015	Public Spectroscopic Survey for Transient Objects (PESSTO)
Since 2009	Data Processing and Analysis Consortium (DPAC) for Gaia ESA mission

## Organization of conferences, meetings and seminars

Jun 2018	SOC/LOC – “ZTF Undergraduate Institute”, Caltech, Pasadena, USA
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Sep. 2017	SOC/LOC - "The Dynamic IR sky", workshop, Caltech, Pasadena, USA
May 2017	LOC - Pasadena Astronomy Postdoc Retreat, Lake Arrowhead, USA
2016 – 2017	Organizer - Caltech seminar series organizer (Tea Talks), Caltech, USA
Jul. 2016	LOC - GROWTH annual meeting, Pasadena, USA
Sep. 2015	LOC- Sharp Eyes on European Skies, Cambridge, USA
Sep. 2014	SOC- 5 <sup>th</sup> Gaia Science Alerts Workshop, Warsaw, Poland
Jun. 2013	SOC - GREAT Astrostatistics School 2013, Alicante, Spain

## Outreach activities

2018	Outreach in the Radboud University, Nijmegen, The Netherlands
2017	Speaker for Astronomy on tap
2012 – 2015	Support to local outreach events, Institute of Astronomy, Cambridge, UK
2014	Gaia Outreach event, Barcelona, Spain
2014	Gaia LIVE outreach talk in an elementary school, Cambridge, UK
2014	Open day in the Institute of Astronomy – Gaia outreach
2013	Stargazing live event at the Institute of Astronomy, Cambridge, UK

## Software

<b>nirc2red</b>	Photometric data reduction pipeline for the NIRC2 instrument on Keck (author).
<b>rcred</b>	Photometric data reduction pipeline for the Rainbow Camera instrument, part of the SEDM (Spectral Energy Distribution Machine), operating on the 60-inch telescope at Palomar (author).
<b>GaiaPython</b>	Software module to filter and visualize the environment of Gaia transient events (author).
<b>GSTEC</b>	Gaia Spectrophotometry Transient Event Classifier – Software for classification of transient and variable objects using Gaia low-resolution spectroscopy (author).
<b>IDT</b>	Initial Data Treatment. Software for the testing science requirements of the initial data reduction module for Gaia data (contributor).

## Publications

### Key publications

1. **N. Blagorodnova** et. al., 2018 (arXiv), The broad absorption line TDE iPTF15af: Optical and ultraviolet evolution
2. **N. Blagorodnova**, J. Neill, R. Walters, S. R. Kulkarni et. al., 2018, PASP, 130, 5003, The SED Machine: a robotic spectrograph for fast transient classification
3. S. M. Adams, **N. Blagorodnova**, M. M. Kasliwal, R. Amanullah et. al., 2017, PASP, 130, 4202, iPTF survey for cool transients
4. T. Hung, S. Gezari, **N. Blagorodnova**, N. Roth et. al. 2017, ApJ, 842, 29, Revisiting Optical Tidal Disruption Events with iPTF16axa
5. L. Yan, R. Quimby, A. Gal-Yam, P. Brown, **N. Blagorodnova** et. al. 2017, ApJ, 840, 57, Far-ultraviolet to Near-infrared Spectroscopy of a Nearby Hydrogen-poor Superluminous Supernova Gaia16apd
6. T. Kangas, **N. Blagorodnova**, S. Mattila, P. Lundqvist et. al. 2017, MNRAS, 469, 1246, Gaia16apd a link between fast and slowly declining type I superluminous supernovae
7. **N. Blagorodnova**, S. Gezari, T. Hung, S. R. Kulkarni, et. al., 2017, ApJ, 844, 46, iPTF16fni: a faint and fast tidal disruption event in an E+A galaxy
8. S. Gezari, T. Hung, S. B. Cenko, **N. Blagorodnova**, et. al. 2017, ApJ, 835, 144, iPTF Discovery of the Rapid Turn-on of a Luminous Quasar
9. **N. Blagorodnova**, R. Kotak, J. Polshaw, M. M. Kasliwal et. al. 2017, ApJ, 834, 107, Common Envelope Ejection for a Luminous Red Nova in M101

10. **N. Blagorodnova**, S. Van Velzen, D. L. Harrison, S. Kopolov, S. Mattila, H. Campbell, N. A. Walton, L. Wyrzykowski, 2016, MNRAS, 455, 603, Gaia transient detection efficiency: hunting for nuclear transients
11. D. Poznanski, Z. Kostrzewa-Rutkowska, Ł. Wyrzykowski and **N. Blagorodnova**, MNRAS, 449, 1753, Bright but slow - Type II supernovae from OGLE-IV & magnitude limited surveys
12. **N. Blagorodnova**, S. Kopolov, Ł. Wyrzykowski, M. Irwin and N. A. Walton, 2014, MNRAS, 442, 327, GS-TEC: Gaia Spectrophotometry Transient Event Classifier
13. S. Hodgkin, Ł. Wyrzykowski, **N. Blagorodnova**, S. Kopolov, 2012, Philosophical Transactions of the Royal Society A, 371, 20239, Transient astronomy with the Gaia satellite

## Co-authored publications

14. T. Wevers, et. al. 2017, MNRAS, 471, 1694, Black hole masses of tidal disruption event host galaxies. One of the 8 co-authors.
15. Miller et. al. 2017, submitted to Apj, Early Observations of the Type Ia Supernova iPTF 16abc: Evidence for Strong Ejecta Mixing or Interaction with Diffuse Material. One of the 22 co-authors
16. Bhalerao, V. et. al. 2017, Apj 845, 152, A Tale of Two Transients: GW 170104 and GRB 170105A. One of the 33 co-authors.
17. Whitesides, L. et. al. 2017, submitted to ApJ, iPTF16asu: A Luminous, Rapidly-Evolving, and High-Velocity Supernova. One of the 25 co-authors.
18. Corsi et. al. 2017, submitted to ApJ, iPTF17cw: An engine-driven supernova candidate discovered independent of a gamma-ray trigger. One of the 24 co-authors.
19. Goobar, et. al. (2017), Science, 356, 291, iPTF16geu: A multiply imaged, gravitationally lensed type Ia supernova. One of the 34 co-authors.
20. Gaia Collaboration, 2017, A&A, 601, 19, Gaia Data Release 1. Open cluster astrometry: performance, limitations, and future prospects . One of 591 co-authors.
21. F. van Leeuwen, et. al. 2017, A&A, 599, 32, Gaia Data Release 1. The photometric data. One of the 94 co-authors.
22. Gaia Collaboration, 2016, A&A, 595, 3, Gaia Data Release 1. Pre-processing and source list creation, One of 107 co-authors.
23. Gaia Collaboration, 2016, A&A, 595, 2, Gaia Data Release 1. Summary of the astrometric, photometric, and survey properties. One of 591 co-authors.
24. Gaia Collaboration, 2016, A&A, 595, 1, The Gaia mission. One of 625 co-authors.
25. M. Childress et. al. 2015, MNRAS, 454, 3816, Measuring nickel masses in Type Ia supernovae using cobalt emission in nebular phase spectra. One of 37 co-authors.
26. H. Campbell et. al. 2015, MNRAS, 452, 1060, Total eclipse of the heart: the AM CVn Gaia14aae/ASSASN-14cn. One of 85 co-authors.
27. S.J. Smartt et. al., 2014, A&A, 579, 40, PESSTO : survey description and products from the first data release by the Public ESO Spectroscopic Survey of Transient Objects, One of the 99 co-authors. Submitted to A&A to describe the PESSTO public data products
28. C. Inserra et. al., 2014, ApJ, 799, 2, OGLE-2013-SN-079: a lonely supernova consistent with a helium shell detonation, one of the 34 co-authors.
29. Ł. Wyrzykowski, Z. Kostrzewa-Rutkowska, S. Kozłowski, A. Udalski, R. Poleski, J. Skowron, N. Blagorodnova, M. Kubiak, M. K. Szymanski, G. Pietrzynski, I. Soszynski,

30. K. Ulaczyk, P. Pietrukowicz and P. Mroz, 2014, *Acta Astronomica*, 64, 197, OGLE-IV Real-Time Transient Search
31. Ł., Wyrzykowski, S. Hodgkin, N. Blagorodnova, V. Belokurov, 2014, *Proceedings of the International Astronomical Union, IAU Symposium*, 298, 446, The Explosive Universe with Gaia
32. Maguire, K et. al., 2013, *MNRAS*, 436, 222, A statistical analysis of circumstellar material in Type Ia supernovae, One of 45 authors.
33. N. Blagorodnova, N A. Walton, Ł. Wyrzykowski, S. Hodgkin, 2012, *Proceedings of the IAU Symposium*, 289, 363, Gaia contribution to the low-redshift supernova population
34. Ł. Wyrzykowski, S. Hodgkin, N. Blagorodnova, S. Kopolov, R. Burgon, 2012, *Gaia-FUN-SSO-2 International Workshop, Paris Observatory, [arXiv:1210.5007]*, Photometric Science Alerts from Gaia

## Astronomy Telegrams (non-refereed communications in astronomy)

**2017 – 6 ATels:** 1034, 1031, 1019, 1008, 1006, 1003

**2016 – 40 ATels:** 9888, 9787, 9786, 9770, 9655, 9630, 9610, 9585, 9580, 9498, 9454, 9433, 9421, 9371, 9368, 9351, 9347, 9326, 9279, 9256, 9230, 9220, 9208, 9111, 9090, 9074, 9071, 9069, 9062, 9061, 9060, 9052, 9037, 9024, 8992, 8973, 8852, 8669, 8604, 8601

**2015 – 11 ATels:** 8240, 8198, 7641, 7628, 7611, 7530, 7448, 7378, 7328, 7177, 7014

**2014 – 20 ATels:** 6788, 6593, 6524, 6518, 6516, 6489, 6478, 6471, 5999, 5970, 5968, 5961, 5957, 5938, 5937, 5934, 5915, 5914, 5912, 5908

**2013 – 10 ATels:** 4895, 4892, 4884, 4882, 4880, 4876, 4863, 4860, 4852, 4772

**2012 – 1 ATel:** 4037