Curriculum Vitae of Francisco Förster Burón

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Spoken languages: Spanish (native) and fluent English.
Date of birth: 2nd Dec 1979 (Rotterdam, The Netherlands).

Profile

Full Professor at Universidad de Chile, Data and Artificial Intelligence Initiative. Director at the Millennium Institute for Astrophysics (MAS). Academic Coordinator of the Master of Data Science (MDS) at Universidad de Chile. Associate Researcher at the Center for Mathematical Modeling (CMM) and the Centro de Astrofísica y Tecnologías Afines (CATA). D.Phil. at the University of Oxford in theoretical studies on supernova progenitors. Former P.I. of the ALeRCE project, an astronomical alert broker for next generation survey telescopes selected as Community Broker for the Vera C. Rubin Observatory; and of the High cadence Transient Survey (HiTS), a real–time search for very young supernova using the Dark Energy Camera.

Education

D.Phil. in Physics, University of Oxford, 2004 – 2009. Thesis title: *Understanding Type Ia Supernova Ignition Conditions Diversity*. Supervised by Prof. Philipp Podsiadlowski.

B.Sc. Astrophysics, University of Chile, 1998 – 2003

B.Sc. Engineering Sciences, University of Chile, 1998 – 2001

Machine Learning Summer School (MLSS), Buenos Aires, Jun 2018. Taught by computer scientists from Amazon, Columbia, Google, Harvard, MIT, Oxford, Paris, Princeton, Stanford & UC Berkeley.

Summer School in Statistics for Astronomers, Penn State University, Jun 2013. Taught by statisticians and astronomers from Carnegie Mellon, Cornell, NJIT & Penn State.

Research

2024 – present, Millennium Institute for Astrophysics: Director.

2022 – present, University of Chile: Full Professor.

2022 – present, Center for Astrophysics and Affine Technologies (CATA) Associate Researcher.

2021 – present, Data and Artificial Intelligence Initiative, Universidad de Chile: Faculty.

2017 – present, Center for Mathematical Modeling, University of Chile: Associate Researcher.

2017 – 2024, Millennium Institute for Astrophysics: Associate Researcher. P.I. of the ALeRCE project.

2013 – 2016, Center for Mathematical Modeling, University of Chile: Scientist at the Center for Mathematical Modeling and Fondecyt Initiation into Research Fellow. P.I. of the High Cadence Transient Survey, the first real–time survey to look for supernova explosions using the Dark Energy Camera.

Oct 2010 – 2013, Astronomy Department, University of Chile: Fondecyt Postdoctoral Fellow. Theoretical and observational studies of Type Ia SN progenitors.

Jul 2008 – Oct 2010, Astronomy Department, University of Chile: Postdoctoral fellow and project manager of a new robotic observatory in Cerro Tololo Interamerican Observatory. Responsible for its design, purchase, installation and commissioning (*1st light Oct 2010*).

Oct 2004 – Jul 2008, Physics Department, University of Oxford: D.Phil. thesis with Prof. Philipp Podsiadlowski on project *"Understanding type Ia SNe ignition conditions diversity"*.

Mar 2004 – Sep 2004, Astronomy Department, University of Chile: Research Assistant with Prof. Simón Casassus. Studies on maximum entropy algorithms for image reconstruction in sub–mm interferometric observations.

Grants and Awards:

Principal investigator of Quimal project *Rubin is coming: scaling up the alerce database system*, 2024 (**awarded 206 kUSD**).

Director of the Millennium Institute for Astrophysics (MAS) - Concurso Apoyo, 2024–2025 (**budget of 1 MUSD in total for 1.5 years**).

Fondecyt Regular Fellow, 2020. *Alert brokers in the era of large etendue telescopes: a new tool to understand the variable universe* . Four year research fellowship initiated at the Center for Mathematical Modeling, U. Chile (**awarded 161 kUSD**).

Principal investigator of Quimal project *A hybrid distributed infrastructure for the alerce broker*, 2019 (**awarded 176 kUSD**).

Associate researcher of the Millennium Institute for Astrophysics (MAS), 2017–2023 (**budget of 10 MUSD in total for 10 years**).

Principal investigator of Comité Mixto ESO Chile project *The Harvard Chile Data Science School: an innovative learning experience*, 2017 (**awarded 27 kUSD**).

Principal investigator of Comité Mixto ESO Chile project *Exploring the time and spectral domains in the era of Big Data Astronomy*, 2015 (**awarded 67 kUSD**).

Deputy lead researcher of the CONICYT–NSF funded project *Big data based real–time astronomy applications for the LSST era*, 2014 (**awarded 222 kUSD**).

Principal investigator of Quimal project *Hierarchical storage system for Big Data Astronomical Research*, 2014 (**awarded 89 kUSD**).

Fondecyt Initiation into Research Fellow, 2013 – 2017. *Understanding supernova progenitors using next generation synoptic surveys*. Four year research fellowship at the Center for Mathematical Modeling, U. Chile (**awarded 97 kUSD**).

Fondecyt Postdoctoral Fellow, 2010–2013. *Understanding supernova progenitors: connecting theory and observations with a robotic telescope* . Three year postdoctoral research fellowship at U. Chile (**awarded 32 kUSD**).

PPARC - GEMINI studentship (2003), awarded to Chilean students to complete postgraduate studies in the UK. Accepted at University of Oxford in 2004 and defended a D.Phil thesis in Jan 2009.

Invitations to speak at international conferences:

Astroinformatics 2024, Chile (2024)

International Conference on Machine Learning for Astrophysics, Italy (2024)

Transients Down Under, Australia (2024)

What was that? Planning ESO follow up for transients, variables and Solar System objects in the era of LSST, Germany (2023)

XVII Latin American Regional IAU Meeting, Uruguay (2023)

Statistical Challenges in Modern Astronomy, US (2023)

237th American Astronomical Society meeting, US (2021).

International Liquid Mirror Telescope Workshop, India (2020).

Subaru Telescope 20th anniversary, Hawaii, US (2019).

The extragalactic explosive Universe: the new era of transient surveys and data-driven discovery, Garching, Munich, Germany (2019).

Astroinformatics 2019, Caltech, Pasadena, CA, US (2019).

Fifty One Ergs, Raleigh, US (2019).

Enabling Multi-Messenger Astrophysics in the Big Data Era Workshop, STScI, Baltimore, US (2019).

Deep Learning for Multimessenger Astrophysics: Real-time discovery at Scale, NCSA, Illinois (2018).

Teaching Experience

Data Science Project, Data Science M.Sc.: Lecturer of this course of the Data Science M.Sc. program at U. Chile. In this course I lead students into working in real data science projects with the industry and public sector (2022A, 2022B, 2023A, 2023B, 2024A, 2024B)

Astroinformatics, U. Chile: Lecturer of this course that teaches data science centered around astronomical data. One of the creators of the course. Designed its current description, leading to its addition as a core course of the Astronomy Department program. The course was offered in English and was opened for international students in 2020 (2011B, 2012B, 2014B, 2016B, 2017B, 2018B, 2019B, 2020B, 2021B, 2022A, 2022B, 2023A, 2024A, 2024B).

Harvard–Chile Data Science School: Lecturer and organizer of the the school, held every year in different institutions in Chile and at Harvard U. in Cambridge, US (2014, 2015, 2016, 2017, 2018, 2019).

La Serena School for Data Science: Lecturer at the school, organized by AURA in La Serena, Chile, with students from Chile and the US working together in interdisciplinary projects on data science (2017, 2018, 2019, 2021, 2022, 2023).

Observational Astronomy, U. Chile: Lecturer in selected topics of this course at U. Chile (2011B).

Students / Engineers Supervising Experience

Astronomy: Isidora Mancilla, 2024 (B.Sc.); Hemanth Bommireddy, 2023-present (Ph.D. c); Steve Jurado, 2023-present (Ph.D. c); Francisca Chabour, 2021 (B.Sc.); Jorge Araya, 2021 (B.Sc.); Simón Sanfeliú, 2021 (B.Sc.); Juanita Antilén, 2020 (M.Sc.); Javier Silva, 2020 (B.Sc.); Melissa Fuentealba, 2020 (B.Sc.); Alex Barrera, 2020 (B.Sc.); Jorge Martínez, 2015-2018 (Ph.D.); Arturo Lira, 2018 (M.Sc); Daniela Barrientos, 2017 (M.Sc); José Peña, 2014-present (Ph.D., co-supervisor); Gustavo Medina, 2014-2016 (M.Sc., co-supervisor); Sebastián Marino, 2013 (B.Sc.); Thomas de Jaeger, 2012 (Ph.D., co-supervisor); Sebastián Marchii, 2012 (B.Sc.); Paloma Pérez, 2011 (B.Sc.); Fernando Rivas, 2010 (B.Sc.); César Parra, 2010 (B.Sc.); Vachail Salinas, 2010 (B.Sc.); Nicolás López, 2009 (B.Sc.).

Mathematical Engineering: Emir Chacra, 2019 (B.Sc.); Andrés Riveros, 2018 (B.Sc.); Paul Silva, 2016 (B.Sc.); Daniela Vega, 2016 (M.Sc.); David Hasson, 2015 (B.Sc.); Andrés Cristi, 2015 (B.Sc.).

Computer Science: Luis Muñoz, 2025 (B.Sc.); Diego León, 2023 (B.Sc.); Kay Medina, 2023 (B.Sc.); Benjamín Correa, 2023 (B.Sc.); Alejandra Alarcón, 2022 (B.Sc.); Francisco Muñoz, 2020 (M.Sc.); Javier Morales, 2020 (M.Sc.); Eduardo Araos, 2020 (M.Sc.); Francisco Muñoz, 2018 (B.Sc.); Paloma Pérez, 2018 (B.Sc.); Ariel Barraza, 2016 (B.Sc.); Alonso González, 2009 (B.Sc.).

Electrical Engineering: Tomás Sulima, 2025-present (B.Sc.); Alan Contreras, 2024 (B.Sc.); Jorge Espejo, 2023-present (M.Sc. co-supervisor); Bastián Gamboa, 2022 (M.Sc.); Alejandra Toro, 2021 (B.Sc.); Oscar Pimentel, 2020-present (M.Sc. co-supervisor); Pablo Montero, 2020-present (M.Sc. co-supervisor); Esteban Reyes, 2018-present (M.Sc. co-supervisor); Rodrigo Carrasco, 2017-2019 (M.Sc. co-supervisor); Ignacio Reyes, 2015-2017 (M.Sc., co-supervisor); Pablo Huentelemu, 2014-2016, (M.Sc., co-supervisor).

Data Science: Alan Contreras, 2025-present (M.Sc.); Javier Palominos, 2024-present (M.Sc.); Mathías González, 2024-present (M.Sc.); Simón Sanfeliú, 2024-present (M.Sc.); Arturo Lazcano, 2024 (M.Sc.); Kevin Pinochet, 2023-2024 (M.Sc.);

Visiting students: Amandine Gerstenberg, 2019 (Université de Lille, France); Adrien Baudier, 2017, (Ecole Centrale de Lyon, France).

ALeRCE project engineers (as P.I.)

Erick Muñoz, 2024-present; Claudio Mansilla, 2024-present; Kay Medina, 2024-present; Héctor Larragaña, 2023-present; Bastián Gamboa, 2023-present; Álex Álvarez, 2022-present; Ignacio Reyes, 2019-present; Edison Pizarro, 2023-2024; Pedro Gallardo, 2022-2024; Ángela Sepúlveda, 2022-2024; Diego Rodríguez, 2019-2024; Martín Molina, 2023-2023; Pablo Castellanos, 2022-2023; Nicolás Astorga, 2022-2023; Esteban Reyes, 2021-2023; Alberto Moya, 2020-2023; Cristóbal Donoso, 2019-2023; Alexis Sánchez, 2019-2022; Javier Arredondo, 2019-2022; Diego Mellis, 2021-2021; Luis Sabatini, 2020-2021; Manuel Pérez, 2019-2021; Camilo Valenzuela, 2019-2021; Cristóbal Sepúlveda, 2020-2020; Rodrigo Carrasco, 2020-2020; Daniela Ruz, 2019-2020; Ernesto Castillo, 2019-2020;

Organization of conferences:

LOC and SOC member in the *Unveiling the dynamic universe: cosmic streams in the era of Rubin*, Puerto Varas, Chile (2023).

LOC and SOC member in the *CMM Pucón Symposium Conference Series*, Pucón, Chile (2013, 2015, 2017, 2019, 2022, 2024).

SOC member at conference *Southern Horizons in Time Domain Astronomy*, Cape Town, South Africa, 2017

LOC member and invited speaker at the conference *Supernova through the ages: Understanding the past to prepare for the future*, Easter Island, Chile, 2016

Other recognitions/contributions:

Founder of the startup Flair, `https://goflair.cl/`, doing environmental monitoring and analytics and selected for the Startup Chile program.

Member of the NOIRLab (US national center for ground-based, nighttime optical and infrared astronomy) Management Oversight Council (2021–2024).

Member of the International In-Kind Contribution Evaluation Committee (CEC) of the Rubin Observatory (2020–2021).

Member of the Graduate student committee at the Astronomy Department, U. Chile (2020–2021).

Scientific advisor for the Data Observatory initiative of the Chilean Ministry of Economy (2017–2018)

Head of the LSST–Chile Scientific Coordination Committee of LSST–Chile, 2017–2018

1st position in ranking of astrophysics students at the end of the B.Sc. program (U. Chile, 2003).

1st position in ranking of the School of Science and Engineering (U. Chile, 1st semester of 2000), *Beca Facultad* award for being among the top ten best students admitted to the school of Science and Engineering (U. Chile, 1998) and *Beca Irma Salas* award for obtaining the highest national score in the Chilean Mathematics University admission exam (1998).

Other

Computer skills: Python, Fortran 77/95, C++, R, Perl, LaTeX, Mathematica, IRAF, Linux, Windows.

Observational experience in several telescopes (NTT–EFOSC and SOFI, Blanco – DECam, SOAR, and Gemini).

Practice swimming and cycling regularly.

Publications

89. Pavez-Herrera, M.; Sánchez-Sáez, P.; Hernández-García, L.; ...**Förster, F.**; et al. *ALeRCE light curve classifier: Tidal disruption event expansion pack*, 2025, A&A, 696, 153.
88. Shah, P.; Davis, T. M.; Vincenzi, M.; ...**Förster, F.**; et al. *It is not σ_8: constraining the non-linear matter power spectrum with the Dark Energy Survey Year-5 supernova sample*, 2025, MNRAS, 537, 3814.
87. Anderson, J. P.; Contreras, C.; Stritzinger, M. D.; ...**Förster, F.**; et al. *Optical and near-infrared photometry of 94 type II supernovae from the Carnegie Supernova Project*, 2024, A&A, 692, 95.
86. Hernández-García, L.; Muñoz-Arancibia, A. M.; Lira, P.; ...**Förster, F.**; et al. *AT 2021hdr: A candidate tidal disruption of a gas cloud by a binary super massive black hole system*, 2024, A&A, 692, 84.
85. Ramirez, M.; Pignata, G.; **Förster, F.**; et al. *A novel optimal transport-based approach for interpolating spectral time series: Paving the way for photometric classification of supernovae*, 2024, A&A, 691, 33.
84. Cabrera-Vives, G.; Moreno-Cartagena, D.; Astorga, N.; ... **Förster, F.**; et al. *ATAT: Astronomical Transformer for time series and Tabular data* , 2024, A&A, 689, A289.
83. Sánchez-Sáez, P.; Hernández-García, L.; Bernal, S.; ... **Förster, F.**; et al. *SDSS1335+0728: The awakening of a $\sim 10^6$ $M_\odot$ black hole*, 2024, A&A, 688, A157.
82. Silva-Farfán, J.; Förster, F.; Moriya, T. J.; ... **Förster, F.**; et al. *Physical Properties of Type II Supernovae Inferred from ZTF and ATLAS Photometric Data*, 2024, ApJ, 969, 57.
81. Hernández-García, L.; Panessa, F.; Bruni, G.; ... **Förster, F.**; et al. *Multiwavelength monitoring of the nucleus in PBC J2333.9-2343: the giant radio galaxy with a blazar-like core*, 2023, MNRAS, 525, 2187.
80. Perez-Carrasco, M.; Cabrera-Vives, G.; Hernandez-García, L.; ... **Förster, F.**; et al. *Alert Classification for the ALeRCE Broker System: The Anomaly Detector*, 2023, AJ, 166, 151
79. Pessi, T.; Prieto, J. L.; Anderson, J. P.; ... **Förster, F.**; et al. *A characterization of ASAS-SN core-collapse supernova environments with VLT+MUSE. I. Sample selection, analysis of local environments, and correlations with light curve properties*, 2023, A&A, 677, A28.
78. Reyes-Jainaga, I.; **Förster, F.**, Muñoz Arancibia, A. M., et al. *Multiscale Stamps for Real-time Classification of Alert Streams* , 2023, ApJL, 952, L43.
77. Sánchez-Sáez, P.; Arredondo, J.; Bayo, A.; ... **Förster, F.**; et al. *Persistent and occasional: Searching for the variable population of the ZTF/4MOST sky using ZTF Data Release 11*, 2023, A&A, 675, 195.
76. Lu, Jing; Hsiao, Eric Y.; Phillips, Mark M.; ... **Förster, F.**; et al. *Carnegie Supernova Project. II. Near-infrared Spectral Diversity and Template of Type Ia Supernovae*, 2023, ApJ, 948, 27.
75. Hernández-García, L.; Panessa, F.; Bruni, G.; ... **Förster, F.**; et al., *Multiwavelength monitoring of the nucleus in PBC J2333.9-2343: the giant radio galaxy with a blazar-like core*, 2023, MNRAS, Accepted for publication
74. Kumar, S.; Hsiao, E. Y.; Ashall, C.; ... **Förster, F.**; et al., *Near-infrared and Optical Nebular-phase Spectra of Type Ia Supernovae SN 2013aa and SN 2017cbv in NGC 5643*, 2023, AJ, 945, 27.
73. Pimentel, O; Estévez, P.A.; **Förster, F.**, *Deep Attention-based Supernovae Classification of Multiband Light Curves*, 2023, AJ, 165, 18.
72. **Förster, F.**; Munoz-Arancibia, A. M.; Reyes-Jainaga, I.; et al., *DELIGHT: Deep Learning Identification of Galaxy Hosts of Transients using Multiresolution Images*, 2022, AJ, 164, 195.
71. Martinez, L.; Bersten, M. C. ; Anderson, J. P.; ... **Förster, F.**; et al., *Type II supernovae from the Carnegie Supernova Project-I. III. Understanding SN II diversity through correlations between physical and observed properties*, 2022, A&A, 660, 42.

70. Martinez, L.; Bersten, M. C. ; Anderson, J. P.; ... **Förster, F.**; et al., *Type II supernovae from the Carnegie Supernova Project-I. II. Physical parameter distributions from hydrodynamical modelling*, 2022, A&A, 660, 41.

69. Martinez, L.; Bersten, M. C. ; Anderson, J. P.; ... **Förster, F.**; et al., *Type II supernovae from the Carnegie Supernova Project-I. I. Bolometric light curves of 74 SNe II using uBgVriYJH photometry*, 2022, A&A, 660, 40.

68. Ashall, C.; Lu, J.; Hsiao, E. Y.; ... **Förster, F.**; et al., *Carnegie Supernova Project: The First Homogeneous Sample of Super-Chandrasekhar-mass/2003fg-like Type Ia Supernovae*, 2021, ApJ, 922, 205.

67. Sánchez-Sáez, P.; Lira H.; Martí; Sánchez-Pi, N.; ...**Förster, F.**; et al., *Searching for changing-state AGNs in massive datasets – I: applying deep learning and anomaly detection techniques to find AGNs with anomalous variability behaviours*, 2021, AJ, 162, 206.

66. Medina, N.; Borissova, J.; Kurtev, R.; ... **Förster, F.**; et al., *The G 305 Star-forming Region. II. Irregular Variable Stars*, 2021, ApJ, 914, 28.

65. Carrasco-Davis, R.; Reyes. E.; Valenzuela, C.; **Förster, F.**; et al., *Alert Classification for the ALeRCE Broker System: The Real-time Stamp Classifier*, 2021, AJ, 162, 206.

64. **Förster, F.**; Cabrera-Vives, G.; Castillo-Navarrete, E.; et al., *The Automatic Learning for the Rapid Classification of Events (ALeRCE) Alert Broker*, 2021, AJ, 161, 242

63. Sánchez-Sáez, P.; Reyes, I.; Valenzuela, C.; **Förster, F.**; et al., *Alert Classification for the ALeRCE Broker System: The Light Curve Classifier*, 2021, AJ, 161, 141

62. Tartaglia, L.; Sand, D. J.; Groh, J. H.; ... **Förster, F.**; et al., *The Early Discovery of SN 2017ahn: Signatures of Persistent Interaction in a Fast-declining Type II Supernova*, 2021, ApJ, 907, 907

61. Wang, L.; Contreras, C.; Hu, M.; ... **Förster, F.**, et al., *Optical and Near-infrared Observations of the Nearby SN Ia 2017cbv*, 2020, ApJ, 904, 14

60. Martinez, L.; Bersten, M. C.; Anderson, J. P.; González-Gaitán, S.; **Förster, F.**; Folatelli, G., *Progenitor properties of type II supernovae: fitting to hydrodynamical models using Markov chain Monte Carlo methods*, 2020, A&A, 642, 143

59. Smith, K. W.; Smartt, S. J.; Young, D. R.; ... **Förster, F.**; et al., *Design and Operation of the ATLAS Transient Science Server*, 2020, PASP, 132, 5002

58. de Jaeger, Th.; Galbany, L.; González-Gaitán, S.; ... **Förster, F.**; et al., *Studying Type II supernovae as cosmological standard candles using the Dark Energy Survey*, 2020, MNRAS, 495, 4860

57. Rodríguez, O.; Pignata, G.; Anderson, J.P.; ... **Förster, F.**; et al., *Luminous Type II supernovae for their low expansion velocities*, 2020, MNRAS, 494, 5882

56. Peña, J. Fuentes, C.; **Förster, F.**; et al.; *Asteroids' Size Distribution and Colors from HITS*, 2020, AJ, 159, 148

55. Martínez-Palomera, J.; Lira, P.; Bhalla-Ladd, I.; **Förster, F.**; Plotkin, R., *Introducing the Search for Intermediate-mass Black Holes in Nearby Galaxies (SIBLING) Survey*, 2020, ApJ, 889, 113M

54. Carrasco–Davis, R.; Cabrera–Vives, G.; **Förster, F.**; et al., *Deep Learning for Image Sequence Classification of Astronomical Events*, 2019, PASPA, 131, 1004

53. Huerta, E.A.; Allen, G.; Andreoni, I.; ... **Förster, F.**; et al., *Enabling real-time multi-messenger astrophysics discoveries with deep learning*, 2019, Nat. R. P.

52. Ortíz, J.; **Förster, F.**; Radic, T.; et. al., *Valoración Mayoritaria, un método de votación expresivo de las preferencias de la ciudadanía y su primera implementación en Chile en la Consulta Ciudadana de 2019*, 2021, *Submitted to Revista de Metodología en Ciencias Sociales.*.

51. Whidden, P. J.; Bryce K.; Connolly, Andrew J.; **Förster, F.**; Golkhou, V. Zach, *Fast Algorithms for Slow Moving Asteroids: Constraints on the Distribution of Kuiper Belt Objects*, 2019, AJ, 157, 119W

50. Hsiao, E.; Phillips, M.; Marion, G.H.; ... **Förster, F.**; et al., *Carnegie Supernova Project-II: The Near-infrared Spectroscopy Program*, 2019, PASP, 131, 995

49. Shappee, B.J.; Holoien, T.W.S.; Drout, M.R.; .. **Förster, F.**; et al., *Seeing Double: ASASSN-18bt Exhibits a Two-component Rise in the Early-time K2 Light Curve*, 2019, ApJ, 870, 13

48. Reyes, E.; Estévez, P.; Reyes, I.; ... **Förster, F.**, *Enhanced Rotational Invariant Convolutional Neural Network for Supernovae Detection*, 2018, IJCNN (IEEE WCCI).

47. Astorga, N.; Huijse, P.; Estévez, P.; **Förster, F.**, *Clustering of Astronomical Transient Candidates Using Deep Variational Embedding*, 2018, IJCNN (IEEE WCCI).

46. Martínez-Palomera, J., **Förster, F.**, Protopapas, P., et al., *The High Cadence Transient Survey (HITS): Compilation and characterization of light-curve catalogs*, 2018, AJ, 156, 186M.

45. **Förster, F.**, et al., *The delay of shock breakout due to circumstellar material evident in most type II supernovae*, 2018, Nature Astronomy, 122F.

44. Moriya, T.J.; **Förster, F.**; Yoon, S.-C.; Gräfener, G.; Blinnikov, S.I.; *Type IIP supernova light curves affected by the acceleration of red supergiant winds*, 2018, MNRAS, 476, 2840M.

43. Huijse, P.; Estévez, P.; **Förster, F.**; et al., *Robust Period Estimation Using Mutual Information for Multiband Light Curves in the Synoptic Survey Era*, 2018, ApJS, 236, 12.

42. Rest, A.; Garnavich; P. M., Khatami, D.; ...**Förster, F.**; et al., *A fast-evolving luminous transient discovered by K2/Kepler*, 2018, Nature Astronomy, 2, 307.

41. Medina, G.E.; Muñoz, R.R.; Vivas, A.K.; ... **Förster, F.**; et al., *Discovery of Distant RR Lyrae Stars in the Milky Way Using DECam*, 2018, ApJ, 855, 43M.

40. Peña, J.; Fuentes, C.; **Förster, F.**; et al., *Asteroids in the High Cadence Transient Survey*, 2018, AJ, 155, 135P.

39. Minniti, D.; Saito, R.K.; **Förster, F.**; et. al.; *The Emergence of the Infrared Transient VVV-WIT-06*, 2017, ApJ, 849L, 23M.

38. Medina, G.E.; Muñoz, R.R.; Vivas, A.K.; **Förster, F.**; et al., *Serendipitous Discovery of RR Lyrae Stars in the Leo V Ultra-faint Galaxy*, 2017, ApJ, 845L, 10M.

37. Bauer, F.E.; Treister, E.; Schawinski, K.; ... **Förster, F.**; et al., *A new, faint population of X-ray transients*, 2017, MNRAS, 467, 4841B.

36. Cabrera-Vives, G.C.; Reyes, I.; **Förster, F.**; et al., *Deep-HiTS: Rotation invariant convolutional neural network for supernovae*, 2017, ApJ, 836, 97C

35. Zelaya, P.; Clocchiatti, A.; Baade, D.; ... **Förster, F.**; et al., *Continuum Foreground Polarization and Na I Absorption in Type Ia SNe*, 2017, ApJ, 836, 88Z

34. Cabrera-Vives, G.C.; Reyes, I.; **Förster, F.**; et al., *Supernovae detection by using convolutional neural networks*, 2016, IJCNN.

33. Huentelemu, P.; Estévez, P.; **Förster, F.**, *Correntropy based filtering for supernova detection*, 2016, IJCNN.

32. **Förster, F.**; Maureira, J.C.; San Martín, J.; et al., *The High Cadence Transient Survey (HiTS) - I. Survey design and supernova shock breakout constraints*, 2016, ApJ, 832, 155F

31. Prieto, J.L.; Krühler, T.; Anderson, J.P.;...**Förster, F.**; et al., *MUSE Reveals a Recent Merger in the Post-starburst Host Galaxy of the TDE ASASSN-14li*, 2016, ApJ, 830L, 32P.

30. Galbany, L.; Anderson, J.P.; Rosales-Ortega, F.F.; ... **Förster, F.**; et al., *Characterizing the environments of supernovae with MUSE*, 2016, MNRAS, 455, 4087G.

29. Huijse, P.; Estévez, P.; **Förster, F.**; Berrocal, E., *Discriminating Variable Star Candidates in Large Image Databases from the HiTS Survey Using NMF*, 2018, INNS Conference on Big Data

28. González–Gaitán, S.; Tominaga, N.; Galbany, L.; ... **Förster, F.**; et al., *The rise-time of Type II supernovae*, 2015, MNRAS, 451, 2212G.

27. de Jaeger, Th.; Anderson, J.P.; Pignata, G.; ... **Förster, F.**; et al., *SN 2011A: A Low-luminosity Interacting Transient with a Double Plateau and Strong Sodium Absorption*, 2015, ApJ, 807, 63D.

26. Marino, S.; González–Gaitán, S.; **Förster, F.**; et al., *Searching for Light Echoes Due to Circumstellar Matter in SNe Ia Spectra*, 2015, ApJ, 806, 134M.

25. Anderson, A.; James, P.A.; **Förster, F.**; et al., *On the environments of Type Ia supernovae within host galaxies*, 2015, MNRAS, 448, 732A.

24. Bosh, A.S.; Person, M.J.; Levine, S.E.; ... **Förster, F.**; et al., *The state of Pluto's atmosphere in 2012-2013*, 2015, Icar, 246, 273B.

23. Stritzinger, M. D.; Valenti, S.; Hoeflich, P.; ... **Förster, F.**; et al., *Comprehensive observations of the bright and energetic Type Iax SN 2012Z: Interpretation as a Chandrasekhar mass white dwarf explosion*, 2015, A&A, 573A, 2S.

22. González-Gaitán, S.; Hsiao, E. Y.; Pignata, G.; **Förster, F.**; et al., *Defining Photometric Peculiar Type Ia Supernovae*; 2014, ApJ, 795, 142G.

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