# Lluís Galbany



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### Synopsis of the CV

I am an observational astrophysicist with broad and multidisciplinary interests spanning supernova physics, massive stars, galaxy evolution, and cosmology. I obtained a PhD in Physics from Universitat Autònoma de Barcelona in Oct 2011 under the supervision of Prof. Ramon Miquel at the Institut de Física d'Altes Energies (IFAE). I have been a postdoctoral researcher at the CENTRA/IST in Lisboa under the supervision of Dr. Vallery Stanishev and Prof. A. M. Mourão, a FONDECYT postdoctoral fellow at the Astronomy Department of Universidad de Chile working with Prof. Mario Hamuy, a research associate at the Department of Physics and Astronomy of University of Pittsburgh working with Prof. Michael Wood-Vasey, and a Marie Skłodowska-Curie fellow at Universidad de Granada integrated in Prof. Inma Domínguez group. After a couple of years as a Ramón y Cajal Fellow, I am currently a Científico Titular at the Institute of Space Sciences (IEEC-CSIC). I have always enjoyed scientific independence, conducting competitive research in enjoyable scientific environments.

So far, I have published 358 articles with more than 23k citations and an h-index of 67 (ADS, Jan 2024). My work has been presented in international conferences giving in total 67 talks, including 5 invited talks at different conferences and 28 invitations to deliver seminars at different institutions. I have been PI of 59 successful observational proposals in a competitive basis in the largest observatories around the world, and actively participated in more than 40 other observational campaigns. I have led analyses within major collaborations (SDSS-II SN, CALIFA, PESSTO, DES, HSC-SSP, MaNGA, J-PLUS, LSST, WFIRST, DESI, ZTF), and I had the chance to mentor 3 postdocs, 8 PhD students, 7 graduate and 14 undergraduate students, including two funded 3-months PhD research visits, and 2 ERASMUS+ undergrad programmes.

#### Education

Sep 2008 - Jun 2023 B.S in Economics (4-year degree), Universitat Autònoma de Barcelona (UAB).

Sep 2006 - Oct 2011 Ph.D. in Physics, Institut de Física d'Altes Energies - IFAE, U. Autònoma de Barcelona - UAB.

Supernova studies in the SDSS-II/SNe Survey: spectroscopy of the peculiar SN 2007qd, and photometric properties of Type-Ia supernovae as a function of the distance to the host galaxy.

Supervisor: Prof. Ramon Miquel.

Sep 2006 - Apr 2008 Master degree in Physics, U. Autònoma de Barcelona (UAB).

Tests of DES Charge Coupled Devices. Supervisors: Ramon Miquel and Manel Martínez.

Jun 2007 Certificate of Teaching Proficiency, Institute of Education Sciences (ICE-UAB).

Sep 2001 - Jun 2006 B.S. in Physics (5-year degree), U. Autònoma de Barcelona (UAB).

#### Research activity

Since Dec 2023	Cientifico	Litular OPI	. Institut de	Ciències de	l'Espai	(ICE-CSIC	.).
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Sep 2021 - Dec 2023 Ramon y Cajal fellow (RyC 2019). Institut de Ciències de l'Espai (ICE-CSIC).

Sep 2019 - Aug 2021 Marie Skłodowska-Curie fellow (MSCA-IF 2018). Universidad de Granada.

Sep 2016 - Aug 2019 **Postdoctoral research associate.** University of Pittsburgh.

Oct 2013 - Aug 2016 **FONDECYT 2014 postdoctoral fellow.** Universidad de Chile.

Nov 2011 - Sep 2013 **Postdoctoral researcher**. Instituto Superior Técnico (IST), Universidade de Lisboa.

# \_\_\_\_\_ Fellowships and grants awarded

Dec 2023	CSIC I-COOP project (COOPB23040). Funding: 23,929.60 EUR.
Dec 2023	CSIC I-LINK B project (ILINK23001). Funding: 23,949.64 EUR.
Apr 2023	Ajuts Programa INVESTIGO (2023). Funding: 66.217,84 EUR
Jan 2023	Ajuts de suport a grups de recerca de Catalunya (SGR-Cat 2021). Funding: 24,000 EUR
Jul 2022	Ajuts per al Foment de la Cultura Científica a Catalunya Joan Oró (FCRI). Funding: 15,000 EUR
Jul 2022	Hubble Space Telescope Cycle 30 $\#17179$ proposal. Funding: $\sim90,000$ USD.
Dec 2021	CSIC MOST 2021 project (OSTCSI0003). Funding: 23,946.20 EUR.
Dec 2021	CSIC I-LINK A project (LINKA20409). Funding: 23,914.92 EUR.
Sep 2021	Hubble Space Telescope Cycle 29 $\#16741$ proposal. Funding: $\sim90,000$ USD.
Sep 2021	Proyecto Nacional I+D+i AYA PID2020-115253GA-I00. Funding: 155,577 EUR.
Sep 2021	Proyecto Intramural Especial (PIE) CSIC 20215AT016. Funding: 150.000 EUR.
Jul 2020	Ramon y Cajal Fellowship (RyC 2019, ranked 1st). Funding: 308.600 EUR.
May 2020	UGR conference organization funding. Amount: 1.000 EUR.
Mar 2020	NOAJ grant for visitor researcher program. Funding: 285.000 JPY.
Feb 2019	Marie Skłodowska-Curie Actions - Individual Fellowship (MSCA-IF): 172,932.48 EUR.
Jan 2019	The future of SN host galaxies studies workshop. Funding PITT-PACC: 8,000 USD.
Apr 2018	New advances in NIR SNIa science workshop. Funding PITT-PACC: 10,000 USD.
Mar 2018	SNe II cosmology with the LSST workshop. Funding PITT-PACC: 4,000 USD.
Mar 2017	FINCA grant for visitor researcher program. Funding: 2,650 EUR.
Nov 2016	Preparing for SN Science in the LSST Era workshop. Funding LSST Enabling science: 19,750 USD.
Apr 2013	FONDECYT Postdoctoral fellowship 2014. CONICYT - Chile: 74.352.000 CLP
Jun 2004	

Total funding awarded: approx. 1,200,000 EUR

# \_\_\_\_\_ Teaching activity

Nov 2021	Guest Lecturer Techniques in Observational Astronomy, Purdue University, IL.
From Sep 2021	Lecturer MasterCosmos BCN. Postgraduate in HEP, Astrophysics & Cosmology, ICE-IFAE.
	Neutron Stars, Black Holes and Gravitational Waves; Galaxies and Extragalactic Astrophysics; Introduction to Physics of the Cosmos; Cosmology (Coordinator).
Sep 2019 - Aug 2021	Lecturer Department of Theoretical and Cosmological Physics, U. Granada.
	Stellar Physics, Physics Laboratory, General Physics.
Nov 2016	Guest Lecturer 2nd SELGIFS Advanced School on IFS Data Analysis, UAM, Madrid, Spain.
Aug 2014	Guest Lecturer Guillermo Haro Advanced School on IFS Techniques and Analysis, INAOE,
	Puebla, Mexico.
Sep 2008 - Sep 2010	Teaching Assistant Physics Department of U. Autònoma de Barcelona.
	General Physics, Mathematical Methods, Physics Laboratory.

# Supervision and mentorship

Postdocs	
	<b>Achille Fiore</b> , ICE-CSIC. Gravitational wave electromagnetic counterparts. Funding: Ayudas Juan de la Cierva (JdC), Ref.: JDC2022-050171-I. <i>REJECTED</i>
May 23 - Apr 26	Claudia Gutiérrez, IEEC/ICE-CSIC. CC SN physiscs. Funding: Ajudes Beatriu de Pinoś (BP 2021), MCSA COFUND Action.
Sep 22 - Dec 25	Maria Kopsachielli, ICE-CSIC. SN remnants environments. Funding: ICE María de Maetzu (MdM) postdoctoral fellowship. Funding: Ayudas Juan de la Cierva (JdC), Ref.: JDC2022-049447-I.
Nov 21 - Dec 24	<b>Tomás Müller</b> , ICE-CSIC. Supernova cosmology in the NIR. Funding: Proyecto Intramural Especial (PIE) CSIC 20215AT016.

#### PhD students

The students	
From Nov 2023	<b>Alaa Alburai</b> , ICE-UAB. <i>PhD advisor</i> . Subluminous 1991bg-like SNe Ia. Funding: Proyecto Intramural Especial (PIE) CSIC 20215AT016.
From Nov 2023	<b>Maider González</b> , ICE-UAB. <i>PhD co-advisor with Caludia Gutiérrez</i> . Physics of SNe in early phases. Funding: Institute of Space Sciences MdM fellowship.
From Sep 2022	Dane Cross, ICE/IFAE-UAB. PhD co-advisor with Carles Sánchez. $\sigma_8$ at low and high redshift. Funding: Proyecto Intramural Especial (PIE) CSIC 20215AT016. Funding: Ajuts Joan Oró per a personal investigador predoctoral en formació (FI-2023)".
From Sep 2022	<b>Cristina Jiménez</b> , ICE-UAB. <i>PhD advisor</i> . IFS SN la environments characterization. Funding: "Ayudas para contratos predoctorales para la formación de doctores 2020".
From May 2022	<b>Kim Phan</b> , ICE-UAB. <i>PhD advisor</i> . $H_0$ determination from SN Ia in the near-infrared. Funding: Ajuts per a la contractació de personal investigador predoctoral en formació (FI-2022)".
From Sep 2020	<b>Raúl González Díaz</b> , INAOE/ICE-UAB. <i>PhD co-advisor with Fabián Rosales</i> . Diffuse interstellar gas in IFS.
Sep 18 - Sep 21	Jared Hand, U. Pittsburgh. Supervised by W. M. Wood-Vasey. Stellar population synthesis. (See selected refereed papers #70)
Sep 18 - Feb 21	<b>Daniel Perrefort</b> , U. Pittsburgh. Supervised by W. M. Wood-Vasey. Subluminous SNe. (See selected refereed papers #62)
Abr-Jul 2016	<b>Laura Sánchez-Menguiano</b> , U. Granada. Supervised by I. Pérez and S. F. Sánchez. Radial migration. (See selected refereed papers #21) Funding: "Ayudas a la movilidad predoctoral para estancias en centros de I+D 2015".
Mar 2016	<b>Manuel Emilio Moreno-Raya</b> , U. Complutense. <i>Supervised by M. Mollá and A. López-Sánchez</i> . Elemental abundances of int-z SN host galaxies. (See <i>selected refereed papers</i> #35)
Aug-Nov 2014	<b>Manuel Emilio Moreno-Raya</b> , U. Complutense. <i>Supervised by M. Mollá and A. López-Sánchez</i> . Elemental abundances of low-z SN host galaxies. (See <i>selected refereed papers</i> #12, #22). Funding: "Ayudas a la movilidad predoctoral para estancias en centros de I+D 2013".

#### Master students

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From Jan 24	<b>Noor Ali</b> , Institute of Space Sciences (ICE-CSIC). <i>Supervisor</i> . The host galaxies of the Dark energy Survey.
From Sep 23	Ramon Sanfeliu, U. Autònoma de Barcelona. <i>TFM supervisor</i> .  Metallicity dependence on SHOES Cepheids calibration.
Mar 23 - Jun 23	<b>Christos Thomopoulos</b> , U. Patras, Greece. <i>ERASMUS+</i> . SNIa NIR diversity and improved standardization.
Mar 23 - Jun 23	John Kyriakopoulos, U. Patras, Greece. <i>ERASMUS+</i> .  ZTF SNIa Hubble diagrams as a function of SN properties.
Nov 22 - Sep 23	Carlos Valero, ICE-CSIC. TFM supervisor. Host galaxy dependences on SHOES $H_0$ measurement. (paper in prep.)
Nov 22 -Aug 23	Lara Piscarreta, U. Lisboa. <i>JAE-ICU supervisor</i> . Young supernova programme with GTC. (paper in prep.)
From Oct 22	<b>Utsav Siwatoki</b> , Kathmandu U. (Nepal). <i>TFM supervisor</i> . FP and TF distances of elliptical/spiral galaxies observed with IFS. (paper in prep.)
Oct 22 - Apr 23	Carla Barnera, ICE-CSIC. JAE-ICU supervisor. Spectral evolution of SNe Ia in DES. (paper in prep.)
Sep 20 - Jul 21	<b>Sara Muñoz Torres</b> , U. Granada. <i>TFM supervisor</i> .  The oxygen abundance dependence on the Cepheid period in SH0ES. (paper in prep.)
Oct 19 - Jul 20	Román Fernández Aranda, U. Complutense Madrid. <i>TFM supervised with M. Mollà</i> . Stellar populations of SN host galaxies at high-z 0.5 <z<1.0. (see="" <i="">selected refereed papers #80)</z<1.0.>
Sep 19 - Jul 20	Raúl González Díaz, U. Granada. TFM supervised with R García-Benito.

NCR method in broad and narrow band data from J-PLUS. (See selected refereed papers #93)

- Dec 18 Jul 20 **Nataliya Ramos Chernenko**, U. Granada. *TFM supervised with I. Domínguez*. The local environment of Type la supernovae with IFS.
- Nov 18 Jun 19 **Macarena García del Valle**, U. Complutense Madrid. *TFM supervised with M. Mollà*. Type la supernova environments at high redshift. (See *selected refereed papers* #80)
- Oct 18 Sep 19 **Isaac Lozano Rey**, U. Internacional de València (VIU). *TFM supervisor*. The imprint of hydrogen-rich core collapse supernovae from their parent populations.
- Sep 17 Jun 18 **Asier Castrillo**, U. Autónoma Madrid. *TFM supervised with Y. Ascasibar*. Supernova DTDs in nearby galaxies. (See *selected refereed papers* #63)

#### Undergrad students

- From Dec 23 **Sandra Guerra**, U. Autònoma de Barcelona. *TFG supervisor*. 1991bg-like SNe Ia in the ZTF survey.
- Jun 22 Jul 23 Ramon Sanfeliu, U. Autònoma de Barcelona. Summer internship & TFG supervisor. Database of FLOWS NIR SN Ia. Peculiar velocities of SNe Ia.
  - Feb-Jul 22 **Cristina Jordà**, U. Politècnica de Catalunya. *TFG supervised with R. Morros*. Spectral diversity of CC SNe with machine learning.
- Sep 20 Jul 21 **Antonio láñez Ferres**, U. Granada. *TFG supervisor*. Studying the diversity of type la supernovae in the NIR. (See *selected refereed papers* #76)
- Sep 20 Jul 21 **María Delgado Mancheño**, U. Granada. *TFG supervisor*. The type Ia NIR Hubble diagram constructed with ANDICAM JHK data.
- Nov 19 Jul 20 **Darío García Redecillas**, U. Granada. *TFG supervisor*. Studying the diversity of subluminous type la supernovae from twins.
- Nov 19 Jul 20 Lamberto Oltra Nieto, U. Granada. *TFG supervisor*.

  The local environment of supernovae as seen by J-PLUS. (See *selected refereed papers* #93)
- Sep 16 Jun 17 **Asier Castrillo**, U. Autónoma Madrid. *TFG supervised with Y. Ascasibar*. Supernova rates in nearby galaxies. (See *selected refereed papers* #63)
- Sep 16 Sep 17 **Nicolette M. Kier**, U. Pittsburgh. HII region statistics in PISCO. (See *selected refereed papers* #34)
- Sep 16 Mar 17 **Yiwen Huang**, Carnegie Mellon U. Statistical study of SN la 91bg-like. (See *selected refereed papers* #50)
  - Jan-Sep 2016 Luis Mora, U. Chile. *TFG supervisor*.

    Measuring CO at SN locations with CARMA. (See *selected refereed papers* #25)
  - Jan-Jul 2015 **Tania Moraga**, U. Chile. *TFG supervisor*.

    Type II multiwavelength light-curve characterization. (See *selected refereed papers* #11)
  - Mar-Des 2013 **Ismael Pessa**, U. Chile. *TFG supervisor*.

    SNe la properties as a function of the distance to host galaxy. (See *selected refereed papers* #71)

#### Publication list

Here you can find links of my publications in the ADS, Google Scholar, and ORCID. Selected refereed papers

- 93. Supernova environments in J-PLUS. NCR distributions and SPS, combining narrow- and broad-band filters R. González, L. Galbany, T. Kangas, R. García-Benito, et al. A&A, accepted : (2024), arXiv:2312.13830.
- 92. Recovering lost light: discovery of supernova remnants with integral field spectroscopy H. Martínez-Rodríguez, L. Galbany, C. Badenes, et al. APJ, accepted: (2024), arXiv:2309.14901.
- 91. The Calar Alto Legacy Integral Field Area Survey: extended and remastered data release S. F. Sánchez, L. Galbany, C.J.Walcher, R.García-Benito, et al. MNRAS, accepted: (2023), arXiv:2304.13022.
- 90. Strong Carbon Features and a Red Early Color in the Underluminous Type Ia SN 2022xkq J. Pearson, D. J. Sand, P. Lundqvist, L. Galbany, et al. APJ, accepted: (2023), arXiv:2309.10054.
- 89. An updated measurement of the Hubble constant from near-infrared observations of Type Ia supernovae L. Galbany, T. de Jaeger, Adam G. Riess, T. E. Miler-Bravo, et al. A&A, accepted: (2023), arXiv:2209.02546.
- 88. The Calar Alto Legacy Integral Field Area Survey: Spatial resolved properties S.F. Sánchez, J.K. Barrera-Ballesteros, L. Galbany, R. García-Benito, et al. RMXAA, accepted: (2023), arXiv:2304.13070.

- 87. A metallicity dependence on the occurrence of core-collapse supernovae T. Pessi, J. P. Anderson, J. D. Lyman, J. L. Prieto, L. Galbany, et al. APJL, accepted: (2023), arXiv:2306.11962.
- 86. Fast and Not-so-Furious: Case Study of the Fast and Faint Type IIb SN 2021bxu D. D. Desai, C. Ashall, B. J. Shappee, N. Morrell, L. Galbany, et al. MNRAS, 524:767 (2023), arXiv:2303.13581.
- 85. A characterization of ASAS-SN core-collapse supernova environments with VLT+MUSE: I. Sample selection. T. Pessi, J. L. Prieto, J. P. Anderson, L. Galbany, J. D. Lyman, et al. A&A, 677:28 (2023), arXiv:2306.11961.
- 84. Environmental dependence of Type IIn supernova properties T. Moriya, L. Galbany, C. Jiménez-Palau, J. P. Anderson, et al. A&A, 677:20 (2023), arXiv:2306.09647.
- 83. A graph-based spectral classification of Type II supernovae R. de Souza, S. Thorp, L. Galbany, E. E. O. Ishida, S. González-Gaitán, et al. ASCOM, 44:100715 (2023), arXiv:2206.14335.
- 82. Examining the Properties of Low-luminosity Hosts of Type Ia Supernovae from ASAS-SN T. Holoien, V. Berger, J. Hinkle, L. Galbany, et al. APJ, 950:108 (2023), arXiv:2207.07657.
- 81. SN 2016ije: An SN 2002es-likeSNIa Exploded in a Metal-poor and Low-surface Brightness Galaxy Z. Li, T. Zhang, X. Wang, J. Zhang, L. Galbany, et al. APJ, 950:17 (2023), arXiv:2305.09417.
- 80. Stellar Populations in SNIa host galaxies at intermediate-high z: SF and OH enrichment histories I. Millan-Irigoyen, M. G. del Valle-Espinosa, R. Fernández-Aranda, L. Galbany, et al. MNRAS, 517:3312 (2022), arXiv:2209.10242.
- 79. The Absolute Magnitudes of 1991T-like Supernovae M. M. Phillips, C. Ashall, C. R. Burns, C. Contreras, L. Galbany, et al. APJ, 938:47 (2022), arXiv:2209.08031.
- 78. Testing the Homogeneity of Type Ia Supernovae in the Near-Infrared for Accurate Distance Estimations T. Müller-Bravo, L. Galbany, E. Karamehmetoglu, M. Stritzinger, C. Burns, et al. A&A, 665:123 (2022), arXiv:2207.04780.
- 77. A 5 per cent measurement of the Hubble constant from Type II supernovae T. de Jaeger, L. Galbany, A. G. Riess, B. J. Shappee, et al. MNRAS, 514:4620 (2022), arXiv:2203.08974.
- 76. HostPhot: global and local photometry of galaxies hosting supernovae or other transients T. Müller-Bravo, L. Galbany. JOSS, 7(76):4508 (2022), arXiv:2208.08117.
- 75. Cosmological Results from the RAISIN Survey: Using SNe Ia in NIR as a Novel Path to Measure the DE EoS D. Jones, K. Mandel, R. P. Kirshner, . L. Galbany, et al. APJ, 933:172 (2022), arXiv:2201.07801.
- 74. Systematic errors on optical-SED  $M_s$  estimates for galaxies across cosmic time and their impact on cosmology A. Paulino-Afonso, S. González-Gaitán, L. Galbany, et al. A&A, 662:86 (2022), arXiv:2202.04078.
- 73. A Tale of Two Type Ia Supernovae: The fast-declining siblings SNe 2015bo and 1997cn W. Hoogendam, C. Ashall, L. Galbany, B. Shappee, et al. APJ, 928:103 (2022), arXiv:2109.14644.
- 72. Aperture-corrected spectroscopic type la supernova host galaxy properties

  L. Galbany, M. Smith, S. Duarte Puertas, S. González-Gaitán, I. Pessa, et al. A&A, 659:89 (2022), arXiv:2112.02517.
- 71. Infant excess emission reveals the origin of a normal Type Ia Supernova Y. Qi Ni, D-S Moon, M. R. Drout, A. Polin, . L. Galbany, et al. NATAS, 6,568 (2022), arXiv:2202.08889.
- 70. The Dependence of the Type Ia Supernova Host Bias on Observation or Fitting Technique J. Hand, S. Liu, L. Galbany, et al. APJ, 925:115 (2022), arXiv:2102.08980.
- 69. The effects of varying colour-luminosity relations on type la supernova science. S. González-Gaitán, T. de Jaeger, L. Galbany, et al. MNRAS, 508:4656 (2021), arXiv:2009.13230.
- 68. Are Type Ia Supernovae in Restframe H Brighter in More Massive Galaxies?

  K. A. Ponder, W. MN. Wood-Vasey, A. Weyant, N. T. Barton, L. Galbany, et al. APJ, 923:197 (2021), arXiv:2006.13803.
- 67. Carnegie Supernova Project: The First Homogeneous Sample of 2003fg-like Type la Supernova. C. Ashall, J. Lu, E. Y. Hsiao, P. Hoeflich, M. Phillips, L. Galbany, et al. APJ, 922:205 (2021), arXiv:2106.12140.
- 66. Probing the Progenitors of SNe Ia using Circumstellar Material Interaction Signatures. P. Clark, K. Maguire, M. Bulla, L. Galbany, et al. MNRAS, 507:4367 (2021), arXiv:2107.09034.
- 65. ASASSN-15hy: an under-luminous, red 03fg-like type la supernova.

  J. Lu, C. Ashall, E. Y. Hsiao, P. Hoeflich, L. Galbany, et al. APJ, 920:107 (2021), arXiv:2107.08150.
- 64. The delay time distribution of supernovae from IFS of nearby galaxies.

  A. Castrillo, Y. Ascasibar, L. Galbany, S. F. Sánchez, et al. MNRAS, 501:3122 (2021). arXiv:2012.11958.
- 63. Supernova 2018cuf: A Type IIP supernova with a slow fall from plateau.
  Y. Dong, S. Valenti, K. A. Bostroem, D. J. Sand, J. E. Andrews, L. Galbany, et al. APJ, 906:56 (2021). arXiv:2010.09764.

- 62. The stellar metallicity distribution function of galaxies in the CALIFA survey.

  A. Mejía-Narváez, S. F. Sánchez, E. A. Lacerda, L. Carigi, L. Galbany, et al. MNRAS, 499:4838 (2020). arXiv:2009.13712.
- 61. A Template-based Approach to the Photometric Classification of SN 1991bg-like SNe in the SDSS-II SN Survey. D. Perrefort; Y. Zhang; L. Galbany, W. M. Wood-Vasey, S. González-Gaitán APJ, 904:156 (2020). arXiv:2010.09756.
- 60. SN 2017ivv: two years of evolution of a transitional Type II supernova C. P. Gutiérrez, A. Pastorello, A. Jerkstrand, L. Galbany, et al. MNRAS, 499:974 (2020). arXiv:2008.09628.
- 59. Observational constraints on the optical and NIR emission from a NS-BH binary merger candidate S190814bv  $_{\rm ENGRAVE\ coll.}$  A&A, 643:113 (2020). arXiv:2002.01950.
- 58. A measurement of the Hubble constant from Type II supernovae.

  T. de Jaeger, W. Zheng, B. E. Stahl, A. V. Filippenko, A. G. Riess, L. Galbany. MNRAS, 496:3402 (2020). arXiv:2006.03412.
- 57. Studying Type II supernovae as cosmological standard candles using the Dark Energy Survey. T. de Jaeger, L. Galbany, S. González-Gaitán, et al. MNRAS, 495:1860 (2020). arXiv:2005.09757.
- Studying the environment of AT 2018cow with MUSE.
   J. D. Lyman, L. Galbany, S. F. Sánchez, J. P. Anderson, H. Kuncarayakti. MNRAS, 495:992 (2020). arXiv:2005.02412.
- HII regions in the CALIFA survey: I. catalog presentation.
   C. Espinosa-Ponce, S. F. Sánchez, C. Morisset, J. K. Barrera, L. Galbany, et al. MNRAS, 494:1622 (2020), arXiv:2003.07865.
- 54. Discovery and Rapid Follow-up Observations of the Unusual Type II SN 2018ivc in NGC 1068.

  K. A. Bostroem, S. Valenti, D. J. Sand, J. E. Andrews, S. D. Van Dyk, L. Galbany, et al. APJ, 895:31 (2020), arXiv:1909.07304.
- 53. The AMUSING++ Compilation: I. Full Sample Characterization and Galactic-Scale Outflows Selection. C. López-Cobá, S. F. Sánchez, J. P. Anderson, I. Cruz-González, L. Galbany, et al. AJ, 159:167 (2020), arXiv:2002.09328.
- 52. Galaxies hosting an AGN: a view from the CALIFA survey.

  E. Lacerda, S. Sánchez, R. Cid Fernandes, C. López-Cobá, C. Espinosa, L. Galbany. MNRAS, 492:3073 (2020), arXiv:2001.00099.
- 51. The 50-100 pc scale parent stellar populations of SNII and limitations of single star evolution models. P. Schady, J.J. Eldridge, J. Anderson, T.-W. Chen, L. Galbany, et al. MNRAS, 490:4515 (2019), arXiv:1907.12260.
- 50. Evidence for a Chandrasekhar-mass explosion in the Ca-strong 1991bg-like type la supernova 2016hnk. L. Galbany, C. Ashall, P. Hoeflich, S. González-Gaitán, et al. A&A, 630:A76 (2019), arXiv:1904.10034.
- 49. Models and Sim. for the Photometric LSST Astronomical Time Series Classification Challenge (PLAsTiCC) R. Kessler, G. Narayan, A. Avelino, E. Bachelet, R. Biswas, .(with) L. Galbany, et al. PASP, 131:094501 (2019), arXiv:1903.11756.
- 48. The extraplanar type II supernova ASASSN-14jb in the ESO 467-G051 galaxy. N. Meza, J. L. Prieto, A. Clocchiatti, L. Galbany, et al. A&A, 629:A57 (2019), arXiv:1811.11771.
- 47. Superluminous Supernovae from the Dark Energy Survey.

  C. Angus, M. Smith, M. Sullivan, C. Inserra, P. Wiseman, .(with) L. Galbany, et al. MNRAS, 487:2215 (2019), arXiv:1812.04071.
- 46. Nature of the unusual transient AT 2018cow from HI observations of its host galaxy M. J. Michałowski, P. Kamphuis, J. Hjorth, D. A. Kann, A. de Ugarte, L. Galbany, et al. A&A, 627:106 (2019), arXiv:1902.10144.
- 45. Uncertainties in gas kinematics arising from stellar continuum modeling in IFS data: NGC 2906 with VLT/MUSE E. Bellocchi, Y. Ascasibar, L. Galbany, H. Ibarra-Medel, M. Gavilán, Á. Díaz A&A, 625:A83 (2019), arXiv:1903.06252.
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- 22. LSQ14bdq: A Type Ic super-luminous supernova with a double-peaked light curve M. Nicholl, et al., APJ LETTERS, 807:L18 (2015), arXiv:1505.01078.
- 21. Central star formation and metallicity in CALIFA interacting galaxies  $_{\rm J.K.~Barrera-Ballesteros,~et~al.,~}A\&A,~579:A45~(2015),~arXiv:1505.03153.$
- 20. Early-time light curves of Type lb/c supernovae from the SDSS-II Supernova Survey F. Taddia, et al., A&A, 574:A60 (2015), arXiv:1408.4084.
- 19. Imprints of galaxy evolution on HII regions. Memory of the past uncovered by the CALIFA survey. S.F. Sánchez, et al., A&A, 574:A47 (2015), arXiv:1409.8293.
- 18. Defining photometric peculiar type la supernovae S. González-Gaitán, et al., APJ, 795:142 (2014), arXiv:1409.4811.
- 17. The Core Collapse Supernova Rate from the SDSS-II Supernova Survey  $_{\rm M.\ Taylor,\ et\ al.,\ APJ,\ 792:135}$  (2014), arXiv:1407.0999.
- 16. CALIFA: a diameter selected sample for an Integral Field Spectroscopy galaxy survey C.J. Walcher, et al., A&A, 569:A1 (2014), arXiv:1407.2939.
- 15. Insights on the stellar mass-metallicity relation from the CALIFA survey R. M. González Delgado, et al., APJ LETTERS, 791:L16 (2014), arXiv:1407.1315.
- 14. Improved cosmological constraints from a joint analysis of the SDSS-II and SNLS supernova samples. M. Betoule, et al., A&A, 568:A22 (2014), arXiv:1401.4064.
- 13. Hubble Space Telescope and ground-based observations of the type lax supernovae SN 2005hk and SN 2008A C. Mc Cully, et al., APJ, 786:134 (2014), arXiv:1309.4457.
- 12. Host galaxy spectra and consequences for SN typing from the SDSS SN Survey. M. D. Olmstead, et al., AJ, 147:75 (2014), arXiv:1308.6818.
- 11. A characteristic oxygen abundance gradient in galaxies disks unveiled with CALIFA S.F. Sánchez, et al., A&A, 563:A49 (2014), arXiv:1311.7052.
- 10. The effect of weak lensing on distance estimates from supernovae. M. Smith, et al., APJ, 780:24 (2014), arXiv:1307.2566.
- 9. The effects of spatial resolution on Integral Field Unit Surveys at different redshift. The CALIFA perspective. D. Mast, et al., A&A, 561:129 (2014), arXiv:1311.3941.
- 8. The N2 and O3N2 indicators revisited: improved calibrations based on CALIFA and  $T_e$ -based literature data. R. A. Marino, et al., A&A, 559:114 (2013), arXiv:1307.5316.
- 7. The nature of LINER galaxies: Ubiquitous hot old stars plus rare accreting black holes. R. Singh, et al., A&A, 558:A43 (2013), arXiv:1308.4271.
- 6. Properties of type la supernovae inside rich galaxy clusters. H. S. Xavier, et al., MNRAS, 434:1443 (2013), arXiv:1304.6431.
- 5. Nebular emission and the Lyman continuum photon escape fraction in CALIFA early-type galaxies. P. Papaderos, et al., A&A LETTERS, 555:L1 (2013), arXiv:1306.2338.
- 4. Mass-Metallicity relation explored with CALIFA. I. Is there a dependence on the star-formation rate?. S. F. Sánchez, et al., A&A, 554:A58 (2013), arXiv:1304.2158.
- 3. CALIFA, the Calar Alto Legacy Integral Field Area survey: II. First public data release. B. Husemann, et al., A&A, 549:A87 (2013), arXiv:1210.8150.

- 2. A Measurement of the Rate of Type Ia Supernovae in Galaxy Clusters from the SDSS-II Supernova Survey. B. Dilday, et al., APJ, 715:1021-1035 (2010), arXiv:1003.1521.
- 1. Measurements of the Rate of Type Ia Supernovae at Redshift  $z \lesssim 0.3$  from the SDSS-II Supernova Survey. B. Dilday, et al., APJ, 713:1026-1036 (2010), arXiv:1001.4995.

#### **Thesis**

- 3. Doughnut economics and cities: a comparative approach.
  - Lluís Galbany, Bachelor thesis, Universitat Autònoma de Barcelona, Facultat d'Economia i Empresa, 6 06 2023 Supervisor: Dr. Claudio Cattaneo.
- 2. Supernova studies in the SDSS-II/SNe Survey: spectroscopy of the peculiar SN 2007qd, and photometric properties of Type-Ia supernovae as a function of the distance to the host galaxy.
  - Lluís Galbany, PhD thesis, Universitat Autònoma de Barcelona, Departament de Física, 28 10 2011
  - Supervisor: Dr. Ramon Miquel. Tribunal: Dr. Robert C. Nichol, Dr. Enrique Fernàndez, Dr. Francisco J. Castander
  - Bases de datos de tesis doctorales (Teseo), Ref. 936108
- 1. Tests of DES Charge Coupled Devices
  - Lluís Galbany, Master thesis (DEA), Universitat Autònoma de Barcelona, Departament de Física, 18 04 2008
  - Supervisor: Dr. Ramon Miquel, Dr. Manel Martínez. Trib.: Dr. Eduard Massó, Dr. Enrique Fernàndez, Dr. Francisco J. Castander BIBLIOTECA DE CIÈNCIA I TECNOLOGIA (UAB), T-53 2008 GAL

### Invited presentations and selected talks

#### (I: invited, S: seminar, C: contributed):

- Nov 2023 S: Environmental studies of supernovae with Integral Field Spectroscopy, IfA-Honolulu, HI.
- Jun 2023 I: Observations of supernovae with JWST, Constantine, Argelia.
- Apr 2023 I: Introduction to Integral Field Spectroscopy, ENGRAVE Data analysis meeting.
- Jan 2023 C: Supernova science at ICE-CSIC, CRISPisha, Cádiz.
- Sep 2022 S: A new measurement of H0 with SNe Ia in the NIR, RC SEA 2022, La Laguna.
- Jul 2022 S: A SN in the borough: IFS so SN host galaxies, NAOJ, Tokyo.
- Jul 2022 S: Integral field spectroscopy so SN host galaxies, U Kyoto, Kyoto.
- Jun 2022 C: Cosmography of Laniakea: SNe Ia, pec. vel. and DM, NOT conference, La Palma.
- May 2022 C: The metallicity of SN la progenitors, Estallidos de formación estelar meeting, Madrid.
- Apr 2022 I: Data preparation for the LSST, Danish Participation in LSST, Copenhagen, Denmark.
- Feb 2022 S: IFS of SN hosts, U. Purdue, IN.
- Feb 2022 S: Cornering H0 form SNe Ia in the NIR, ICE-CSIC.
- Feb 2022 S: Cornering H0 form SNe Ia in the NIR, IAC, Tenerife.
- Dec 2021 S: Dust, HO, SNe, King's College London.
- May 2020 C: Type Ia SNe evolution studied with IFS: the low and high-z examples, CSIC, Madrid.
- Apr 2020 S: A SN in the borough: IFS of SN hosts, NYU Abu Dhabi (POSTPONED COVID-19).
- Mar 2020 C: The Legacy Andalusian Transient IFU Network Observatory (LATINO), IAA, Granada.
- Jan 2020 C: The AMUSING survey, CRISPINHO workshop, Granada.
- Oct 2019 S: A SN in the borough: integral field spectroscopy of SN hosts, UNAM México.
- Oct 2019 C: IFS follow up of CSP SNIa host galaxies, Carnegie Obs, Passadena.
- Sep 2019 C: Dones and ToDos in IFS surveys of SN hosts, U. de Southampton, UK.
- Sep 2019 S: Constraining progenitors with integral field spectroscopy, U. de Granada.
- Sep 2019 S: Surveys of integral field spectroscopy of SN hosts, Florida State University, Tallahassee, FL.
- Aug 2019 I: Progenitors of Type la supernovae conference, Lijiang, Yunnan, China.
- Jul 2019 C: Analyzing Integral field spectroscopy data CRISP workshop, Lisbon, Portugal.
- Feb 2019 C: A 1991bg-like SNIa 2016hnk, Carnegie SN Project meeting, Saint George Island, FL.
- Dec 2018 C: Testing WFIRST simulations with SNEMO, Lawrence Berkeley National Lab, CA.
- Nov 2018 S: SN Ia local environments with IFS, University of Pennsylvania, Philadelphia PA.
- Nov 2018 S: SN 2016hnk, a Ca-rich 91bg-like SN Ia with a light echo, ESO, Santiago, Chile.
- Nov 2018 C: The local environment of type la SNe as seen with IFS, Bariloche, Argentina.
- Jul 2018 C: A Ca-rich faint 91bg-like type Ia SN, Institute for Astrophysics, Honolulu HI.
- Jul 2018 C: CSP SN Ia environments with IFS. Carnegie SN Project meeting, IfA, Honolulu HI.
- Jul 2018 C: A Ca-rich faint 91bg-like type la SN, Lorentz center, Leiden.
- Jun 2018 S: Inferring SN progenitor properties with J-PLUS, CEFCA, Teruel.
- Jun 2018 S: Using the environment to infer SN progenitor properties, U. Zaragoza.

- Jun 2018 S: Using the environment to infer SN progenitor properties, U. Barcelona.
- Jun 2018 S: The Pmas/ppak Integral-field SN hosts COmpilation (PISCO), IAA Granada.
- Jun 2018 S: Using the environment to infer SN progenitor properties, U. Autònoma de Barcelona.
- Dec 2017 S: The Pmas/ppak Integral-field SN hosts COmpilation (PISCO), CfA Harvard MA.
- Oct 2017 C: The local environment of type Ia SNe as seen with IFS, Carnegie Observatories, Pasadena.
- Mar 2017 S: The All-weather MUse SN Integral field Nearby Galaxies survey, U. Oulu, Finland.
- Mar 2017 S: PISCO and AMUSING: IFS of SN environments, University of Turku, Finland.
- Feb 2017 S: Integral field spectroscopy of SN environments, University of Toronto, Canada.
- Feb 2017 S: What's there? Integral field spectroscopy to study SN environments, U. Pittsburgh PA.
- Nov 2016 I: The All-weather MUse AN Integral field Nearby Galaxies survey, IFS school UAM, Madrid.
- Nov 2016 I: SN remnant dominated regions and SN rates with IFS, IFS school UAM, Madrid.
- Nov 2016 C: Spectrophot. SNII template: A SiFTO fitter for SNeII. LSST SN workshop, Pittsburgh.
- Aug 2016 C: SN environmental studies through IFS. SNe through the ages:, Easter Island, Chile.
- Jul 2016 C: SN environmental studies through IIFS. XII RC SEA 2016, Bilbo, Spain.
- Jul 2016 C: The All-weather MUse SN Int.-field Nearby Galaxies (AMUSING). EWASS 2016, Athens, Greece.
- Jun 2016 C: Standardization of SN II with statistical methods. Meeting on Fundamental Cosmology, Barcelona.
- Jun 2016 S: Environmental studies of SNe. CIEMAT, Madrid, Spain.
- May 2016 C: Statistical methods in SN II light-curves. South American Supernovae 2016, La Plata, Argentina.
- Mar 2016 C: The local environment of SNe as seen with IFS. SOCHIAS 2016, Antofagasta, Chile.
- Jun 2015 C: Nearby supernova host galaxies from the CALIFA survey. EWASS 2015, La Laguna, Spain.
- Jun 2015 C: The local environment of SNe., IX PESSTO meeting, Paris, France.
- May 2015 S: Characterizing SN host galaxies with IFS. European Southern Observatory, Santiago, Chile.
- Apr 2015 C: PCA of type II SN light-curves. South American Supernovae 2015, Santiago, Chile.
- Apr 2015 C: SN studies with IFS: the CALIFA contribution. CALIFA Busy Week, Firenze, Italy.
- Sep 2014 S: Characterizing SN host galaxies with IFS. Universidad de Guanajuato, Mexico.
- Aug 2014 I: What can IFS shine on SN progenitors. I: Studying SN environments with IFS. Guillermo Haro Advanced School on IFS Techniques and Analysis, INAOE, Puebla, Mexico.
- May 2014 S: Integral Field Spectroscopy of nearby supernova host galaxies, IEEC-UAB.
- Nov 2013 C: Studying SNe environment with CALIFA Survey. XIV LARIM, Florianópolis, Brasil.
- Jul 2013 C: Integral Field Unit spectroscopy of supernova host galaxies. XXIII ENAA, CAAUL, Portugal.
- Apr 2013 S: IFU spectroscopy of SN host galaxies. Universidad de Chile, Santiago, Chile.
- Apr 2013 C: IFU spectroscopy of SN host galaxies. CALIFA 5th Busy Week, AIP, Potsdam, Germany.
- Jan 2013 S: Using the environment to understand SNe properties. CIEMAT, Madrid, Spain.
- Nov 2012 C: Studying CCSNe environment with CALIFA Survey. CALIFA 4th Busy Week, IAA, Granada.
- Aug 2012 C: *Type-la SNe standarization accounting for the environment*. Modern Cosmology: Early Universe, CMB and LSS, Benasque Center for Science, Benasque, Spain.
- Oct 2010 C: Type-la SDSS-II/SNe properties as a function of the distance to their host galaxies. SDSS-II/SN Collaboration Meeting, Argonne National Laboratory, IL, USA.

### Participation in collaborations and responsibilities

- 2023 present Member of the Nancy Roman PIT for Supernova Cosmology (PI: D. Scolnic).
- 2023 present Member of the La Silla Southern Supernova Survey (LS4).

Seat in the Collaboration Council.

- 2021 present Sponsored member of the Dark Energy Spectroscopic Instrument (DESI).
- 2018 present Member of the Electro-magnetic counterparts of GW at the VLT (ENGRAVE).

MUSE instrument scientist (with J. Lyman).

- 2017 2023 Member of the WFIRST SIT for SNIa cosmology (PI: S. Perlmutter).
- 2016 present Member of the J-PLUS collaboration.

Leading the SN environments working group.

2016 - present Full member of the LSST Dark Energy Science Collaboration (DESC).

Served in the Publication Board committee (2019-2021). Served as a co-chair of the Speakers Bureau (2021-2023).

Serving in the Collaboration Council (2023-present).

- 2016 present External collaborator of the Hyper Suprime Cam Survey (HSCS) for SNe II and SLSNe.
  - 2016 2021 Member (until 2019; EC since then) of the Sloan Digital Sky Survey IV (SDSS-IV).

PI of an ancillary program in MaNGA to observe SN host galaxies.

2015 - present	Member (EC until 2021) of the Dark Energy Survey (DES). Leading the SNII working group.
2015 - 2016	Member of the Chilean Scientific Coordination Committee for the LSST.
2013 - present	Member of Public ESO Spectroscopic Survey of Transient Objects (PESSTO $\rightarrow$ ePESSTO+). Serving as the ePESSTO+ Ombudsperson, and in the Target And Alert (TAT) committee. PI of the <i>SN environments</i> and the <i>SNIa cosmology in the NIR</i> science groups.
2011 - 2017	Associate member of the Calar Alto Legacy Integral Field Area Survey (CALIFA). Responsible of the external ancillary data catalogues.
2008 - 2014	External member of the Sloan Digital Sky Survey II - Supernova Survey (SDSS-II/SNe).
2006 - 2011	Participant member of the Dark Energy Survey (DES)

— Only those as a Principal investigator (PI):

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Observing experience
               Hubble Space Telescope (HST)
                                 2.4m / WFC3
                                                Cycle 30. 17179, 232 orbits (Service mode; SM).
                                                Cycle 29. 16741, 218 orbits (Service mode; SM).
             Cerro Paranal Observatory (CPO)
                            8.1m UT4 / MUSE
                                                20B. 106.2104.001, 53 hours (SM).
                                                17A. 099.D-0022(A), 45 hours (SM).
                                                16B. 098.D-0115(A), 99 hours (SM).
                                                14B. 60.A-9329(A), 4 hours (SM).
                            8.1m UT1 / KMOS
                                                24A. 113.26AP, 3 hours (SM).
                                                22A. 0109.22Y8, 3 hours (SM).
                                                19B. 0104.D-0498(A), 36 hours (SM).
                                                22A. 0109.22WW.001, 66 hours (SM).
                           8.1m UT4 / HAWKI
            Las Campanas Observatory (LCO)
                   6.5m Baade Telescope / FIRE
                                                16B. CN2016B-17, 2 nights (Visitor mode; VM).
                   6.5m Clay Telescope / LDSS3
                                                16B. CN2016B-16, 4 nights (VM).
Observatorio Roque de Los Muchachos (ORM)
    10.4m Gran Telescopio Canarias / HIPERCAM
                                                23B-DDT. GTC09, 1 hour.
          10.4m Gran Telescopio Canarias / EMIR
                                                24A. GTCMULTIPLE2B, 16 hours.
                                                23B. GTCMULTIPLE2D, 10 hours.
                                                23B. GTCMULTIPLE4B, 25 hours.
                                                23A. 3-GTC5-B, 10 hours.
                                                22B. 4-MULTIPLE-2, 10 hours.
                                                22A. 49-MULTIPLE-2, 10 hours.
                                                21A. 57-GTC36, 18 hours.
                                                20B. 5-GTC3, 20 hours.
        10.4m Gran Telescopio Canarias / OSIRIS
                                                24A. GTCMULTIPLE2B, 8 hours.
                                                23B. GTCMULTIPLE2D, 14 hours.
                                                23B. GTCMULTIPLE4B, 20 hours.
                                                23A. 3-GTC4-A, 14 hours.
                                                22B. 4-MULTIPLE-2, 8 hours.
                                                22A. 49-MULTIPLE-2, 14 hours.
                                                20B. 11-GTC9, 6 hours (ToO).
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20A. 76-GTC52, 10 hours (ToO). 23B. —, 6h (SM). 21B. SW2021a13, 16h (SM).

4.5m William Herschel Telescope / WEAVE

4.5m William Herschel Telescope / PFQHY

21B. SW2021a26, 28h (SM).

4.5m William Herschel Telescope / ACAM-LIRIS

20A. 150-WHT5, 4 nights. 24A. X-NOTX, 6 nights.

2.5m Nordic Optical Telescope / NOTCam

23B. X-NOTX, 6 nights.

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23A. 5-NOT1, 6 nights.
                                                      22A. 38-NOT2, 6 nights.
                                                      21B. 74-NOT10, 6 nights.
                                                      21A. 58-NOT4, 6 nights.
                                                      20B. 6-NOT2-A, 6 nights.
                                                      24A. LT11, 20 hours.
                     2.0m Liverpool Telescope / LIRIS
                          Gemini Observatory (GO)
                              8.2m G-North / GMOS
                                                      18B. NOAO-2018B-0060, 10 hours (SM).
                                                      18A. NOAO-2018A-0125, 1.1 hours (SM).
                                                      18A. NOAO-2018A-0040, 10 hours (SM).
                              8.2m G-South / GMOS
                                                      15B. GS-2015B-Q-8, 10 hours (SM).
  Cerro Tololo Inter-American Observatory (CTIO)
                1.3m SMARTS telescope / ANDICAM
                                                      19A. 2019A-0081, 42 hours (SM).
                                                      18B. 2018B-0016, 42 hours (SM).
                                                      18A. 2018A-0047, 30 hours (SM).
Centro Astronómico Hispano de Andalucía (CAHA)
                       3.5m telescope / OMEGA2000
                                                      24A. 24A-3.5-002, 4 nights (VM).
                                                      23B. 23B-3.5-005, 4 nights (VM).
                                                      23A. 23A-3.5-004, 4 nights (VM).
                                                      22B. 22B-3.5-008, 3 nights (VM).
                                                      22A. 22A-3.5-002, 4 nights (VM).
                                                      21B. 21B-3.5-003, 4 nights (VM).
                                                      21A. F21-3.5-003, 4 nights (SM).
                                                      20B. H20-3.5-002, 4 nights (SM).
                        3.5m telescope / PMAS-Ppak
                                                      24A. 24A-3.5-004, 4 nights (VM).
                                                      23B. 23B-3.5-004, 4 nights (VM).
                                                      23A. 23A-3.5-003, 4 nights (VM).
                                                      22B. 22B-3.5-007, 4 nights (VM).
                                                      22A. 22A-3.5-011, 5 nights (VM).
                                                      20B. H20-3.5-001, 4 nights (VM).
                                                      20A. F20-3.5-008, 5 nights (VM).
                                                      18B. H18-3.5-008, 6 nights (VM).
                                                      18A. F18-3.5-001, 3 nights (SM).
                                                      17B. H17-3.5-001, 2 nights (SM).
                                                      17A. F17-3.5-001, 3 nights (SM).
                                                      16B. H16-3.5-012, 2 nights (SM).
                                                      16A. F16-3.5-006, 5 nights (SM).
                                                      15B. H15-3.5-004, 4 nights (VM).
       Astronomical Australian Observatory (AAO)
                       4.2m AAT telescope / KOALA
                                                      18A. A/2018A/19, 11 nights (VM).
    Observatorio Astroómico de Javalambre (OAJ)
                            0.8m telescope / T80Cam
                                                      21A. 2000182, 44.24 hours (SM).
                                                      20B. 2000177, 47.52 hours (SM).
                                                      20A. 1900165, 47.52 hours (SM).
                                                      19B. 1900154, 47.52 hours (SM).
                                                      19A. 1800146, 46.9 hours (SM).
      Observatori Astronòmic del Montec (OAdM)
                           0.8m telescope / T80Cam
                                                      23A-24B. p477, 280 hours (remote).
                                                      22B. p425, 45 hours (remote).
                                                      22A. p389, 45 hours (remote).
                                                      21B. p351, 45 hours (remote).
                  Apache Point Observatory (APO)
                        2.5m SDSS telescope / BOSS
                                                      17B. MaNGA Ancillary program, 30 objects (SM).
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### Organization of scientific meetings and seminar series

- Jul 2025 Co-chair of the Xth Summer School of ICE on cosmology.
- Sep 2024 SOC member of the LSST in Europe 6 conference, La Palma, Sep 6th to 10th.
- Jul 2024 SOC member of the Transients session in the SEA 2024, Granada, Jul 8th to 12th.
- Jul 2024 SOC member of the Transient hosts in the 2020ies EAS 2024 special session, Padova, Jul 1st to 5th.
- May 2024 Organizer of The Dark Energy Survey Collaboration Meeting, S'Agaró, May 27th to 31st.
- Jun 2022 Organizer of the extended Public ESO Spectroscopic Survey of Transient Objects + (ePESSTO+) meeting, Barcelona, Jun 20th to 22nd.
- May 2022 LOC/SOC member of the 16th Iberian Cosmology (IberiCOS) 2022 meeting, May 4-6.
- Sep 2021 SOC member of the Encontro Nacional de Astronomia e Astrofisica (ENAA) 2021, Sep 8-10.
- Jul 2020 SOC member of the Dark Energy Science Collaboration (DESC) virtual meeting, Jul 20-24.
- Jun 2020 Chair of the special session Supernova host environments at the EAS 2020, Leiden, NL.
- Mar 2020 SOC member of the *Public Surveys and new instrumentation for Calar Alto Observatory* workshop, Granada, Mar 12-13.
- Jan 2020 Organizer of the workshop *CRISPINHO: Correcting reddening intelligently for cosmological supernova probes*, Granada, Jan 27-31.
- Sep 2019 Organizer of the workshop *The future of SN host galaxies studies II*, Southampton, UK, Sep 23-25.
- Jan 2019 Organizer of the workshop The future of SN host galaxies studies, Pittsburgh, USA, Jan 22-24.
- Apr 2018 Organizer of the workshop New advances in NIR SNIa science, Pittsburgh, USA, April 11-13.
- Mar 2018 Organizer of the workshop SN II cosmology in the LSST, Pittsburgh, USA, March 5-9.
- 2017 2019 Organizer of the Astro Seminars at the Department of Physics and Astronomy U. Pittsburgh.
  - Nov 2016 Organizer of the workshop *Preparing for supernova science in the LSST era: a kick-off workshop*, Pittsburgh, USA, November 16-18.
  - Nov 2016 LOC member of the DEC LSST Hack Week, Pittsburgh, US, November 7-11.
  - Aug 2016 LOC member of the conference Supernovae through the ages: understanding the past to prepare for the future, Easter Island, Chile, August 9-13. Funding: several sources including ESO-Chile, AURA, Carnegie observatories, MAS, and CASSACA.
  - Aug 2016 Organizer of the workshop *SIDH: Supernova is in da house*, Santiago, Chile, August 1-5. Funding: \$200,000 CLP from the Millennium Institute for Astrophysics (MAS).
- 2014 2015 Organizer of 'Supernova Journal Club' seminar series (DAS).
- 2009 2010 Organizer of PhD students 'Thursday's Meeting seminar series (IFAE).

#### Research visits

Nov 2023 Institute for Astronomy (IfA). U. Hawai'i.

Supernova studies with Integral Field Spectroscopy

Collaborator: Prof. Ben Shappee.

Oct 2022 University of Aarhus, Denmark

Status and development of the FLOWS project.

Collaborator: Prof. Maximillian Stritzinger.

Apr 2023 National Central University (NCU). Taiwan.

Type la supernova photospheric velocities and their environment

Collaborators: Prof. Yen-Chen Pan.

Oct 2022 Institute for Astronomy (IfA). U. Hawai'i.

Type la supernova peculiar velocities and  $\sigma_8$ .

Collaborators: Prof. Ben Shappee, and Dr. Thomas de Jaeger.

Jul 2022 National Astronomical Observatory of Japan (NAOJ). Under the NAOJ visitor program.

Type IIn supernova environments and relation to SN properties.

Collaborator: Dr. Takashi Moriya.

Mar 2022 University of Aarhus, Denmark

Status and development of the FLOWS project.

Collaborator: Prof. Maximillian Stritzinger.

#### Oct 2019 Instituto de Astronomía, UNAM, Mexico City

Quality control pipeline for the AMUSING survey.

Collaborator: Prof. Sebastián Sánchez.

#### Oct 2019 Carnegie Observatories, Pasadena

Preparation of the next stage of the Carnegie Supernova Project (CSP).

Collaborator: Dr. Christopher Burns.

#### Jul 2019 Universidade de Lisboa, Portugal.

Correcting reddening intelligently for cosmological supernova probes (CRISP).

Collaborator: Dr. Santiago González-Gaitán.

#### Nov 2018 European Southern Observatory (ESO), Chile.

Executive meeting for the AMUSING survey.

Collaborator: Dr. Joseph Anderson.

#### Oct 2018 University of Southampton, UK.

SN Ia environments with IFS.

Collaborators: Dr. Matthew Smith and Prof. Mark Sullivan.

#### May 2018 Macquaire University, AUS.

IFS observations with KOALA.

Collaborator: Dr. Ángel R. López-Sánchez.

#### Feb 2018 University of Berkeley, US.

Type II SN cosmology in the Dark Energy Survey.

Collaborator: Dr. Thomas de Jaeger.

#### Jun 2017 Centro Inv. Energéticas, Medioambientales y Tecnológicas (CIEMAT), SPAIN.

Intermediate redshift type la supernova host galaxies.

Collaborator: Dra. Mercedes Mollá

#### Mar 2017 University of Turku, FINLAND. Under the FINCA visitor program.

Integral Field Spectroscopy of SN host galaxies.

Collaborator: Dr. Hanindyo Kuncarayakti, Dr. Seppo Matila.

#### Feb 2017 University of Berkeley, US.

Type II supernova cosmology.

Collaborator: Dr. Thomas de Jaeger.

#### Jun 2016 Centro Inv. Energéticas, Medioambientales y Tecnológicas (CIEMAT), SPAIN.

Metallicity dependence on SN la luminosity.

Collaborator: Dra. Mercedes Mollá

#### Feb 2016 University of Pittsburgh, US.

Type Ia supernova cosmology in the NIR.

Collaborators: Dr. Michael Wood-Vasey and Dr. Carles Badenes.

#### Jun 2015 Instituto de Astrofísica de Canarias, SPAIN.

Spectroscopic characterization of SN 2014J.

Collaborators: Dr. Jonay I. González

#### Jun 2014 University of Southampton & Institute of Cosmology and Gravitation, Portsmouth, UK.

Supernova science with DECam.

Collaborators: Dr. Francisco Förster, Dr. Mark Sullivan, Dr. Robert Nichol

#### Apr 2013 Departamento de Astronomía, Universidad de Chile, CHILE.

Core-collapse and type Ia SNe environmental studies.

Collaborators: Dr. Joseph Anderson

#### Jan 2013 Centro Inv. Energéticas, Medioambientales y Tecnológicas (CIEMAT), SPAIN.

Type Ia SN standardization accounting for host galaxy metallicity.

Collaborator: Dra. Mercedes Mollá

#### Feb 2007 Fermi National Laboratory (FNAL), US

Studies related to DES CCD characterization.

Supervisors: Dra. Brenna Flaugher and Dr. Juan Estrada

#### Press and outreach

18/02/2024 Outreach activity at the Barcelona Museum of Contemporary Art (Link) 28/06/2023 Participation in the Enciclopedia.cat Divulcat blog (Link). 13/06/2023 Outreach talk about SNe and cosmology at the Agrupación Astronómica de Madrid (Link). 13/06/2023 Interview in La esfera celeste Astronomy blog (Link). 08/06/2023 Premiere of La veu còsmica, podcast of poetry, music and science (Funded by FCRI; Link). 30/05/2023 Telescope observation of the night sky at the Ermita de Sant Hilari, Cardedeu. 26/05/2023 Outreach talk about DESI at the Granollers planetarium (Link). 12/05/2023 Press release on a MNRAS article Multiwavelength observations of the extraordinary accretion event AT2021lwx, (ICE, IEEC). 26/04/2023 Outreach talk within the Cicle d'astronomia of the Centre Excursionista de Cardedeu. 25/04/2023 Outreach talk for the Aula d'Extensió Universitària del VO (AGEVO) at the Museu de Granollers. 29/11/2022 Ciència amb tirador, short public talks in a bar. Third session at Bar Anònims, Granollers (Link). 17/11/2022 Nit de la Recerca, telescope observations at UAB. 27/10/2022 Outreach talk at the Agrupació Astronòmica de Barcelona (ASTER). 14/09/2022 Ciència amb tirador, short public talks in a bar. Second session at Bar Anònims, Granollers (Link). 19/05/2022 Interview at Vallès Oriental TV, about astronomy and the city of Granollers (Link). 18/05/2022 Ciència amb tirador, short public talks in a bar. First session at Bar Anònims, Granollers (Link). 28/04/2022 Amb G de Granollers interview for the strategic plan of the city (Link). 17/02/2022 Press release on a Nature Astronomy article SN 2018aoz, the earliest detection of a type Ia supernova to date, (ICE, IEEC, CSIC). 12/12/2021 Interview in La esfera celeste Astronomy blog (Link). Outreach talk at l'Alzina primary school, Molins de Rei. 24/11/2021 18/03/2021 Two outreach talks at the mental health unit of the juvenile detention center Els Til·lers. 12/11/2020 Interview in La esfera celeste Astronomy blog (Link). 14/11/2019 Outreach talk at José Hurtado Primary school, Granada. "What is a star?" (IAU100). Participation in "Semana de la Ciencia" at UGR. Speaker in Stand 5 "Stellar evolution" (Link). 08/11/2019 23/06/2018 "Perfils", interview in the online newspaper Nació digital (in Catalan, Nació Digital). 20/06/2018 Interview in the La Xarxa television (in Catalan, Vallès Oriental TV). 30/05/2018 'Career day' at the Environmental Charter School, outreach talk. Pittsburgh PA. 18/03/2016 "Supernovas, explosiones en el universo", outreach talk at the Colegio Su Santidad Juan XXIII, San Joaquín, Chile (in Spanish, Día de astronomia, CONICYT). 18/03/2016 "Supernovas, explosiones en el universo", outreach talk at the Colegio Malaquias Concha, La Granja, Chile (in Spanish, Día de astronomia, CONICYT). "Supernovas, explosiones estelares", outreach talk at the Liceo Bicentenario Zapallar high school, 01/12/2015 Curicó, Chile (in Spanish, http://www.astrofisica.cl/?p=4904). 30/11/2015 "Supernovas, explosiones estelares", outreach talk at the Liceo Complejo Educacional Javiera Carrera high school, Talca, Chile (in Spanish, http://www.astrofisica.cl/?p=4904) 13/04/2015 "Qué son los meteoritos?", outreach talk at the Pintacuentos primary school, Las Condes, Chile (in Spanish, http://www.astrofisica.cl/?p=4287). 03/02/2014 "Esclata la Supernova més propera a la Terra des de 1604", press article in the online newspaper Nació digital (in Catalan, Nació Digital).

"Un granollerí que estudia l'Univers a Santiago de Xile", short interview for the La Xarxa television

"Supernovas, la llave del lado oscuro del Universo", outreach talk at the llatargi Astronomical

# Languages

(in Catalan, Vallès Oriental TV).

Catalan Native speaker
Spanish Native speaker
English CEFR C1
Portuguese CEFR A2.

10/02/2014

28/12/2012

# Astronomical society membership

Association, Oñati, Spain (in Spanish, El Correo).

2019 - present European Astronomical Society (EAS)
 2016 - present Sociedad Española de Astronomía (SEA)
 2015 - 2016 Sociedad Chilena de Astronomía (SOCHIAS)

#### Other merits

- Regular reviewer for journals: ApJL, ApJ & AJ (US), MNRAS (UK), JCAP (UK/IT), Galaxies (Switzerland).
- Mar 2023 Reviewer for the Spanish National Research Agency (AEI).
- Dec 2022 i3 credential issued by the Spanish Ministry of Universities.
- Nov 2022 External referee for the Polish National Science Centre.
- Nov 2022 Member of the Tribunal in João Gonçalves (U. Lisboa) Master thesis defense.
- Jan 2022 Member of the ICE postdoctoral Fellowship committee.
- Oct 21-Dec 23 Treasurer of the Social and Solidarity Economy consumers association La Magrana Vallesana.
  - May 2021 Reviewer for the Hubble Space Telescope Cycle 29 proposals.
  - 2020-2021 ESO Observing Programmes Committee (OPC) Panel member for periods P106, P108 (P107 cancelled), and P109.
  - Apr 2020 *Profesor Contratado Doctor* credential awarded from the Agencia Nacional de Evaluación de la Calidad y Acreditación (ANECA).
  - Oct 2019 Reviewer for the Hubble Space Telescope Cycles 26 and 27 Mid-cycle proposals.
  - May 2019 CIRTL course on Diversity in the College Classroom.
  - Apr 2019 Lecturer (*Lector*) credential issued by the Agència per a la Qualitat Universitària (AQU) de Catalunya.
  - Dec 2018 Associate certification from the Center for the Integration of Research, Teaching, and Learning (CIRTL), University of Pittsburgh.
  - 2017 DDT External reviewer for the Spanish Time Allocation Committee (CAT) of the Instituto de Astrofísica de Canarias (IAC).
    - Jul 2016 Member of the Tribunal in Manuel Moreno-Raya PhD thesis defense.
- 2016A semester External reviewer for the Spanish Time Allocation Committee (CAT) of the Instituto de Astrofísica de Canarias (IAC).
  - Dec 2015 Tenured assistant professor (*Recerca*) credential issued by the Agència per a la Qualitat Universitària (AQU) de Catalunya.
  - Jun 2011 Training Program for Higher Education Teachers (FDES-UAB).
  - Jun 2010 Corrector of University Access Exams (PAU).
    - 2008 Radiological protection program at UTPR (UAB).