Dr. Daniel Anglés-Alcázar

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Appointments

2019–	Assistant Professor of Physics, University of Connecticut.
2022–	Guest Researcher, Flatiron Institute.
2019–2022	Associate Research Scientist, Flatiron Institute.
2017–2019	Flatiron Research Fellow, Flatiron Institute.
2014–2017	CIERA Postdoctoral Fellow, Northwestern University.

Education

2009 – 2014	Ph.D. in Physics. University of Arizona. Thesis title: *Modeling the Evolution of Galaxies and Massive Black Holes Across Cosmic Time.* Advisors: Romeel Davé and Feryal Özel.
2007 – 2009	M.S. in Physics. University of Puerto Rico. Thesis title: *Study of the Earliest Stages of Galactic Star Formation: BLAST Survey of the Vela Molecular Ridge.* Advisor: Luca Olmi.
2002 – 2007	B.S. (Licenciatura) in Physics. Universidad Autónoma de Madrid.

Fellowships and Awards

2025	Sloan Research Fellowship ($75,000). Alfred P. Sloan Foundation.
2023	Cottrell Scholar Award ($100,000). Research Corporation for Science Advancement.
2017	Flatiron Fellowship ($300,000). Center for Computational Astrophysics, Simons Foundation.
2015	Presentation Award, Third Annual NUPF Research Symposium, Northwestern University.
2014	CIERA Fellowship ($240,000). Center for Interdisciplinary Exploration and Research in Astrophysics, Northwestern University.
2008	Fellowship for Exceptional Academics and Merit ($25,000). University of Puerto Rico.
2008	NASA Space Grant Summer Internship. University of Puerto Rico.
2007	NASA IDEAS-ER Awardee. University of Puerto Rico.
2005	Center of Studies for Latin America Scholarship. Universidad Autónoma de Madrid.
2003	Scholarship for Outstanding Academic Performance. Comunidad Autónoma de Madrid.

Teaching and Mentoring

Graduate student mentoring: Sagan Sutherland (UConn, 2023–), Xavier Sims (UConn, 2021–), Niranjan Roy (UConn, 2021–), Matt Gebhardt (UConn, 2020–), Jonathan Mercedes-Feliz (UConn, 2020–2024), Ana Maria Delgado (Harvard CfA, 2020–2023), Viraj Pandya (UC Santa Cruz, 2018–2020), Rachel Cochrane (Edinburgh, 2018–2019), Joshua Borrow (Durham, 2018–2019), Tyler Parsotan (Oregon State, 2018), Zach Hafen (CIERA, 2014–2019).

Undergraduate student mentoring: Aanchal Poddar (UConn, 2025–), Pragyan Yadav (UConn, 2024–), Jose Cevallos (UConn, 2023–2024), Grace Farrell (UConn, 2023–), Rachel Cleveland (UConn, 2022–), Daniel Baker (UConn, 2022–2024), Aina Nambena (UConn, 2021–2024), Amanda Zettler (UConn, 2021–2022), Sofya Levitina (UConn, 2020–2025), Joyce Caliendo (UConn, 2020–2021), Ana Maria Delgado (CUNY, 2020), Gus Beane (UPenn, 2018–2019), Aliya Babul (Toronto, 2016–2017).

High school student mentoring: Autumn Pepper Rhodes (UConn Young Scholars Senior Summit, Summer 2022).

Graduate Advisory/General Exam/Proposal Defense/Ph.D. Dissertation Committees: Kelcey Davis (UConn, 2024-), Bren Backhaus (UConn, 2024), Anton Shcherbakov (UConn, 2024), Vaishakhi Moningi (UConn, 2024), Elias Oakes (UConn, 2023–), Megan Davis (UConn, 2023–), Dani Lipman (UConn, 2023–), Logan Fries (UConn, 2023–), Jennifer Wallace (UConn, 2022–), Andrew Casey-Clyde (UConn, 2021–), Hugh Sharp (UConn, 2021–),

Douglas Rennehan (UVic, 2022), Mohammad Akhshik (UConn, 2022), Gloria Fonseca Alvarez (UConn, 2021–2022), Yasaman Homayouni (UConn, 2020–2021).

Institutional mentoring programs:

2023–	Center for Access and Postsecondary Success (CAPS) Summer Program, UConn.
2022–	Mentor for McNair Scholars Program, UConn.
2022–2023	IDEA Grant project Mentor, UConn.
2022	Mentor for Jack Kent Cooke Scholars program, UConn.
2018–2019	Lecturer for AstroCom NYC program for undergraduate students, AMNH.
2018	Mentor for the Kavli Summer Program in Astrophysics, Flatiron Institute.

Graduate and undergraduate teaching:

2022–2024	Introduction to Computational Physics (PHYS 5350). University of Connecticut.
2022	Independent study (UNIV 1999). University of Connecticut.
2021–2024	Research Thesis in Physics (PHYS 4096W). University of Connecticut.
2021–2023	Advanced Methods in Astrophysics (PHYS 4740/6740). University of Connecticut.
2020–2024	Research in Physics (PHYS 5020). University of Connecticut.
2020–2024	Undergraduate Research (PHYS 3989). University of Connecticut.
2020–2025	Introductory Astronomy with Laboratory (PHYS 1025Q). University of Connecticut.
2010–2011	Teaching Assistant. Laboratory of Classical Mechanics. University of Arizona.
2009–2010	Teaching Assistant. Laboratory of Electricity and Magnetism. University of Arizona.
2007–2008	Teaching Assistant. Laboratory of General Physics. University of Puerto Rico.
2006–2007	Teaching Assistant. Tutorial Sessions of General Physics. University of Puerto Rico.

Grants, Observing Proposals, and Supercomputing Time Awarded

2025–2027	Sloan Research Fellowship in Physics: *Pushing the frontiers of galaxy evolution modeling*; \$75,000. PI Anglés-Alcázar.
2024–2027	JWST Cycle 3 Program AR-05366: *Maximizing the value of extragalactic JWST surveys using realistic, highly-resolved simulations*; \$124,942. Admin PI Anglés-Alcázar; Science PI Cochrane.
2024–2027	NASA Astrophysics Theory Program ATP23-0156: *Multi-scale cosmological simulations of active galactic nuclei fueling and feedback*; \$493,801. PI Anglés-Alcázar.
2024–2027	Frontera Large-Scale Community Partnerships (LSCP) Allocation (AST21010): *LSCP Renewal: Simulating Galaxies, Stars, and Black Holes Across Scales: The Feedback In Realistic Environments (FIRE) Project*; 800,000 Node Hours. PI Hopkins; Co-PI Anglés-Alcázar.
2024–2025	NSF-ACCESS TRA240018: *ACCESS Training: Introducing Computational Physics in a Supercomputing Environment*; 200,000 CPU-hours. PI Anglés-Alcázar.
2023–2026	JWST Cycle 2 Program AR-04357: *Interpreting JWST surveys with spatially-resolved mock line emission spectra from cosmological hyper-refinement simulations*; \$260,626. PI Anglés-Alcázar.
2023–2026	Cottrell Scholar Award CS-CSA-2023-028: *Multi-scale physics of supermassive black hole growth and feedback in galaxies and fundamental implications in cosmology*; \$100,000. PI Anglés-Alcázar.
2022–2025	JWST Cycle 1 Program GO 1712: *JWST beholds the multiple-merger assembly of the most luminous quasar*, 23.3 Primary Spacecraft Hours; \$268,621 (UConn portion: \$69,637). PI Diaz-Santos; Co-I Anglés-Alcázar.
2022–2024	Simons Foundation Award CCA-1018464: *UConn-CCA Collaboration on Computational Galaxy Formation*; \$67,892. PI Anglés-Alcázar.
2022–2023	NSF-XSEDE TRA220027: *Introduction to Computational Physics in a Supercomputing Environment*; 50,000 CPU-hours. PI Anglés-Alcázar.
2021–2024	NSF AST-2108944: *Collaborative Research: CDS&E: Cosmology and Astrophysics with MachinE Learning Simulations (CAMELS) to maximize the science return of next generation cosmological experiments*; \$933,932 (UConn portion: \$361,091). Lead PI Anglés-Alcázar.

2021–2022 Chandra Cycle 23 (CXC 23700161): *Interpreting Chandra surveys with cosmological hyper-refinement simulations of AGN fueling and feedback*; $99,995. PI Anglés-Alcázar.

2021–2024 Frontera Large-Scale Community Partnerships (LSCP) Allocation (AST21010): *Simulating New Physics on Cosmological Scales: The Feedback In Realistic Environments (FIRE) Project*; 900,000 Node Hours. PI Hopkins; Co-PI Anglés-Alcázar.

2021–2021 NASA Connecticut Space Grant Consortium (CTSGC): *Improving supermassive black hole accretion models with cosmological hyper-refinement simulations*; $8,000. PI Anglés-Alcázar. Graduate Fellow: Jonathan Mercedes-Feliz.

2020–2023 NSF AST-2009687: *The Interscale Galactic NucleI Simulations (IGNIS): Hyper-refined black hole growth and feedback in cosmological environments*; $309,680. PI Anglés-Alcázar.

2020–2021 Simons Foundation Research Grant; $20,000. PI Anglés-Alcázar.

2018–2019 Blue Waters Supercomputing Allocation: *Simulating the Co-Evolution of Massive Galaxies and their Black Holes*; 6,800,000 CPU-hours. PI Faucher-Giguère; Co-I Anglés-Alcázar.

2018–2019 DiRAC 10th Call Allocation: *Simba: New cosmological simulations to study galaxy-black hole co-evolution*; 9,000,000 CPU-hours on Cosma-Durham. PI Davé; Co-I Anglés-Alcázar.

2018–2019 OSIRIS/Keck Observatory: *Tests of Black Hole Accretion Rate Prescriptions*; 3 nights. PI Medling; Collaborator Anglés-Alcázar.

2017–2018 PRACE Call 15: *FIREbox: Simulated Galaxies with Resolved Structure and Multiphase Interstellar Medium in Cosmological Volumes*; 29,900,000 CPU-hours on MareNostrum. PI Feldmann; Co-I Anglés-Alcázar.

2017–2018 Blue Waters Supercomputing Allocation: *Pushing the Dynamic Range: Simulating the Co-Evolution of Galaxies and Black Holes*; 14,560,000 CPU-hours. PI Faucher-Giguère; Co-I Anglés-Alcázar.

2017–2018 ALMA Cycle 5 Proposal #2017.1.01109.S: *How universal are surprisingly significant molecular gas reservoirs in massive post-starburst galaxies at* $z \sim 0.6$*?*; 27.8 hours. PI Bezanson, Co-I Anglés-Alcázar.

2016–2019 HST-AR-14562.001: *Combining Statistical Samples of Resolved-ISM Simulated Galaxies with Realistic Mock Observations to Fully Interpret HST and JWST Surveys*; $121,870. PI Faucher-Giguère; Co-I Anglés-Alcázar.

2016–2018 Chandra Theory Proposal #18700332: *The Triggering Mechanisms and Accretion Modes of AGN: New Cosmological Simulations to Interpret Chandra Surveys*; $80,000. PI Faucher-Giguère; Co-I Anglés-Alcázar.

2016–2017 NSF TG-AST160048: *Black holes on FIRE: Simulating the Coevolution of Massive Black Holes and Galaxies in Realistic Environments*; 4,000,000 CPU-hours (estimated value of awarded resources: $139,779). PI Anglés-Alcázar.

2016–2017 QUEST Research Allocation: *The First Massive Black Holes and their Impact in Galaxy Evolution*; 500,000 CPU-hours. PI Anglés-Alcázar.

2015–2018 HST-AR-14293.001-A: *Metallicity and Azimuthal Angle Diagnostics of Inflows and Outflows: Interpreting HST Measurements of Circum-Galactic Gas Flows*; $110,658. PI Faucher-Giguère; Co-I Anglés-Alcázar.

2015–2018 NSF AST-1517491: *Toward Physically-Predictive Modeling of Massive Black Hole Growth and Feedback in Galaxy Formation*; $439,662. PI Faucher-Giguère; Collaborator Anglés-Alcázar.

2015–2016 NSF TG-AST140023: *FIREBOX: Full Cosmological Volumes of Simulated Galaxies with Resolved Interstellar Medium and Feedback Physics*; 4,000,000 CPU-hours. PI, Faucher-Giguère; Collaborator Anglés-Alcázar.

2014–2015 NSF TG-AST120039 renewal: *Modeling the Co-Evolution of Black Holes and Galaxies Across Cosmic Time*; 550,000 CPU-hours. Co-PIs Anglés-Alcázar, Davé, & Özel.

2013–2014 NSF TG-AST120039: *Modeling the Co-Evolution of Black Holes and Galaxies Across Cosmic Time*; 800,000 CPU-hours. Co-PIs Anglés-Alcázar, Davé, & Özel.

2012–2013 Herschel Space Observatory (OT2): *Herschel mapping of the Vela-D star forming region*; 9.9 hours. PI Giannini; Co-I Anglés-Alcázar.

2012–2013 Herschel Space Observatory (OT2): *The Physical and Chemical State of High-mass Pre- and Proto-stellar Cores Identified by the Hi-GAL Survey*; 28.5 hours. PI Olmi; Co-I Anglés-Alcázar.

Professional activities

- **Journal Referee:**
  Monthly Notices of the Royal Astronomical Society ∗ The Astrophysical Journal ∗ The Astrophysical Journal Letters ∗ Astronomy and Astrophysics ∗ Nature Astronomy.

- **Expert reviewer/Panelist:**
  UConn SURF research awards ∗ NSF CAREER ∗ NSF Astronomy and Astrophysics Research Grants (EXC AIS) ∗ NSF ASCEND Fellowships ∗ Chandra X-Ray Center ∗ NASA Astrophysics Theory Grants ∗ Cottrell Scholar Award (RCSA) ∗ NASA FINESST Fellowships ∗ European Research Council (ERC) Starting Grants ∗ Swiss National Science Foundation ∗ Distributed Research using Advanced Computing (DiRAC, UK) ∗ Veni Grant in the Innovational Research Incentives Scheme (Netherlands) ∗ Research Council of Norway Grants.

- **Professional Development Seminars/Panelist:**
  Keynote speaker at AstroCodEx meeting, Yale University.
  PhD application expectations: insight from STEM professors on admissions committees (UConn McNair).
  Graduate Professional Development Seminar on Proposal Writing (UConn Physics).
  STEM Seminar Series for undergraduates from underrepresented groups (UConn McNair and LSAMP).
  Open House for Prospective Physics Undergraduates (UConn CLAS).

- **Workshop/meeting/seminar organizer, committee memberships:**
  Cosmology and Astrophysics with Machine Learning Workshop (core organizer), Flatiron Institute, 2024.
  FIRE Collaboration Regional Meeting (core organizer), University of Connecticut, 2024.
  FIRE Collaboration Regional Meeting (core organizer), University of Connecticut, 2023.
  CAMELS Workshop (core organizer), Flatiron Institute, 2022.
  Flatiron Fellowship Admissions Committee, CCA, Flatiron Institute, 2019–2021.
  SIMBA Collaboration Workshop (core organizer), Flatiron Institute, 2019.
  FIRE collaboration coordinator of monthly topical discussions, 2017–2022.
  CCA galaxy formation group meetings, regular discussion coordinator, 2017–2022.
  Astronomy Seminar Committee, CIERA, Northwestern University, 2014–2017.

- **Professional affiliations and leadership in multi-institutional projects:**
  CAMELS Collaboration, Core leader, 2019–present.
  FIRE Collaboration, PI member, 2019–present.
  SIMBA Collaboration, Core member, 2017–present.
  Learning the Universe Collaboration, Working Group leader, 2021–present.
  SMAUG Collaboration, Working Group leader, 2017–2020.

Publications

Since 2010: h-index = 40, total citations > 7,100 (NASA ADS)
Since 2020: h-index = 33, total citations > 3,200 (NASA ADS)

127. *Zooming In On The Multi-Phase Structure of Magnetically-Dominated Quasar Disks: Radiation From Torus to ISCO Across Accretion Rates*. Hopkins, P. F., Su, K.-Y., Murray, N., Steinwandel, U. P., Kaaz, N., Ponnada, S. B., Bardati, J., Piotrowska, J. M., Wang, H.-Y., Shi, Y., **Anglés-Alcázar, D.**, Most, E. R., Kremer, K., Faucher-Giguère, C.-A., & Wellons, S. 2025, submitted to the Open Journal of Astrophysics (arXiv:2502.05268).

126. *Constraining the Effect of Baryonic Feedback on the Matter Power Spectrum with Fast Radio Bursts*. Medlock, I., Nagai, D., **Anglés-Alcázar, D.**, & Gebhardt, M. 2025, submitted to ApJ (arXiv:2501.17922).

125. *Learning the Universe: Cosmological and Astrophysical Parameter Inference with Galaxy Luminosity Functions and Colours*. Lovell, C. C., Starkenburg, T., Ho, M., **Anglés-Alcázar, D.**, Davé, R., Gabrielpillai, A., Iyer, K., Matthews, A. E., Roper, W. J., Somerville, R., Sommovigo, L., & Villaescusa-Navarro, F. 2024, submitted to MNRAS (arXiv:2411.13960).

124. *Bridging Scales: Coupling the galactic nucleus to the larger cosmic environment*. Su, K.-Y., Natarajan, P., Cho, H., Narayan, R., Hopkins, P. F., **Anglés-Alcázar, D.**, & Prather, B. S. 2024, submitted (arXiv:2410.13235).

123. *Powerful nuclear outflows and circumgalactic medium shocks driven by the most luminous quasar in the Universe*. Vayner, A., Díaz-Santos, T., Eisenhardt, P. R. M., Stern, D., Armus, L., **Anglés-Alcázar, D.**, Assef, R. J., Fernández Aranda, R., Blain, A. W., Jun, H. D., Tsai, C.-W., Roy, N. C., Ferkinhoff, C. D., Li, G., Laio, M., Shobhana, D., & Zewdie, D. 2024, submitted to ApJ (arXiv:2412.02862).

122. *Diverse dark matter profiles in FIRE dwarfs: black holes, cosmic rays and the cusp-core enigma*. Koudmani, S., Rennehan, D., Somerville, R. S., Hayward, C. C., **Anglés-Alcázar, D.**, Orr, M. E., Sands, I. S., & Wellons, S. 2024, submitted to MNRAS (arXiv:2409.02172).

121. *How DREAMS are made: Emulating Satellite Galaxy and Subhalo Populations with Diffusion Models and Point Clouds*. Nguyen, N., Villaescusa-Navarro, F., Mishra-Sharma, S., Cuesta-Lazaro, C., Torrey, P., Farahi, A., Garcia, A. M., Rose, J. C., O'Neil, S., Vogelsberger, M., Shen, X., Roche, C., **Anglés-Alcázar, D.**, Kallivayalil, N., Muñoz, J. B., Cyr-Racine, F. Y., Roy, S., Necib, L., & Kollmann, K. E. 2024, submitted to ApJ (arXiv:2409.02980).

120. *Host-galaxy stars can dominate the ionizing radiation field of the circumgalactic medium in galaxies at Cosmic Noon*. Holguin, F., Hayward, C. C., Ma, Xiangcheng, **Anglés-Alcázar, D.**, & Cochrane, R. K. 2024, submitted to OJAp (arXiv:2405.13110).

119. *Introducing the DREAMS Project: DaRk mattEr and Astrophysics with Machine learning and Simulations*. Rose, J. C., Torrey, P., Villaescusa-Navarro, F., Lisanti, M., Nguyen, T., Roy, S., Kollmann, K. E., Vogelsberger, M., Cyr-Racine, F.-Y., Medvedev, M. V., Genel, S., **Anglés-Alcázar, D.**, Kallivayalil, N., Wang, B. Y., Costanza, B., O'Neil, S., Roche, C., Karmakar, S., Garcia, A. M., Low, R., Lin, S., Mostow, O., Cruz, A., Caputo, A., Farahi, A., Muñoz, J. B., Necib, L., Teyssier, R., Dalcanton, J. J., & Spergel, D. 2024, submitted (arXiv:2405.00766).

118. *X-raying CAMELS: Constraining Baryonic Feedback in the Circum-Galactic Medium with the CAMELS simulations and eRASS X-ray Observations*. Lau, E. T.; Nagai, D., Bogdán, A., Medlock, I., Oppenheimer, B. D., Battaglia, N., **Anglés-Alcázar, D.**, Genel, S., Ni, Y., & Villaescusa-Navarro, F. 2025, accepted in ApJ (arXiv:2412.04559).

117. *EMBER-2: Emulating baryons from dark matter across cosmic time with deep modulation networks*. Bernardini, M., Feldmann, R., Gensior, J., **Anglés-Alcázar, D.**, Bassini, L., Bieri, R., Cenci, E., Tortora, L., & Faucher-Giguère, C.-A. 2024, accepted in MNRAS.

116. *Large-scale dual AGN in large-scale cosmological hydrodynamical simulations*. Puerto-Sánchez, C., Habouzit, M., Volonteri, M., Ni, Y., Foord, A., **Anglés-Alcázar, D.**, Chen, N., Guetzoyan, P., Davé, R., Di Matteo, T., Dubois, Y., Koss, M., & Rosas-Guevara, Y. 2025, MNRAS, 536, 3016.

115. *Quantifying Baryonic Feedback on the Warm–Hot Circumgalactic Medium in CAMELS Simulations*. Medlock, I., Neufeld, C., Nagai, D., **Anglés-Alcázar, D.**, Genel, S., Oppenheimer, B. D., Sims, X., Singh, P., & Villaescusa-Navarro, F. 2025, ApJ, 980, 61.

114. *Deciphering the imprint of AGN feedback in Seyfert galaxies: Nuclear-scale molecular gas deficits*. García-Burillo, S., Hicks, E. K. S., Alonso-Herrero, A., Pereira-Santaella, M., Usero, A., Querejeta, M., Gonzalez-Martín, O., Delaney, D., Ramos Almeida, C., Combes, F., **Anglés-Alcázar, D.**, Audibert, A., Bellocchi, E., Davies, R. I., Davis, T. A., Elford, J. S., Garcia-Bernete, I., Hönig, S., Labiano, A., Leist, M. T., Levenson, N. A., López-Rodríguez, E., Mercedes-Feliz, J., Packham, C., Ricci, C., Rosario, D. J., Shimizu, T., Stalevski, M., & Zhang, L. 2024, A&A, 689, 347.

113. *The impact of feedback on the evolution of gas density profiles from galaxies to clusters: a universal fitting formula from the SIMBA suite of simulations*. Sorini, D., Sownak, B., Davé, R., & **Anglés-Alcázar, D.** 2024, OJAp, 7, 115.

112. *Effects of Multichannel Active Galactic Nuclei Feedback in FIRE Cosmological Simulations of Massive Galaxies*. Byrne, L., Faucher-Giguère, C.-A., Wellons, S., Hopkins, P. F., **Anglés-Alcázar, D.**, Sultan, I., Wijers, N., Moreno, J., & Ponnada, S. 2024, ApJ, 973, 149.

111. *The baryon cycle in modern cosmological hydrodynamical simulations*. Wright, R. J., Somerville, R. S., Lagos, C., Schaller, M., Davé, R., **Anglés-Alcázar, D.**, & Genel, S. 2024, MNRAS, 532, 3417.

110. *Cosmology with multiple galaxies*. Chawak, C., Villaescusa-Navarro, F. Echeverri Rojas, N., Ni, Y., Hahn, C., & **Anglés-Alcázar, D.** 2024, ApJ, 969, 105.

109. *Zooming by in the CARPoolGP lane: new CAMELS-TNG simulations of zoomed-in massive halos*. Lee, M. E., Genel, S., Wandelt, B. D., Zhang, B., Delgado, A. M., Pandey, S., Lau, E. T., Carr, C., Cook, H., Nagai, D., **Anglés-Alcázar, D.**, Villaescusa-Navarro, F., & Bryan, G. L. 2024, ApJ, 968, 11.

108. *Dense stellar clump formation driven by strong quasar winds in the FIRE cosmological hydrodynamic simulations*. Mercedes-Feliz, J., **Anglés-Alcázar, D.**, Kiat Oh, B., Hayward, C. C., Cochrane, R. K., Richings, A. J., Faucher-Giguère, C.-A., Wellons, S., Terrazas, B. A., Moreno, J., Su, K. Y., & Hopkins, P. F. 2024, MNRAS, 530, 2795.

107. *Probing the Circum-Galactic Medium with Fast Radio Bursts: Insights from the CAMELS Simulations*. Medlock, I., Nagai, D., Singh, P., Oppenheimer, B., **Anglés-Alcázar, D.**, & Villaescusa-Navarro, F. 2024, ApJ, 967, 32.

106. *FORGE'd in FIRE II: The Formation of Magnetically-Dominated Quasar Accretion Disks from Cosmological Initial Conditions*. Hopkins, P. F., Squire, J., Su, K.-Y., Steinwandel, U. P., Kremer, K., Shi, Y., Grudic, M. Y., Wellons, S., Faucher-Giguère, C.-A., **Anglés-Alcázar, D.**, Murray, N., & Quataert, E. 2024, OJAp, 7E, 19.

105. *FORGE'd in FIRE: Resolving the End of Star Formation and Structure of AGN Accretion Disks from Cosmological Initial Conditions*. Hopkins, P. F., Grudic, M. Y., Su, K.-Y., Wellons, S., **Anglés-Alcázar, D.**, Steinwandel, U. P., Guszejnov, D., Murray, N., Faucher-Giguère, C.-A., Quataert, E., & Keres, D. 2024, OJAp, 7E, 18.

104. *Cosmological baryon spread and impact on matter clustering in CAMELS*. Gebhardt, M., **Anglés-Alcázar, D.**, Borrow, J., Genel, S., Villaescusa-Navarro, F., Ni, Y., Lovell, C., Nagai, D., Davé, R., Marinacci, F., Vogelsberger, M., & Hernquist, L. 2024, MNRAS, 529, 4896.

103. [C_{II}] *158 μm emission as an indicator of galaxy star formation rate*. Liang, L., Feldmann, R., Murray, N., Narayanan, D., Hayward, C. C., **Anglés-Alcázar, D.**, Bassini, L., Richings, A. J., Faucher-Giguère, C.-A., Chung, D. T., Chan, J. Y. H., Çatmabacak, O., Kereš, D., & Hopkins, P. F. 2024, MNRAS, 528, 499.

102. *Beware the recent past: a bias in spectral energy distribution modelling due to bursty star formation*. Haskell, P., Das, S., Smith, D. J. B., Cochrane, R. K., Hayward, C. C., & **Anglés-Alcázar, D.** 2024, MNRAS, 530L, 7.

101. *An Observationally Driven Multifield Approach for Probing the Circum-Galactic Medium with Convolutional Neural Networks*. Gluck, N., Oppenheimer, B. D., Nagai, D., Villaescusa-Navarro, F., & **Anglés-Alcázar, D.** 2024, MNRAS, 527, 10038.

100. *Disappearing galaxies: the orientation dependence of JWST-bright, HST-dark, star-forming galaxy selection*. Cochrane, R. K., **Anglés-Alcázar, D.**, Cullen, F., & Hayward, C. C. 2024, ApJ, 961, 37.

99. *Inferring Warm Dark Matter Masses with Deep Learning*. Rose, J. C., Torrey, P., Villaescusa-Navarro, F., Vogelsberger, M., O'Neil, S., Medvedev, M. V., Low, R., Adhikari, R., & **Anglés-Alcázar, D.** 2024, MNRAS, 527, 739.

98. *The CAMELS project: Expanding the galaxy formation model space with new ASTRID and 28-parameter TNG and SIMBA suites*. Ni, Y., Genel, S., **Anglés-Alcázar, D.**, Villaescusa-Navarro, F., Jo, Y., Bird, S., Di Matteo, T., Croft, R., Chen, N., de Santi, N. S. M., Gebhardt, M., Shao, H., Pandey, S., Hernquist, L., & Davé, R. 2023, ApJ, 959, 136.

97. *Predicting the impact of feedback on matter clustering with machine learning in CAMELS*. Delgado, A. M., **Anglés-Alcázar, D.**, Thiele, L., Ntampaka, M., Pandey, S., Lehman, K., Somerville, R. S., Genel, S., & Villaescusa-Navarro, F. 2023, MNRAS, 526, 5306.

96. *An Exploration of AGN and Stellar Feedback Effects in the Intergalactic Medium via the Low Redshift Lyman-α Forest*. Tillman, M. T., Burkhart, B., Tonnesen, S., Bird, S., Bryan, G. L., **Anglés-Alcázar, D.**, Hassan, S., Somerville, R. S., Davé, R., Marinacci, F., Hernquist, L., & Vogelsberger, M. 2023, ApJ, 166, 228.

95. *A universal equation to predict $\Omega_{\rm m}$ from halo and galaxy catalogues*. Shao, H., de Santi, N. S. M., Villaescusa-Navarro, F., Teyssier, R., Ni, Y., **Anglés-Alcázar, D.**, Genel, S., Hernquist, L., Steinwan-

del, U. P., Castro, T., Hernandez-Martınez, E., Dolag, K., Lovell, C. C., Visbal, E., Garrison, L. H., & Kulkarni, M. 2023, ApJ, 956, 149.

94. *A unified model for the co-evolution of galaxies and their circumgalactic medium: the relative roles of turbulence and atomic cooling physics*. Pandya, V., Fielding, D. B., Bryan, G. L., Carr, C., Somerville, R. S., Stern, J., Faucher-Giguère, C.-A., Hafen, Z., & **Anglés-Alcázar, D.** 2023, ApJ, 956, 118.

93. *A Hierarchy of Normalizing Flows for Modelling the Galaxy-Halo Relationship*. Lovell, C. C., Hassan, S., **Anglés-Alcázar, D.**, Bryan, G., Fabbian, G., Genel, S., Hahn, C., Iyer, K., Kwon, J., de Santi, N., & Villaescusa-Navarro, F. 2023, Machine Learning for Astrophysics, ICML 2023 (arXiv:2307.06967).

92. *Constraining cosmology with machine learning and galaxy clustering: the CAMELS-SAM suite*. Perez, L. A., Genel, S., Villaescusa-Navarro, F., Somerville, R. S., Gabrielpillai, A., **Anglés-Alcázar, D.**, Wandelt, B. D., & Yung, L. Y. A. 2023, ApJ, 954, 11.

91. *Cosmology with one galaxy? The ASTRID model and robustness*. Echeverri-Rojas, N. Villaescusa-Navarro, F., Chawak, C., Ni, Y., Hahn, C., Hernandez-Martinez, E., Teyssier, R., **Anglés-Alcázar, D.**, Dolag, K., & Castro, T. 2023, ApJ, 954, 125.

90. *Energy-balance SED modelling can be effective at high redshifts regardless of UV-FIR offsets*. Haskell, P., Smith, D. J. B., Cochrane, R. K., Hayward, C. C., & **Anglés-Alcázar, D.** 2023, MNRAS, 525, 1535.

89. *Inferring the impact of feedback on the matter distribution using the Sunyaev Zel'dovich effect: Insights from CAMELS simulations and ACT+DES data*. Pandey, S., Lehman, K., Baxter, E. J., Ni, Y., **Anglés-Alcázar, D.**, Genel, S., Villaescusa-Navarro, F., Delgado, A. M., & Di Matteo, T. 2023, MNRAS, 525, 1779.

88. *Massive black holes in galactic nuclei: Theory and Simulations*. Di Matteo, T., **Anglés-Alcázar, D.**, & Shankar, F. 2023. Massive black holes in galactic nuclei: Theory and simulations, in The Encyclopedia of Cosmology (Set 2): Black Holes, edited by Z. Haiman (World Scientific, New Jersey).

87. *Local positive feedback in the overall negative: the impact of quasar winds on star formation in the FIRE cosmological simulations*. Mercedes-Feliz, J., **Anglés-Alcázar, D.**, Hayward, C. C., Cochrane, R. K., Terrazas, B. A., Wellons, S., Richings, A. J., Faucher-Giguère, C.-A., Moreno, J., Su, K. Y., Hopkins, P. F., Quataert, E., & Kereš, D. 2023, MNRAS, 524, 3446.

86. *Robust field-level likelihood-free inference with galaxies*. de Santi, N. S. M., Shao, H., Villaescusa-Navarro, F., Abramo, L. R., Teyssier, R., Villanueva-Domingo, P., Ni, Y., **Anglés-Alcázar, D.**, Genel, S., Hernandez-Martinez, E., Steinwandel, U. P., Lovell, C. C., Dolag, K., Castro, T., & Vogelsberger, M. 2023, ApJ, 952, 69.

85. *The impact of AGN-driven winds on physical and observable galaxy sizes*. Cochrane, R. K., **Anglés-Alcázar, D.**, Mercedes-Feliz, J., Hayward, C. C., Faucher-Giguère, C.-A., Wellons, S., Terrazas, B. A., Wetzel, A., Hopkins, P. F., Moreno, J., Su, K.-Y., & Somerville, R. S. 2023, MNRAS, 523, 2409.

84. *Augmenting astrophysical scaling relations with machine learning: application to reducing the Sunyaev-Zeldovich flux-mass scatter*. Wadekar, D., Thiele, L., Villaescusa-Navarro, F., Hill, J. C., Cranmer, M., Spergel, D. N., Battaglia, N., **Anglés-Alcázar, D.**, Hernquist, L., & Ho, S. 2023, PNAS, 120, 12.

83. *Public data release of the FIRE-2 cosmological zoom-in simulations of galaxy formation*. Wetzel, A., Hayward, C. C., Sanderson, R. E., Ma, X., **Anglés-Alcázar, D.**, Feldmann, R., Chan, T. K., El-Badry, K., Wheeler, C., Garrison-Kimmel, S., Nikakhtar, F., Panithanpaisal, N., Arora, A., Gurvich, A. B., Samuel, J., Sameie, O., Pandya, V., Hummels, C., Loebman, S., Boylan-Kolchin, M., Bullock, J. S., Faucher-Giguère, C.-A., Kereš, D., Quataert, E., & Hopkins, P. F. 2023, ApJS, 265, 44.

82. *The CAMELS project: public data release*. Villaescusa-Navarro, F., Genel, S., **Anglés-Alcázar, D.**, Perez, L. A., Villanueva-Domingo, P., Wadekar, D., Shao, H., Mohammad, F. G., Hassan, S., Moser, E., Lau, E. T., Machado Poletti Valle, L. F., Nicola, A., Thiele, L., Jo, Y., Philcox, O. H. E., Oppenheimer, B. D., Tillman, M., Hahn, C., Kaushal, N., Pisani, A., Gebhardt, M., Delgado, A. M., Caliendo, J., Kreisch, C., Wong, K. W. K., Coulton, W. R., Eickenberg, M., Parimbelli, G., Ni, Y., Steinwandel, U. P., La Torre, V., Davé, R., Battaglia, N., Nagai, D., Spergel, D. N., Hernquist, L., Burkhart, B., Narayanan, D., Wandelt, B., Somerville, R. S., Bryan, G. L., Viel, M., Li, Y., Irsic, V., Kraljic, K., & Vogelsberger, M. 2023, ApJS, 265, 54.

81. *Weighing the Milky Way and Andromeda with Artificial Intelligence*. Villanueva-Domingo, P., Villaescusa-Navarro, F., Genel, S., **Anglés-Alcázar, D.**, Hernquist, L., Marinacci, F., Spergel, D. N., Vogelsberger, M., & Narayanan, D. 2023, PRD, 107, 3003.

80. *HaloGraphNet: Predict halo masses from simulations*. Villanueva-Domingo, P., Villaescusa-Navarro, F., **Anglés-Alcázar, D.**, Genel, S., Marinacci, F., Spergel, D. N., Hernquist, L., Vogelsberger, M., Davé, R., & Narayanan, D. 2023, Astrophysics Source Code Library, record ascl:2303.020.

79. *The SZ flux-mass (Y-M) relation at low halo masses: improvements with symbolic regression and strong constraints on baryonic feedback*. Wadekar, D., Thiele, L., Hill, J. C., Pandey, S., Villaescusa-Navarro, F., Spergel, D. N., Cranmer, M., Nagai, D., **Anglés-Alcázar, D.**, Ho, S., & Hernquist, L. 2023, MNRAS, 522, 2628.

78. *Efficient long-range AGN feedback affects the low redshift Lyman-α forest*. Tillman, M. T., Burkhart, B., Tonnesen, S., Bird, S., Bryan, G. L., **Anglés-Alcázar, D.**, Davé, R., & Genel, S. 2023, ApJL 945, L17.

77. *Robust field-level inference of cosmological parameters with dark matter halos*. Shao, H., Villaescusa-Navarro, F., Villanueva-Domingo, P., Teyssier, R., Garrison, L. H., Gatti, M., Inman, D., Ni, Y., Steinwandel, U. P., Kulkarni, M., Visbal, E., **Anglés-Alcázar, D.**, Castro, T., Hernández-Martínez, E., & Dolag, K. 2023, ApJ, 944, 27.

76. *Calibrating cosmological simulations with implicit likelihood inference using galaxy growth observables*. Jo, Y., Genel, S., Wandelt, B. D., Somerville, R. S., Villaescusa-Navarro, F., Bryan, G. L., **Anglés-Alcázar, D.**, Foreman-Mackey, D., Nelson, D., & Kim, J.-h. 2023, ApJ, 944, 67.

75. *FIRE-3: Updated Stellar Evolution Models, Yields, & Microphysics and Fitting Functions for Applications in Galaxy Simulations*. Hopkins, P. F., Wetzel, A., Wheeler, C., Sanderson, R., Grudic, M. Y., Sameie, O., Boylan-Kolchin, M., Orr, M., Ma, X., Faucher-Giguère, C.-A., Kereš, D., Quataert, E., Su, K.-Y., Moreno, J., Feldmann, R., Bullock, J. S., Loebman, S. R., **Anglés-Alcázar, D.**, Stern, J., Necib, L., & Hayward, C. C. 2023, MNRAS, 519, 3154.

74. *Stellar feedback-regulated black hole growth: driving factors from nuclear to halo scales*. Byrne, L., Faucher-Giguère, C.-A., Stern, J., **Anglés-Alcázar, D.**, Wellons, S., Gurvich, A. B., & Hopkins, P. F. 2023, MNRAS, 520, 722.

73. *Exploring supermassive black hole physics and galaxy quenching across halo mass in FIRE cosmological zoom simulations*. Wellons, S., Faucher-Giguère, C.-A., Hopkins, P. F., Quataert, E., **Anglés-Alcázar, D.**, Feldmann, R., Hayward, C. C., Kereš, D., Su, K.-Y., & Wetzel, A. 2023, MNRAS, 520, 5394.

72. *Predicting sub-millimeter flux densities from global galaxy properties*. Cochrane, R. K., Hayward, C. C., **Anglés-Alcázar, D.**, & Somerville R. S. 2023, MNRAS, 518, 5522.

71. *Inpainting hydrodynamical maps with deep learning*. Mohammad, F. G., Villaescusa-Navarro, F., Genel, S., **Anglés-Alcázar, D.**, & Vogelsberger, M. 2022, ApJ, 941, 132.

70. *Dust temperature uncertainties hamper the inference of molecular gas masses from the dust continuum emission of quiescent high-redshift galaxies*. Cochrane, R. K., Hayward, C. C., & **Anglés-Alcázar, D.** 2022, ApJL, 939, 27.

69. *HIFlow: Generating Diverse HI Maps and Inferring Cosmology while Marginalizing over Astrophysics using Normalizing Flows*. Hassan, S., Villaescusa-Navarro, F., Wandelt, B., Spergel, D. N., **Anglés-Alcázar, D.**, Genel, S., Cranmer, M., Bryan, G. L., Davé, R., Somerville, R. S., Eickenberg, M., Narayanan, D., Ho, S., & Andrianomena, S. 2022, ApJ, 937, 83.

68. *The Circumgalactic Medium from the CAMELS Simulations: Forecasting Constraints on Feedback Processes from Future Sunyaev-Zeldovich Observations*. Moser, E., Battaglia, N., Nagai, D., Lau, E., Machado Poletti Valle, L. F., Villaescusa-Navarro, F., Amodeo, S., **Anglés-Alcázar, D.**, Bryan, G. L., Davé, R., Hernquist, L., & Vogelsberger, M. 2022, ApJ, 933, 133.

67. *Inferring halo masses with Graph Neural Networks*. Villanueva-Domingo, P., Villaescusa-Navarro, F., **Anglés-Alcázar, D.**, Genel, S., Marinacci, F., Spergel, D. N., Hernquist, L., Vogelsberger, M., Davé, R., & Narayanan, D. 2022, ApJ, 935, 30.

66. *The black hole population in low-mass galaxies in large-scale cosmological simulations*. Haidar, H., Habouzit, M., Volonteri, M., Mezcua, M., Greene, J., Neumayer, N., **Anglés-Alcázar, D.**, Martin-Navarro, I., Hoyer, N., Dubois, Y., & Davé, R. 2022, MNRAS, 514, 4912.

65. *Hot-mode accretion and the physics of thin-disk galaxy formation*. Hafen, Z., Stern, J., Bullock, J., Gurvich, A. B., Yu, S., Faucher-Giguère, C.-A., Fielding, D. B., **Anglés-Alcázar, D.**, Quataert, E., Wetzel, A., Starkenburg, T., Boylan-Kolchin, M., Moreno, J., Feldmann, R., El-Badry, K., Chan, T. K., Trapp, C., Kereš, D., & Hopkins, P. F. 2022, MNRAS, 514, 5056.

64. *Galaxies lacking dark matter produced by close encounters in a cosmological simulation*. Moreno, J., Danieli, S., Bullock, J. S., Feldmann, R., Hopkins, P. F., Catmabacak, O., Gurvich, A., Lazar, A., Klein, C., Hummels, C. B., Hafen, Z., Mercado, F. J., Yu, S., Jiang, F., Wheeler, C., Wetzel, A., **Anglés-Alcázar, D.**, Boylan-Kolchin, M., Quataert, E., Faucher-Giguère, C.-A., & Kereš, D. 2022, Nature Astronomy, 6, 496.

63. *Breaking baryon-cosmology degeneracy with the electron density power spectrum*. Nicola, A., Villaescusa-Navarro, F., Spergel, D. N., Dunkley, J., **Anglés-Alcázar, D.**, Davé, R., Genel, S., Hernquist, L., Nagai, D., Somerville, R. S., & Wandelt, B. D. 2022, JCAP, 04, 046.

62. *Reionization with Simba: How much does astrophysics matter in modeling cosmic reionization?* Hassan, S., Davé, R., McQuinn, M., Somerville, R., Keating, L., **Anglés-Alcázar, D.**, Villaescusa-Navarro, F., & Spergel, D. N. 2022, ApJ, 931, 62.

61. *Percent-level constraints on baryonic feedback with spectral distortion measurements*. Thiele, L., Wadekar, D., Hill, J. C., Battaglia, N., Chluba, J., Villaescusa-Navarro, F., Hernquist, L., Vogelsberger, M., **Anglés-Alcázar, D.**, & Marinacci, F. 2022, PRD, 105, 8.

60. *Running Late: Testing Delayed Supermassive Black Hole Growth Models Against the Quasar Luminosity Function*. Tillman, M. T., Wellons, S., Faucher-Giguère, C.-A., Kelley, L. Z., & **Anglés-Alcázar, D.** 2022, MNRAS, 511, 5756.

59. *Co-evolution of massive black holes and their host galaxies at high redshift: discrepancies from six cosmological simulations and the key role of JWST*. Habouzit, M., Onoue, M., Bañados, E., Neeleman, M., **Anglés-Alcázar, D.**, Walter, F., Pillepich, A., Davé, R., Jahnke, K., & Dubois, Y. 2022, MNRAS, 511, 3751.

58. *The CAMELS Multifield Dataset: Learning the Universe's Fundamental Parameters with Artificial Intelligence*. Villaescusa-Navarro, F., Genel, S., **Anglés-Alcázar, D.**, Thiele, L., Davé, R., Narayanan, D., Nicola, A., Li, Y., Villanueva-Domingo, P., Wandelt, B., Spergel, D. N., Somerville, R. S., Zorrilla Matilla, J. M., Mohammad, F. G., Hassan, S., Shao, H., Wadekar, D., Eickenberg, M., Wong, K. W. K., Contardo, G., Jo, Y., Moser, E., Lau, E. T., Machado Poletti Valle, L. F., Perez, L. A., Nagai, D., Battaglia, N., & Vogelsberger, M. 2022, ApJS, 259, 61.

57. *Cosmology with one galaxy?* Villaescusa-Navarro, F., Ding, J., Genel, S., Tonnesen, S., La Torre, V., Spergel, D. N., Teyssier, R., Li, Y., Heneka, C., Lemos, P., **Anglés-Alcázar, D.**, Nagai, D., & Vogelsberger, M. 2022, ApJ, 929, 132.

56. *Neural networks as optimal estimators to marginalize over baryonic effects*. Villaescusa-Navarro, F., Wandelt, B. D., **Anglés-Alcázar, D.**, Genel, S., Zorrilla Mantilla, J. M., Ho, S., & Spergel, D. N. 2022, ApJ, 928, 44.

55. *Finding universal relations in subhalo properties with artificial intelligence*. Shao, H., Villaescusa-Navarro, F., Genel, S., Spergel, D. N., **Anglés-Alcázar, D.**, Hernquist, L., Davé, R., Narayanan, D., Contardo, G., & Vogelsberger, M. 2022, ApJ, 927, 85.

54. *IQ Collaboratory III: The Empirical Dust Attenuation Framework – Taking Hydrodynamical Simulations with a Grain of Dust*. Hahn, C., Starkenburg, T. K., **Anglés-Alcázar, D.**, Choi, E., Davé, R., Dickey, C., Iyer, K. G., Maller, A. H., Somerville, R. S., Tinker, J. L., & Yung, L. Y. A. 2022, ApJ, 926, 122.

53. *Black hole-galaxy scaling relations in FIRE: the importance of black hole location and mergers*. Çatmabacak, O., Feldmann, R., **Anglés-Alcázar, D.**, Faucher-Giguère, C.-A., Hopkins, P. F., & Kereš, D. 2022, MNRAS, 511, 506.

52. *Why do Black Holes Trace Bulges (& Central Surface Densities), Instead of Galaxies as a Whole?* Hopkins, P. F., Wellons, S., **Anglés-Alcázar, D.**, Faucher-Giguère, C.-A., & Grudic, M. Y. 2022, MNRAS, 510, 630.

51. *Supermassive black holes in cosmological simulations II: The AGN population and predictions for upcoming X-ray missions*. Habouzit, M., Somerville, R. S., Li, Y., Genel, S., Aird, J., **Anglés-Alcázar, D.**, Davé,

R., Georgiev, I. Y., McAlpine, S., Rosas-Guevara, Y., Dubois, Y., Nelson, D., Banados, E., Hernquist, L., Peirani, S., & Vogelsberger, M. 2022, MNRAS, 509, 3015.

50. *From EMBER to FIRE: predicting high resolution baryon fields from dark matter simulations with Deep Learning*. Bernardini, M., Feldmann, R., **Anglés-Alcázar, D.**, Boylan-Kolchin, M., Bullock, J., Mayer, L., & Stadel, J. 2022, MNRAS, 509, 1323.

49. *Robust marginalization of baryonic effects for cosmological inference at the field level*. Villaescusa-Navarro, F., Genel, S., **Anglés-Alcázar, D.**, Spergel, D. N., Li, Y., Wandelt, B., Thiele, L., Nicola, A., Zorrilla Matilla, J. M., Shao, H., Hassan, S., Narayanan, D., Davé, R., & Vogelsberger, M. 2021, arXiv:2109.10360.

48. *Multifield Cosmology with Artificial Intelligence*. Villaescusa-Navarro, F., **Anglés-Alcázar, D.**, Genel, S., Spergel, D. N., Li, Y., Wandelt, B., Nicola, A., Thiele, L., Hassan, S., Zorrilla Matilla, J. M., Narayanan, D., Davé, R., & Vogelsberger, M. 2021, arXiv:2109.09747.

47. *The origin of galaxy colour bimodality in the scatter of the stellar-to-halo mass relation*. Cui, W., Davé, R., Peacock, J. A., **Anglés-Alcázar, D.**, & Yang, X. 2021, Nature Astronomy, 5, 1069.

46. *Which AGN Jets Quench Star Formation in Massive Galaxies?* Su, K.-Y., Hopkins, P. F., Bryan, G. L., Somerville, R. S., Hayward, C. C., **Anglés-Alcázar, D.**, Faucher-Giguère, C.-A., Wellons, S., Stern, J., Terrazas, B. A., Chan, T. K., Orr, M. E., Hummels, C., Feldmann, R., & Kereš, D. 2021, MNRAS, 507, 175.

45. *Neutral CGM as damped Lyα absorbers at high redshift*. Stern, J., Sternberg, A., Faucher-Giguère, C.-A., Hafen, Z., Fielding, D., Quataert, E., Wetzel, A., **Anglés-Alcázar, D.**, El-Badry, K., Kereš, D., & Hopkins, P. F. 2021, MNRAS, 507, 2869.

44. *Bringing faint Active Galactic Nuclei (AGN) to light*. Schirra, A. P., Habouzit, M., Klessen, R. S., Fornasini, F., Nelson, D., Pillepich, A., **Anglés-Alcázar, D.**, Davé, R., & Civano, F. 2021, MNRAS, 508, 4816.

43. *Characterizing mass, momentum, energy and metal outflow rates of multi-phase galactic winds in the FIRE-2 cosmological simulations*. Pandya, V., Fielding, D., **Anglés-Alcázar, D.**, Somerville, R. S., Bryan, G. L., Hayward, C. C., Stern, J., Kim, C.-G., Quataert, E., Forbes, J. C., Faucher-Giguère, C.-A., Feldmann, R., Hafen, Z., Hopkins, P. F., Kereš, D., Murray, N., & Wetzel, A. 2021, MNRAS, 508, 2979.

42. *Seeds Don't Sink: Even Massive Black Hole "Seeds" Cannot Migrate to Galaxy Centers Efficiently*. Ma, L., Hopkins, P. F., Ma, X., **Anglés-Alcázar, D.**, Faucher-Giguère, C.-A., & Kelley, L. Z. 2021, MNRAS, 508, 1973.

41. *Cosmological simulations of quasar fueling to sub-parsec scales using Lagrangian hyper-refinement*. **Anglés-Alcázar, D.**, Quataert, E., Hopkins, P., Somerville, R., Hayward, C., Faucher-Giguère, C.-A., Bryan, G., Kereš, D., Hernquist, L., & Stone, J. 2021, ApJ, 917, 53.

40. *The CAMELS project: Cosmology and Astrophysics with MachinE Learning Simulations*. Villaescusa-Navarro, F., **Anglés-Alcázar, D.**, Genel, S., Spergel, D. N., Somerville, R. S., Davé, R., Pillepich, A., Hernquist, L., Nelson, D., Torrey, P., Narayanan, D., Li, Y., Philcox, O., La Torre, V., Delgado, A. M., Ho, S., Hassan, S., Burkhart, B., Wadekar, D., Battaglia, N., & Contardo, G. 2021, ApJ, 915, 71.

39. *IQ Collaboratory II: The Quiescent Fraction of Isolated, Low Mass Galaxies Across Simulations and Observations*. Dickey, C. M., Starkenburg, T. K., Geha, M., Hahn, C., **Anglés-Alcázar, D.**, Choi, E., Davé, R., Genel, S., Iyer, K. G, Maller, A. H, Mandelker, N., Somerville, R. S., & Yung, L. Y. A. 2021, ApJ, 915, 53.

38. *The Radio Galaxy Population in the SIMBA Simulations*. Thomas, N., Davé, R., Jarvis, M. J., & **Anglés-Alcázar, D.** 2021, MNRAS, 503, 3492.

37. *Supermassive black holes in cosmological simulations I: $M_{\rm BH} - M_{\rm star}$ relation and black hole mass function*. Habouzit, M., Li, Y., Somerville, R. S., Genel, S., Pillepich, A., Volonteri, M., Davé, R., Rosas-Guevara, Y., McAlpine, S., Peirani, S., Hernquist, L., **Anglés-Alcázar, D.**, Reines, A., Bower, R., Dubois, Y., Nelson, D., Pichon, C., & Vogelsberger, M. 2021, MNRAS, 503, 1940.

36. *Virialization of the inner CGM in the FIRE simulations and implications for galaxy discs, star formation and feedback*. Stern, J., Faucher-Giguère, C.-A., Fielding, D., Quataert, E., Hafen, Z., Gurvich, A. B., Ma, X., Byrne, L., El-Badry, K., **Anglés-Alcázar, D.**, Chan, T. K., Feldmann, R., Kereš, D., Wetzel, A., Murray, N., Hopkins, P. F. 2021, ApJ, 911, 88.

35. *The Origin and Evolution of Lyman-alpha Blobs in Cosmological Galaxy Formation Simulations*. Kimock, B., Narayanan, D., Smith, A., Ma, X., Feldmann, R., **Anglés-Alcázar, D.**, Bromm, V., Davé, R., Geach, J. E., Hopkins, P., & Kereš, D. 2021, ApJ, 909, 119.

34. *Realistic mock observations of the sizes and stellar mass surface densities of massive galaxies in FIRE-2 zoom-in simulations*. Parsotan, T., Cochrane, R. K., Hayward, C. C., **Anglés-Alcázar, D.**, Feldmann, R., Faucher-Giguère, C. A., Wellons, S., & Hopkins, P. F. 2021, MNRAS, 501, 1591.

33. *The impact of AGN wind feedback in simulations of isolated galaxies with a multiphase ISM*. Torrey, P., Hopkins, P. F., Faucher-Giguère, C.-A., **Anglés-Alcázar, D.**, Quataert, E., Ma, X., Feldmann, R., Kereš, D., & Murray, N. 2020, MNRAS, 497, 5292.

32. *Measuring dynamical masses from gas kinematics in simulated high-redshift galaxies*. Wellons, S., Faucher-Giguère, C.-A., **Anglés-Alcázar, D.**, Hayward, C. C., Feldmann, R., Hopkins, P. F., & Kereš, D. 2020, MNRAS, 497, 4051.

31. *First Results from SMAUG: The Need for Preventative Stellar Feedback and Improved Baryon Cycling in Semianalytic Models of Galaxy Formation*. Pandya, V., Somerville, R. S., **Anglés-Alcázar, D.**, Hayward, C. C., Bryan, G. L., Fielding, D. B., Forbes, J. C., Burkhart, B., Genel, S., Hernquist, L., Kim, C.-G., Tonnesen, S., & Starkenburg, T. 2020, ApJ, 905, 4.

30. *Jet feedback and the photon underproduction crisis in Simba*. Christiansen, J. F., Davé, R., Sorini, D., & **Anglés-Alcázar, D.** 2020, MNRAS, 499, 2617.

29. *Simba: The average properties of the circumgalactic medium of $2 \leq z \leq 3$ quasars are determined primarily by stellar feedback*. Sorini, D., Davé, R., & **Anglés-Alcázar, D.** 2020, MNRAS, 499, 2760.

28. *The fates of the circumgalactic medium in the FIRE simulations*. Hafen, Z., Faucher-Giguère, C.-A., **Anglés-Alcázar, D.**, Stern, J., Kereš, D., Esmerian, C., Wetzel, A., El-Badry, K., Chan, T. K., & Murray, N. 2020, MNRAS, 494, 3581.

27. *The impact of quenching on galaxy profiles in the Simba simulation*. Appleby, S., Davé, R., Kraljic, K., **Anglés-Alcázar, D.**, & Narayanan, D. 2020, MNRAS, 494, 6053.

26. *Cosmological baryon transfer in the SIMBA simulations*. Borrow, J., **Anglés-Alcázar, D.**, & Davé, R. 2020, MNRAS, 491, 6102.

25. *Imprint of drivers of galaxy formation in the circumgalactic medium*. Oppenheimer, B., Kollmeier, J., Kravtsov, A., Bregman, J., **Anglés-Alcázar, D.**, et al. Astro2020: Decadal Survey on Astronomy and Astrophysics, science white papers, no. 280; Bulletin of the American Astronomical Society, Vol. 51, Issue 3, id. 280 (2019).

24. *Mergers, starbursts, and quenching in the Simba simulation*. Rodríguez Montero, F., Davé, R., Wild, V., **Anglés-Alcázar, D.**, & Narayanan, D. 2019, MNRAS, 490, 2139.

23. *The implications of local fluctuations in the galactic midplane for dynamical analysis in the Gaia era*. Beane, A., Sanderson, R. E., Ness, M. K., Johnston, K. V., Grion Filho, D., Mac Low, M.-M., **Anglés-Alcázar, D.**, Hogg, D. W., & Laporte, C. F. P. 2019, ApJ, 883, 103.

22. *Black hole - galaxy correlations in SIMBA*. Thomas, N., Davé, R., **Anglés-Alcázar, D.**, & Jarvis, M. 2019, MNRAS, 487, 5764.

21. *Simba: Cosmological simulations with black hole growth and feedback*. Davé, R., **Anglés-Alcázar, D.**, Narayanan, D., Li, Q., Rafieferantsoa, M. H., & Appleby, S. 2019, MNRAS, 486, 2827.

20. *Predictions for the spatial distribution of the dust continuum emission in $1 < z < 5$ star-forming galaxies*. Cochrane, R. K., Hayward, C. C., **Anglés-Alcázar, D.**, Lotz, J., Parsotan, T., Ma, X., Kereš, D., Feldmann, R., Faucher-Giguère, C. A., & Hopkins, P. F. 2019, MNRAS, 488, 1779.

19. *The origins of the circumgalactic medium in the FIRE simulations*. Hafen, Z., Faucher-Giguère, C.-A., **Anglés-Alcázar, D.**, Stern, J., Keres, D., Hummels, C., Esmerian, C., Garrison-Kimmel, S., El-Badry, K., Wetzel, A., Chan, T. K., Hopkins, P. F., & Murray, N. 2019, MNRAS, 488, 1248.

18. *FIRE-2 simulations: Physics versus numerics in galaxy formation*. Hopkins, P. F., Wetzel, A., Kereš, D., Faucher-Giguère, C.-A., Quataert, E., Boylan-Kolchin, M., Murray, N., Hayward, C. C., Garrison-Kimmel, S., Hummels, C., Feldmann, R., Torrey, P., Ma, X., **Anglés-Alcázar, D.**, Su, K.-Y., Orr, M., Schmitz, D., Escala, I., Sanderson, R., Grudic, M. Y., Hafen, Z., Kim, J.-H., Fitts, A., Bullock, J. S., Wheeler, C., Chan, T. K., Elbert, O. D., & Narananan, D. 2018, MNRAS, 480, 800.

17. *Black holes on FIRE: Stellar feedback limits early feeding of galactic nuclei*. **Anglés-Alcázar, D.**, Faucher-Giguère, C.-A., Quataert, E., Hopkins, P. F., Feldmann, R., Torrey, P., Wetzel, A., & Kereš, D. 2017, MNRAS 472, L109.

16. *The cosmic baryon cycle and galaxy mass assembly in the FIRE simulations*. **Anglés-Alcázar, D.**, Faucher-Giguère, C.-A., Kereš, D., Hopkins, P. F., Quataert, E., & Murray, N. 2017, MNRAS, 470, 4698.

15. *Low-redshift lyman limit systems as diagnostics of cosmological inflows and outflows*. Hafen, Z., Faucher-Giguère, C.-A., **Anglés-Alcázar, D.**, Keres, D., Feldmann, R., Chan, T. K., Quataert, E., Murray, N., & Hopkins, P. F. 2017, MNRAS, 469, 2292.

14. *Metal flows of the circumgalactic medium, and the metal budget in galactic halos*. Muratov, A. L., Keres, D., Faucher-Giguère, C.-A., Hopkins, P. F., Ma, X., **Anglés-Alcázar, D.**, Chan, T. K., Torrey, P., Hafen, Z. H., Quataert, E., & Murray, N. 2017, MNRAS, 468, 4170.

13. *The structure and dynamical evolution of the stellar disk of a simulated Milky Way-mass galaxy*. Ma, X., Hopkins, P. F., Wetzel, A. R., Kirby, E. N., **Anglés-Alcázar, D.**, Faucher-Giguère, C.-A., Keres, D., & Quataert, E. 2017, MNRAS, 467, 2430.

12. *Gravitational torque-driven black hole growth and feedback in cosmological simulations*. **Anglés-Alcázar, D.**, Davé, R., Faucher-Giguère, C.-A., Özel, F., & Hopkins, P. F. 2017, MNRAS, 464, 2840.

11. *The impact of environment and mergers on the HI content of galaxies in hydrodynamic simulations*. Rafieferantsoa, M., Davé, R., **Anglés-Alcázar, D.**, Katz, N., Kollmeier, J. A., & Oppenheimer, B. D. 2015, MNRAS, 453, 3980.

10. *Torque-limited growth of massive black holes in galaxies across cosmic time*. **Anglés-Alcázar, D.**, Özel, F., Davé, R., Katz, N., Kollmeier, J. A., & Oppenheimer, B. D. 2015, ApJ, 800, 127.

9. *On the shape of the mass-function of dense clumps in the Hi-GAL fields. II. Using Bayesian inference to study the clump mass function*. Olmi, L., **Anglés-Alcázar, D.**, Elia, D., Molinari, S., Pestalozzi, M., Pezzuto, S., Schisano, E., Testi, L., & Thompson, M. 2014, A&A, 564, 87.

8. *Modeling the evolution of galaxies and massive black holes across cosmic time* . **Anglés-Alcázar, D.** 2014, ProQuest Dissertations And Theses (Ph.D., The University of Arizona), ISBN: 9781321144918.

7. *Cosmological zoom simulations of $z = 2$ galaxies: The impact of galactic outflows*. **Anglés-Alcázar, D.**, Davé, R., Özel, F., & Oppenheimer, B. D. 2014, ApJ, 782, 84.

6. *Black hole-galaxy correlations without self-regulation*. **Anglés-Alcázar, D.**, Özel, F., & Davé, R. 2013, ApJ, 770, 5.

5. *On the shape of the mass-function of dense clumps in the Hi-GAL fields. I. Spectral energy distribution determination and global properties of the mass-functions*. Olmi, L., **Anglés-Alcázar, D.**, Elia, D., Molinari, S., Montier, L., Pestalozzi, M., Pezzuto, S., Polychroni, D., Ristorcelli, I., Rodon, J., Schisano, E., Smith, M. D., Testi, L., & Thompson, M. 2013, A&A, 551, A111.

4. *The BLAST survey of the Vela Molecular Cloud: Dynamical properties of the dense cores in Vela-D*. Olmi, L., **Anglés-Alcázar, D.**, De Luca, M., Elia, D., Giannini, T., Lorenzetti, D., Massi, F., Martin, P. G., & Strafella, F. 2010, ApJ, 723, 1065.

3. *A Herschel study of YSO evolutionary stages and formation timelines in two fields of the Hi-GAL survey*. Elia, D., Schisano, E., Molinari, S., Robitaille, T., **Anglés-Alcázar, D.**, Bally, J., Battersby, C., Benedettini, M., Billot, N., Calzoletti, L., di Giorgio, A. M., Faustini, F., Li, J. Z., Martin, P., Morgan, L., Motte, F., Mottram, J. C., Natoli, P., Olmi, L., Paladini, R., Piacentini, F., Pestalozzi, M., Pezzuto, S., Polychroni, D., Smith, M. D., Strafella, F., Stringfellow, G. S., Testi, L., Thompson, M. A., Traficante, A., & Veneziani, M. 2010, A&A, 518, L97.

2. *BLAST: Study of the earliest stages of galactic star formation*. **Anglés-Alcázar, D.**, Ade, P. A. R., Bock, J. J., Brunt, C., Chapin, E. L., Devlin, M. J., Dicker, S., Griffin, M., Gundersen, J. O., Halpern, M., Hargrave, P. C., Hughes, D. H., Klein, J., Marsden, G., Martin, P. G., Mauskopf, P., Netterfield, C. B., Olmi, L., Pascale, E., Patanchon, G., Rex, M., Scott, D., Semisch, C., Truch, M. D. P., Tucker, C., Tucker, G. S., Viero, M. P., Wiebe, D. V. 2010, Highlights of Spanish Astrophysics V. Proceedings of the VIII Scientific Meeting of the Spanish Astronomical Society.

1. *The Blast survey of the Vela Molecular Cloud: Physical properties of the dense cores in Vela-D*. Olmi, L., Ade, Peter A. R., **Anglés-Alcázar, D.**, Bock, J. J., Chapin, E. L., De Luca, M., Devlin, M. J., Dicker, S., Elia, D., Fazio, G. G., Giannini, T., Griffin, M., Gundersen, J. O., Halpern, M., Hargrave, P. C., Hughes, D. H., Klein, J., Lorenzetti, D., Marengo, M., Marsden, G., Martin, P. G., Massi, F., Mauskopf, P., Netterfield, C. B., Patanchon, G., Rex, M., Salama, A., Scott, D., Semisch, C., Smith, H. A., Strafella, F., Thomas, N., Truch, M. D. P., Tucker, C., Tucker, G. S.,Viero, M. P.. Wiebe, D. V. 2009, ApJ, 707, 1836.

Publications outside astrophysics

- *Assessing the impact of grass invasion on the population dynamics of a threatened Caribbean dry forest cactus*. Rojas-Sandoval, J., Meléndez-Ackerman, E., & **Anglés-Alcázar, D.** 2016. Biological Conservation 196: 156-164.

Presentations at scientific meetings and seminars

12/2024	Cosmology and Galaxy Astrophysics with Simulations and Machine Learning, NYC, USA.
10/2024	Ringberg Workshop on Computational Galaxy Formation, Ringberg, Germany.
10/2024	IAC Winter School 2024, Canary Islands, Spain.
10/2024	Physics & Astronomy Colloquium, Colby College, USA.
09/2024	Simons Collaboration on Learning the Universe Annual Meeting, NYC, USA.
08/2024	FIRE PI Collaboration Workshop, Northwestern University, USA.
06/2024	Cosmic Odysseys 2024, Crete, Greece.
06/2024	Hot Dust Obscured Galaxies collaboration meeting, Crete, Greece.
05/2024	Yale Mini-Conference on Coding Pedagogy in Astronomy, Yale University, USA.
05/2024	Bridging Scales in the Black Hole Accretion-Feedback Problem, Harvard University, USA.
05/2024	Astronomy Seminar, University of Vienna, Vienna, Austria.
04/2024	Recipes to regulate star formation at all scales, 2024 STScI Spring Symposium, USA.
04/2024	Physics and Astronomy Seminar, University of Victoria, Canada.
04/2024	Astronomy Colloquium, University of British Columbia, Canada.
04/2024	NASA Galaxies Science Interest Group Seminar.
03/2024	Physics Colloquium, Southern Illinois University, Carbondale, USA.
03/2024	Los Alamos Astrophysics Distinguished Seminar, LANL, USA.
02/2024	Astronomy Colloquium, Pennsylvania State University, USA.
02/2024	Astronomy Seminar, University of Southampton, UK.
02/2024	Physics and Astronomy Colloquium, Georgia State University, Atlanta, USA.
12/2023	New Simulations for New Problems in Galaxy Formation, IAP, Paris, France.
12/2023	Black Holes on Broadway, Simons Foundation, NYC, USA.
11/2023	Debating the Potential of Machine Learning in Astronomical Surveys, IAP/CCA.
10/2023	NSF meta-workshop on AI to Accelerate Science and Engineering Discovery.
09/2023	Enhance Networking and Gathering on Agn in Galaxy Evolution meeting, Madrid, Spain.
09/2023	Simons Collaboration on Learning the Universe Annual Meeting, NYC, USA.
08/2023	FIRE PI Collaboration Workshop, Massachusetts Institute of Technology, USA.
07/2023	Incentivizing Cultural Change, Cottrell Scholar Conference, Tucson, USA.
05/2023	SIMBA Collaboration Workshop, Simons Foundation, NYC, USA.
03/2023	Deep dive into central supermassive black holes, Flatiron Institute, NYC, USA.
12/2022	CAMELS Workshop, Simons Foundation, NYC, USA.
11/2022	Astronomy Colloquium, Wesleyan University, USA.
09/2022	What drives the growth of black holes: a decade of reflection, Reykjavik, Iceland.
09/2022	Simons Collaboration on Learning the Universe Annual Meeting, NYC, USA.
07/2022	The Three Hundred Clusters Workshop, Madrid, Spain.

07/2022 Machine Learning in the era of peta and exabyte scale surveys, EAS 2022.
06/2022 The Interstellar Medium of Infrared Galaxies from the Present to Cosmic Noon, EAS 2022.
06/2022 Properties and impact of large-scale multiphase AGN outflows, EAS 2022.
04/2022 IV Workshop on Numerical and Theoretical Astrophysics, Santiago, Chile.
04/2022 Astronomy Seminar, Donostia International Physics Center, Spain.
02/2022 Astronomy Colloquium, Royal Observatory Edinburgh, UK.
10/2021 Spergelfest 2021, Princeton University and Flatiron Institute.
07/2021 Cosmology from Home 2021.
07/2021 The many faces of black hole accretion, EAS 2021.
07/2021 Massive Galaxies: The Build-up of Monsters Through Cosmic History, EAS 2021.
10/2020 Astronomy Colloquium, University of Massachusetts Amherst, USA.
10/2020 Astrophysics Seminar, Hebrew University of Jerusalem, Israel.
02/2020 SIMBA Collaboration Workshop, Flatiron Institute, NYC, USA.
10/2019 CGM Berlin 2019 Workshop, Berlin, Germany.
09/2019 Astrophysics Seminar, Observatorio Astronómico Nacional, Madrid, Spain.
06/2019 Feedback and its Role in Galaxy Formation, Spetses, Greece.
06/2019 Supermassive Black Holes: Environment and Evolution, Corfu, Greece.
04/2019 The accretion signatures onto the earliest black holes, Princeton University, USA.
03/2019 Astronomy & Astrophysics Colloquium, Yale University, USA.
02/2019 Astrophysics Seminar, Department of Physics, University of Connecticut, USA.
02/2019 Center for Computational Astrophysics Seminar, Flatiron Institute, NYC, USA.
12/2018 TORUS 2018: The many faces of AGN obscuration, Puerto Varas, Chile.
11/2018 Astrophysics Seminar, Department of Physics, University of Connecticut, USA.
11/2018 Local Group Local Group meeting, Columbia University, USA.
08/2018 Circumgalactic Medium Workshop, Northwestern University, USA.
07/2018 Kavli Summer Program in Astrophysics 2018, Flatiron Institute, NYC, USA.
06/2018 Massive black holes in evolving galaxies, Institut d'Astrophysique de Paris, France.
06/2018 CCA/STScI Epoch of Reionization with JWST Workshop, Flatiron Institute, NYC, USA.
05/2018 Accretion and Feedback on Mesoscales Around Black Holes, Flatiron Institute, NYC, USA.
03/2018 Ringberg Workshop 2018 on Computational Galaxy Formation, Ringberg, Germany.
03/2018 2018 CCA Flatiron Fellows Symposium, Flatiron Institute, NYC, USA.
12/2017 Center for Computational Astrophysics Lunch Talk, Flatiron Institute, NYC, USA.
12/2017 Astrophysics Seminar, American Museum of Natural History, NYC, USA.
11/2017 Astrophysics Seminar, Department of Physics, University of Notre Dame, USA.
10/2017 Scientific Visualization Conference, Flatiron Institute, USA.
08/2017 The Circle of Life: IGM, CGM, and ISM, Kruger Park, South Africa.
07/2017 The Galaxy Ecosystem: Flow of Baryons Through Galaxies, Garching, Germany.
06/2017 European Week of Astronomy and Space Science 2017, Prague, Czech Republic.
06/2016 Computing the Universe, Oaxaca, Mexico.
05/2016 Ringberg Workshop 2016 on Computational Galaxy Formation, Ringberg, Germany.
04/2016 The Interplay between Local and Global Processes in Galaxies, Cozumel, Mexico.
04/2016 CIERA Theory Meeting, Northwestern University, USA.
01/2016 Feedback In Realistic Environments Workshop, University of California Berkeley, USA.
12/2015 CIERA Research Jamboree, Northwestern University, USA.
11/2015 Leonard E. Parker CGCA Seminar, University of Wisconsin, USA.
11/2015 Physics Department Colloquium, Grinnell College, USA.
09/2015 Third Annual NUPF Research Symposium, Northwestern University, USA.
08/2015 2015 Santa Cruz Galaxy Workshop, University of California Santa Cruz, USA.
07/2015 Guillermo Haro Workshop for Advance Astrophysical Research, INAOE, Puebla, Mexico.
07/2015 Accretion and Feedback in the Circum-Galactic Medium, Aspen Center For Physics, USA.

02/2015	Physics & Astronomy Brown Bag Lunch Seminar, Northwestern University, USA.
01/2015	Feedback In Realistic Environments Workshop, California Institute of Technology, USA.
01/2015	Theory Seminar, The Carnegie Observatories, Pasadena, USA.
07/2014	Feedback In Realistic Environments Workshop, Northwestern University, USA.
02/2014	Astronomy Journal Club, Northwestern University, USA.
01/2014	American Astronomical Society 223rd Meeting, Washington DC, USA.
11/2013	South African Astronomical Observatory Colloquium, Cape Town, South Africa.
11/2013	The Emergence of Disk Galaxies, Centre for Extragalactic Theory, Cape Town, South Africa.
10/2013	Galaxy Journal Club, Space Telescope Science Institute, Baltimore, USA.
10/2013	Theory Lunch Seminar, University of Maryland, College Park, USA.
09/2013	Friday Scientific Lunch Talk, National Optical Astronomy Observatory, Tucson, USA.
08/2013	Massive Black Holes: Birth, Growth and Impact, KITP, UC Santa Barbara, USA.
01/2013	30th Jerusalem Winter School in Theoretical Physics, The Hebrew University, Israel.
12/2012	Department of Theoretical Physics Seminar, Universidad Autónona de Madrid, Spain.
12/2012	Illuminating the Galaxy-AGN Connection, Ringberg, Germany.
06/2012	The Baryon Cycle Conference, University of California, Irvine, USA.
01/2012	The Event Horizon Telescope Project Meeting, Tucson, AZ.
07/2009	Fifth NAIC/NRAO Single Dish Summer School, Arecibo Observatory, Puerto Rico.
07/2008	VIII Scientific Meeting of the Spanish Astronomical Society, Santander, Spain.
04/2008	2008 NASA EPSCoR Annual Meeting, San Juan, Puerto Rico.
01/2008	IX Puerto Rico NASA Space Grant Consortium, Annual Meeting. University of Puerto Rico.
07/2007	ESAC Trainee Meeting. European Space Astronomy Center, Madrid, Spain.

Outreach and Selected Press

Public Lectures/Outreach:

- Guided discussion for middle school students as part of Programa Explora, CONICYT (Chile).
- *EcoTarium Astronomy Speaker Series*. Public talk at Alden Planetarium, Worcester, Massachusetts.
- *Cosmic Hearth: Sky Knowledge Across Traditions*. Core speaker as part of the *To Order the Days* exhibition at the Joseloff and Silpe Galleries, Hartford Art School, University of Hartford.
- Public display of visualizations of simulations from the CAMELS project throughout the streets of New York City on the digital displays of LinkNYC.
- CAMELS simulations featured in European Space Agency's public trailer to advertise the Euclid mission.
- Animation zooming into simulated supermassive black hole with >40,000 views in YouTube.
- *Una breve historia de agujeros negros y galaxias*. Public talk, Madrid, Spain.
- *Astronomers share their ideas of the most interesting story in the universe*. Interview for Queens Public Library Magazine.
- *Mundos Alternos: Art and Science Fiction in the Americas*. Core speaker as part of the *Meet the Scientist* program, Queens Museum and Queens Public Library.

Appearances in Radio and TV:

- *Apprendimento automatico a dorso di Camels*. CAMELS project featured in Media INAF TV.
- *Cosmology talks.* YouTube playlist featuring videos presenting CAMELS results.
- *How does a black hole eat?* Interview with Quirks & Quarks host Bob McDonald, CBC Radio.
- *Are we Immigrants in our own Galaxy? Understanding Intergalactic Transfer*. Fox 5 News.
- *Every one of us contains alien atoms that originated in a galaxy far, far away*. BBC Radio 4.
- *Stuff Matters: Inter-Galactic Mass Transfer*. 8 O'Clock Buzz, WORT Community Radio.

Written press (English):

- *Astrophysicists Show How to 'Weigh' Galaxy Clusters with Artificial Intelligence.* UConn Today.

- *Artificial Intelligence Discovers Secret Equation for "Weighing" Galaxy Clusters.* Simons Foundation News.
- *RCSA Welcomes 2023 Class of Cottrell Scholars.* Research Corporation for Science Advancement News.
- *What's it like to be a PROFESSIONAL ASTRONOMER?* June 2022 issue of BBC Sky at Night Magazine.
- *What Can We Learn About the Universe from Just One Galaxy?* The New Yorker.
- *How astronomers build the Universe in a computer.* BBC Sky at Night Magazine.
- *Any Single Galaxy Reveals the Composition of an Entire Universe.* Quanta Magazine.
- *The Largest Suite of Cosmic Simulations for AI Training Is Now Free to Download; Already Spurring Discoveries.* UConn Today.
- *The Lives of Black Holes and Galaxies: New Models for All Scales of Motion.* Yale Scientific Magazine.
- *This is How a Supermassive Black Hole Feeds.* Universe Today.
- *New simulation shows how galaxies feed their supermassive black holes.* Northwestern Now.
- *Massive Black Holes and Quasars in Supercomputer Simulations.* Simons Foundation News.
- *Cracking a Mystery of Massive Black Holes and Quasars with Supercomputer Simulations.* UConn Today.
- *Record-Breaking Suite of Cosmic Simulations Aims to Identify Universe's Parameters.* Simons Foundation.
- *Revolutionizing Simulations of the Universe With AI.* Simons Foundation Annual Report.
- *We are all made of stars: half our bodies' atoms formed beyond the Milky Way.* The Guardian.
- *Turns out we may all be made of stardust, scientists say.* CNN.
- *Here's the Surprising Way the Milky Way Galaxy Got So Massive.* NBC News.
- *We all could be made of extragalactic space matter from supernova explosions.* USA Today.
- *We Are All Extragalactic Immigrants From Galaxies Far, Far Away.* Forbes.
- *Half the atoms inside your body came from across the universe.* New Scientist.
- *Milky Way May Be Made with Swapped Gas.* Sky & Telescope.
- *The Intergalactic Winds That Built the Milky Way.* The Atlantic.

Written press (Spanish):

- *Por qué somos viajeros espaciales.* BBC Mundo.
- *Parte de nosotros parece ser materia extragaláctica.* El Universal.
- *La mitad de nuestros átomos vendría de una galaxia lejana.* Telemundo.
- *Los seres humanos podrían estar hechos en parte de materia extragaláctica.* Antena 3 TV.
- *Los átomos de nuestro cuerpo proceden de galaxias lejanas.* ABC.
- *La mitad de los átomos de tu cuerpo llegaron de más allá de nuestra galaxia.* El Español.
- *La mitad de nuestros átomos podría venir de fuera de la galaxia.* Muy Interesante.

References

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