SHUOWEN JIN

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ACADEMIC EXPERIENCE

Cosmic Dawn Center & DTU Space, Denmark
Marie Curie Fellow *07/2022 – present*
Postdoctoral fellowship *09/2021 – 06/2022*

Univercité Paris-Salcay, France *04/2021 – 07/2021*
Visiting Scholar

Instituto de Astrofísica de Canarias (IAC), Spain *01/2019 – 02/2021*
Postdoctoral researcher

Nanjing University, China *11/2018 – 01/2019*
Research associate

EDUCATION

Nanjing University, PhD in Astronomy *09/2014 – 09/2018*
Thesis: *Far-Infrared to (sub)millimeter study of high redshift galaxies in the COSMOS field*
Supervisors: Dr. Emanuele Daddi, Prof. Qiusheng Gu

CEA Paris-Saclay, France *10/2015 – 10/2017*
PhD Fellowship
Supervisor: Dr. Emanuele Daddi

Purple Mountain Observatory, China *09/2011 – 07/2014*
MSc in Astrophysics
Supervisors: Profs. Longlong Feng, Qiusheng Gu

Sichuan Normal University, China *09/2007 – 07/2011*
BSc in Physics

SCIENTIFIC FOCUS

Observational cosmology and galaxy evolution: I focus on the study of galaxies and galaxy clusters in the early universe aiming to shed light on their formation, their growth, and the evolution of their properties. I specialise on deep multi-wavelength cosmological surveys with an emphasis on infrared, (sub)mm and radio observations.

GRANTS/AWARDS

Marie Skodowska-Curie Actions Postdoctoral Fellowship, 2022 – 2024
AAS & IOP China Top Cited Paper Award 2022
AAS & IOP China Top Cited Paper Award 2021
China Scholarship Council (CSC) PhD Fellowship, 2015 – 2017

DATA PRODUCT

COSMOS FIR+(sub)mm+radio Super-deblended catalog:
Deblended photometry of Herschel/PACS & SPIRE, SCUBA2, AzTEC, MAMBO and VLA for 200k galaxies.

SELECTED PUBLICATIONS

See full publication list in ADS library — Statistic: 71 papers (7 as the 1st author, 4 as the supervisor, 1 as the 2nd author); Total citations: 1321; H-index: 22.

First author publications:

- ***Cosmic Vine: A z=3.44 Large-Scale Structure Hosting Massive Quiescent Galaxies**
  S. Jin, N. Sillassen, G. Magdis, M. Brinch et al. 2023, A&A Letter 683L, 4J
- **Massive galaxy formation caught in action at $z \sim 5.2$ with JWST**
  S. Jin, N. Sillassen, G. Magdis, G. Brammer et al. 2023, A&A Letter 670, L11
- **Diagnosing deceivingly cold dusty galaxies at $3.5 < z < 6$: A substantial population of compact starbursts with high infrared optical depths**
  S. Jin, E. Daddi, G. Magdis, D. Liu et al. 2022, A&A 665, A3
- **COALAS: I. ATCA CO(1-0) Survey and Luminosity Function in the Spiderweb Protocluster at z=2.16**
  S. Jin, H. Dannerbauer, B. Emonts, M. Lehnert, P. Serra et al. 2021, A&A 625, A11
- **Discovery of Four Apparently Cold Dusty Galaxies at z = 3.62-5.85 in the COSMOS Field: Direct Evidence of Cosmic Microwave Background Impact on High-redshift Galaxy Observables**
  S. Jin, E. Daddi, G. Magdis, D. Liu, E. Schinnerer, et al. 2019, ApJ 887, 144 — **AAS & IOP China Top Cited Paper Award 2022**
- **"Super-deblended" Dust Emission in Galaxies: II. the Far-IR to (sub)millimeter photometry and high redshift candidates in the full COSMOS field**
  S. Jin, E. Daddi, D. Liu, V. Smolcic, E. Schinnerer et al. 2018, ApJ 864, 56 — **AAS & IOP China Top Cited Paper Award 2021**
- **Color-magnitude distribution of face-on nearby galaxies in Sloan digital sky survey DR7**
  S. Jin, Q. Gu, S. Huang, Y. Shi and L. Feng. 2014, ApJ 787, 63

Supervised publications:

- **"Dust Giant": Extended and Clumpy Star-Formation in a Massive Dusty Galaxy at $z = 1.38$**
  V. Kokorev, **S. Jin**, C. Gómez-Guijarro, G. E. Magdis, et al. 2023, arXiv:2305.09709 (A&A in press)
- **An Ultra-deep Multi-band VLA Survey of the Faint Radio Sky (COSMOS-XS): New Constraints on the Optically Dark Population**
  D. van der Vlugt, J. A. Hodge, **S. Jin** et al. 2023, ApJ, 951, 131
- **JWST Insight into a Lensed HST-dark Galaxy and its Quiescent Companion at z=2.58**
  V. Kokorev, **S. Jin**, G. E. Magdis, K. I. Caputi, F. Valentino, P. Dayal, M. Trebitsch, G. Brammer, S. Fujimoto et al. 2023, ApJ 945L, 25K
- **A galaxy group candidate at $z \approx 3.7$ in the COSMOS field**
  N. Sillassen, **S. Jin**, G. E. Magdis, E. Daddi, J. R. Weaver, R. Gobat et al. 2022, A&A Letter 665, L7

Second author publication:

- **Radio selection of the most distant galaxy clusters**
  E. Daddi, **S. Jin**, V. Strazzulo, M. Sargent, T. Wang, C. Ferrari et al. 2017, ApJL 846, L31

TELESCOPE TIME ALLOCATION

PI projects

- **NOEMA**: S23CT (5.4 hrs); W22EA (28.4 hrs); W22DV (6.8 hrs); S22CW (24 hrs); S22DB (26.2 hrs); W20EE (6.4 hrs); W20DM (28.8 hrs); S18DI (32 hrs) — **Total time: 158.4 hours**.
- **ALMA**: 2022.1.00884.S (8.7 hours); 2022.1.00322.S (3.3 hours); 2017.1.00373.S (6.6 hours) — **Total time: 18.6 hours**.
- **VLT**: 112.25JF (6 hours).

Co-I projects (major contribution)

- NOEMA Large Program "NICE", ID: M21AA, 159 hours, PIs: E. Daddi, T. Wang
- NOEMA S18DA, 36 hours, PI: E. Daddi
- ATCA Large Program "COALAS", ID: C3181, 820 hours, PI: H. Dannerbauer

INVITED PRESENTATIONS

Seminar

- 06/06/2023, Colloquium talk, Observatory of Rome, Italy, "Massive Galaxies and Clusters in the Making: Multi-wavelength study of optically-dark SMGs and galaxy overdensities at $z > 2.5$"
- 19/09/2022, online lunch talk for Yunnan University, China, "Unveiling the nature of optically-dark galaxies: A substantial population of compact starbursts with high infrared optical depths"
- 01/04/2021, Xiamen University, China, "Extreme properties in distant dusty galaxies and the molecular gas reservoirs in high-z protocluster"
- 20/01/2021, virtual seminar at LAM, Marseille, "Super-deblending: A powerful tool to search for the most distant or otherwise extreme dusty galaxies"
- 08/10/2019, CSIRO Marsfield, Australia, "A population of extremely cold dusty galaxies at z=3–6: direct evidence of CMB impact on high-z galaxy observables"
- 02/04/2019, NRAO, Charlottesville, "Extremely cold dusty galaxies at z=4–6: first direct evidence of CMB impact on high-z galaxy observables"

Conference

- 15/11/2021, Sino-French Workshop on high-z galaxies and clusters, "Massive dusty galaxies at z=3–6 revealed by ALMA and NOEMA"
- 21/09/2021, DAWN summit, "Diagnosing Optically Thick Dust in Apparently Cold Galaxies at z∼4"
- 01/09/2020, Workshop on Protoclusters: Galaxies in Confinement, "CO luminosity function of the Spiderweb protocluster at z=2.16"

PRESS RELEASES (PR)

PR by DAWN Early galaxy formation caught in the act with James Webb
PR by DAWN Shuowen Jin receives the 2022 IOP China Top Cited Paper Award
PR by IOP publishing China Authors Behind the Top-Cited Papers
PR by DAWN Master student discovers a group of galaxies clustered together in the early Universe
PR by DAWN Shuowen Jin started the Marie Curie project FIRSTDUST at DAWN
PR by DAWN Radio- and microwaves reveal the true nature of dark galaxies in the early Universe
PR by DAWN Shuowen Jin receives the 2021 IOP China Top Cited Paper Award
PR by NJU: Dr. Jin & Prof. Cheng won IOP 2021 China Top Cited Paper Award
PR by IAC: *A challenge to models of star-formation truncation in massive galaxies*
PR by COSMOS: COSMOS Super-deblend catalogue

SUPERVISION

MSc Students: N. Sillassen (DTU)
Co-supervised PhD Students: N. Sillassen (DAWN), M. Brinch (DAWN), V. Kokorev (DAWN), A. Le Bail (CEA Saclay), M. Shuntov (IAP)

MAIN INTERNATIONAL COLLABORATIONS AND PROJECTS

Major International Collaborations
CEA Paris-Saclay (France), PUCV (Chile), Institut Astrophysique de Paris (France), Instituto de Astrofsica de Canarias (Spain), Max Plank Institute for Extraterrestrial Physics (Germany), Nanjing University (China), Leiden University (Netherland)
Major International Projects/Teams
COSMOS, COSMOS-web, Cosmic Dawn Survey, MIGHTEE, Euclid

LANGUAGES

English (advanced), Chinese (native), French (basic)