

Michael G. Jones

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Education

Cornell University

Ithaca, NY, USA

PHD & MS – ASTRONOMY

2011-2016

Supervisors: Martha P. Haynes & Riccardo Giovanelli

University of Cambridge – Fitzwilliam College

Cambridge, UK

MSCI & BA – NATURAL SCIENCES (ASTROPHYSICS)

2007-2011

Employment

University of Arizona

Tucson, AZ, USA

2020 - present

- Post-doctoral researcher with David Sand (Nov. 2020 – present)

Instituto de Astrofísica de Andalucía

Granada, Spain

2016 - 2020

- Juan de la Cierva formación post-doctoral fellow (May 2018 – Sep. 2020)
- Post-doctoral researcher with Lourdes Verdes-Montenegro (July 2016 – Apr. 2018)

Talks & Seminars

CONFERENCES

Aug. 2019	MIAPP , Ω_{HI} at $z \approx 0$ from ALFALFA	Contributed
Apr. 2019	SKA Science Meeting , Towards a FAIR understanding of compact group evolution	Contributed
Aug. 2018	Lorentz Center , Estimating the abundance of gas-bearing UDGs	Contributed
June 2018	PHISCC , What drives evolution in compact groups?	Contributed
Feb. 2017	PHISCC , HI scaling relations of the most isolated galaxies	Contributed
Nov. 2016	3GC4 , ALFALFA HIMF: Accounting for uncertainty and bias	Contributed
Jan. 2016	AAS , The effects of environment in ALFALFA & limitations of HI surveys	Contributed
Mar. 2015	PHISCC , Spectroscopic confusion: Its impact on HI surveys and stacking	Contributed

COLLOQUIA AND SEMINARS

Feb. 2022	STScI , Young, blue, and isolated stellar systems in the Virgo cluster	Seminar
Nov. 2021	RIT , Are they even galaxies? Extreme mass-to-light ratio, gas-rich systems	Colloquium
Sept. 2021	Arizona State University , Ultra-diffuse galaxy formation through tidal interaction	Seminar
Jan. 2021	Steward Observatory , The cool gas content of galaxies from isolation to dense groups	Seminar
Feb. 2018	Kapteyn Institute , HI-bearing ultra-diffuse galaxies and the HI mass function	Colloquium
Oct. 2017	University of Exeter , HI galaxy surveys	Seminar
Aug. 2017	ICRAR , HI scaling relations of isolated galaxies	Seminar
Aug. 2017	ICRAR , ALFALFA 100% HI mass function	Seminar
Feb. 2017	IAA , The impact of environment and confusion on the HI galaxy population	Seminar
July 2015	ASTRON , The environmental dependence of the HI mass function in $\alpha.70$	Seminar

Observing Time & Experience

- 2021 **VLA**, PI of 42.75 hr project to map HI gas in 10 satellite systems.
- 2021 **HST**, PI of SNAP project to detect globular clusters in field UDGs.
- 2020 **CFHT**, Co-I of 8 hr MEGACAM project to observe 47 satellites in 10 systems in H α .
- 2021 **GBT**, 3.75 hr of DDT awarded to obtain HI mass constraints on blue Virgo dwarf.
- Arecibo**, Over 300 hours of time awarded as co-PI of the project the Arecibo Pisces–Perseus Supercluster Survey. Over 100 hours observing experience with the ALFA and LBW instruments as part of the ALFALFA team for the main survey and associated projects.
- 2018 **GTC**, PI of 25 hr of MEGARA IFU project to observe blue, field ultra-diffuse galaxies.
- 2018 **NOT**, 3 nights of observing with the ALFOSC instrument on the NOT in La Palma.
- 2018 **Kuiper 61'**, 4 nights of observing with the Mont4K imager.

Funding, Awards & Honours

- 2021 **HST SNAP program**, HST-SNAP-16758 grant of \$54,885. *STScI*
- 2017 **Juan de la Cierva fellowship**, a competitive, national-level (Spain) 2 year post-doctoral fellowship. *IAA*
- 2015 **Eleanor York Prize**, for service to the community and academic achievement. *Cornell*
- 2015 **Travel Grant**, for conference travel from Cornell's graduate school. *Cornell*
- 2011 **Newton Prize**, for excellence in sciences while contributing to college life. *Cambridge*
- 2011 **1912 Senior Scholarship**, for achieving a Class I degree in 4th year. *Cambridge*

Teaching & Outreach

Mentoring

Mentoring of Cornell students Jeremy Borden, Johnathan Gomez Barrientos, Johnathan Letai, and UA student Juzhen Lin, while working on astronomy undergraduate research projects. Mentored AP Research high school student Isabel Doty.

Community College Python Course

Lectured/demonstrated as part of an astronomy-themed introductory Python course for Pima Community College students.

Teaching Assistant

2 years as a teaching assistant for introductory astronomy classes at Cornell. Responsibilities included leading 2 weekly 1 hour sections (up to 30 students each), as well as writing and grading homework and exams.

Guest Lectures

Performed guest lectures to several undergraduate classes at Cornell, including 1st year writing seminars and a 200-student astronomy class.

Undergraduate ALFALFA Team

Demonstrated observing, lectured and tutored students as part of the UAT workshop at Arecibo observatory.

Workshop Seminars

Co-wrote and led workshop seminars on Python and TOPCAT for undergraduates working on summer research projects.

Ask an Astronomer

Answered questions weekly as part of Cornell's Ask an Astronomer web service. Participated in a highly successful Reddit Ask Me Anything event.

Local Outreach

While at Cornell I participated annually in local outreach events Museum in the Dark and Focus for Teens.

Journal Club

Created a journal club at the IAA for students and post-docs to discuss recent papers and background for upcoming seminars.

First Author Papers

Young, blue, and isolated stellar systems in the Virgo Cluster. II. A new class of stellar system

Submitted to ApJ

Jones et al. 2022

AGC 226178 and NGVS 3543: Two deceptive dwarfs towards Virgo

ApJL 926, 15

Jones et al. 2022

Evidence for ultra-diffuse galaxy formation through tidal heating of normal dwarfs

ApJ 919, 72

Jones et al. 2021

The HI mass function of group galaxies in the ALFALFA survey

MNRAS 494, 2090-2108

Jones et al. 2020

Evolution of compact groups from intermediate to final stages: A case study of the HI content of HCG 16

A&A 632, A78

Jones et al. 2019

The ALFALFA HI mass function: A dichotomy in the low-mass slope and a locally suppressed knee mass

MNRAS 477, 2-17

Jones et al. 2018c

The contribution of HI-bearing ultra-diffuse galaxies to the cosmic number density of galaxies

A&A 614, A21

Jones et al. 2018b

The AMIGA sample of isolated galaxies XIII. The HI content of an almost “nurture free” sample

A&A 609, A17

Jones et al. 2018a

The environmental dependence of the HI mass function in ALFALFA 70%

MNRAS 457, 4393-4405

Jones et al. 2016b

When is stacking confusing?: The impact of confusion in deep HI galaxy surveys

MNRAS 455, 1574-1583

Jones et al. 2016a

Spectroscopic confusion: Its impact on current and future extragalactic HI surveys

MNRAS 449, 1856-1868

Jones et al. 2015

The relationship between accretion disc age and stellar age and its consequences for protostellar discs

MNRAS 419, 925-935

Jones et al. 2012

Select Co-author Papers

Tucana B: An Isolated and Quenched Ultra-faint Dwarf Galaxy at D=1.4 Mpc

Submitted to ApJ

Sand et al. 2022

Decoding the star forming properties of gas-rich galaxy pairs

Accepted to MNRAS

Bok et al. 2022

Hubble Space Telescope Observations of NGC 253 Dwarf Satellites: Three Ultra-faint Dwarf Galaxies

ApJ 926, 77

Mutlu-Pakdil et al. 2022

Satellites around Milky Way Analogs: Tension in the number and fraction of quiescent satellites seen in observations versus simulations

ApJL 916, 19

Karunakaran et al. 2021

Star formation and quenching of central galaxies from stacked HI measurements

ApJ 918, 53

Guo et al. 2021

MeerKAT-64 discovers wide-spread tidal debris in the nearby NGC 7232 galaxy group

MNRAS 505, 3795-3809

Namumba et al. 2021

A diffuse tidal dwarf galaxy destined to fade out as a “dark galaxy”

A&A 649, L14

Román et al. 2021

HI study of isolated and paired galaxies: the MIR SFR-M* sequence

MNRAS 499, 3193-3213

Bok et al. 2020

WALLABY – An SKA Pathfinder HI Survey

ApSS 365, 118

Koribalski et al. 2020

Direct Measurement of the HI-halo Mass Relation through Stacking

ApJ 894, 92

Guo et al. 2020

The environment of HI-bearing ultra diffuse galaxies in the ALFALFA survey

MNRAS 490, 566-577

Janowiecki et al. 2019

The Arecibo Pisces-Perseus Supercluster Survey. I. Harvesting ALFALFA

ApJ 157, 81

O'Donoghue et al. 2019

The Arecibo Legacy Fast ALFA Survey: The ALFALFA Extragalactic HI Source Catalog

ApJ 861, 49

Haynes et al. 2018

The Clustering of ALFALFA Galaxies: Dependence on H I Mass, Relationship with Optical Samples, and Clues of Host Halo Properties

ApJ 776, 43

Papastergis et al. 2013