GEORGIOS E. MAGDIS

Associate Professor - Villum Young Investigator
Cosmic DAWN Center - Niels Bohr Institute - University of Copenhagen

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RESEARCH INTEREST

My research lies in the area of observational cosmology and galaxy evolution. I focus on the study of the physical properties (e.g. stellar mass, star-formation rate, ISM) of distant galaxy populations aiming to shed light on the birth, formation, mass build-up, and evolution of galaxies throughout cosmic time. For my research, I use multi-wavelength data (ranging from X-rays to radio) and I specialise in infrared/submm/radio space as well as ground-based observations. I am leading and actively participate in numerous projects that aim to pioneered our view of galaxy evolution, develop new methods and tools to detect distant galaxy populations and study their physical properties in order to understand the origins and the history of our Cosmos.

EDUCATION

University of Oxford, UK *October 2008*
DPhil in Astrophysics
Thesis title: Mid-Infrared Studies of Lyman Break Galaxies with the Spitzer Space Telescope
University of Crete, GR *September 2005*
MSc in Astrophysics
University of Crete, GR *September 2003*
BSc in Physics

ACADEMIC POSITIONS

Cosmic Dawn Center, NBI, DK *2018 -*
Co-founder, Associate Professor
Dark Cosmology Center, NBI, DK *November 2015 - April 2018*
Assistant Professor - DARK/Carlsberg Fellow
Young Investigator Program, Villum Foundation *January 2016 - present*
Group Leader
National Observatory of Athens, GR *January 2014 - present*
Adjunct Researcher
University of Oxford, UK *April 2011 - November 2015*
Post-doctoral Research Fellow
Service d'Astrophysique, CEA, Saclay, FR *November 2008 - April 2011*
Post-doctoral Fellow

FELLOWSHIPS AND SCHOLARSHIPS

DARK/Carlsberg Independent Research Fellowship, *DARK Cosmology Center* *2015 - 2018*
School of Advanced Physics graduate Scholarship, *University of Crete* *2003 - 2005*

GRANTS

Centers of Excellence, DNRF €8.5million (core member, co-founder) *2018 - 2024*
Cosmic Dawn Center of Excellence
Young Investigator Program, Villum Foundation, €700k (PI) *2016 - 2021*
Gas to stars - Stars to Dust; Exploring the star formation activity through Cosmic time
THALES Programme, €521k (co-I) *2012 - 2015*
The invisible side of formation and evolution of supermassive Black Holes in the Universe
Astrophysical Data Analysis Program, NASA, $116k (co-I) *2012*
Extreme silicate absorbers in WISE

PUBLICATIONS

I have published **120 articles** in peer reviewed journals, **13 as a first author**, that have received **more than 8000 citations** and I have an **h-index of 52** (source NASA ADS). For a full list of my publication record see separate attachment.

TEACHING EXPERIENCE

NBI, KU, DK *2018*
Lecturer for the course: "Gravitational Dynamics and Galaxy Formation" - Block 3
University of Athens, GR *2016 and 2017*
Invited lecturer on Galaxy Evolution Astronomy Summer School
University of Oxford, UK *2006 -2008 and 2011 - 2015*
Demonstrator for the 3rd undergraduate course "Astrophysics Lab"
University of Crete, GR *2003-2005*
Teaching Assistant, Demonstrator and Mark Evaluator for the courses "Classical Mechanics" and "Applied Mathematics"

SUPERVISION

Master Students
E. Paspaliaris, University of Copenhagen (Principal) *2017 - present*
Cecilie Sand Norholm, University of Copenhagen (Principal) *2017 - present*
Marina Papathanasiou, DTU (Principal) *2017 - present*
I. Cortzen, University of Copenhagen (Principal) *2015 - 2016*
PhD Students
I. Cortzen, University of Copenhagen (Principal) *2017 - present*
C. Gomez Guijarro, University of Copenhagen (co) *2017 - present*
J. Virdee, University of Oxford (co) *2012-2015*
A. Tiley, University of Oxford (co) *2013-2015*
Post-Docs
F. Vallentino, University of Copenhagen (Principle) *2017-2020*
L. Ciesla, University of Crete (co) *2013-2015*

INTERNATIONAL RECOGNITION AND AWARDS

Enhanced Eurotalents, *Proposal Reviewer* *2017*
NASA Astrophysical Data Analysis Program, *Selection Committee* *2017*
ESO, *Time Allocation Committee* *2017-2018*
ERC Starting Grant, *Proposal Referee* *2016*
Royal Astronomical Society Group Achievement Award *2014*
MNRAS, ApJ, A&A journals, *Referee* *2010 - present*
32 Invited/Contributed Talks / 19 Colloquia *2010 - present*

PRESS RELEASES AND OUTREACH

Maxwell Lecture Series, King's College, UK *2017*
Talk: The History of the Universe; A story narrated by photons
Master Intro cabin trip, Niels Bohr Institute *2017*
Talk: The Cool Cosmos
Work experience placement in astrophysics at the University of Oxford *2011 - 2015*
A week of astronomer's daily work followed by school students
Oxford Stargazing, BBC live stargazing *2014*
Oxford University Science Blog *2014*
Galactic star baby boom ended five billion years ago.
Press release by the Royal Astronomical Societ *2012*
GOODS-Herschel reveals gas mass role in creating fireworks versus beacons of star formation
Astronomy & Astrophysics Highlights *2011*
Herschel Reveals a new population of star forming Galaxies
Press release by the European Space Agency *2011*
Herschel paints a new story of galaxy evolution

SELECTED TELESCOPE TIME ALLOCATION AND OBSERVING EXPERIENCE

ALMA (selected)
Dissecting the Main Sequence of Star Formation with [CI](1-0) Observations, 11.0hrs, (PI) *2018*
Excitation conditions of the diffuse gas traced by [CI] in MS galaxies at $z \sim 1.2$*, 11.5hrs* (co-PI) *2018*
Exploring the link between [CI] and PAHs in star-forming galaxies, 72.5hrs (ACA, co-PI) *2018*
Obscuration to Reionization: A Blank-Field 2mm Deep Survey in COSMOS, 40,5hrs (co-I) *2018*
What is the Origin and Subsequent Evolution of Starbursts at $z \sim 2$*?, 19.4hrs* (co-I) *2018*
SFR and dust sizes, morphologies and dynamical masses of 42 galaxies at $z \sim 1.5$*, 15.9hrs*(co-I) *2018*
Probing the Gas Reservoirs of Lensed Quiescent Galaxies at $z = 1.6 - 3.2$ *10.6hrs*(co-I) *2018*
Towards a census of star-formation since $z \sim 6$ *with ALMA-1.1mm, 21.2hrs*, (co-I) *2017*
Quiescence of quiescent galaxies at $z \sim 2$*, 12.3hrs*, (co-I) *2017*
Direct detection of cold dust in $z \sim 1.6$ *passive early-type galaxies, 11.4hrs*, (co-I) *2017*
A [CI] survey of high-redshift main-sequence galaxies, 8hrs, (co-I) *2016*
What is the origin and subsequent evolution of starbursts at $z > 2$*, 14.6hrs*, (co-I) *2016*
How do we get to the peak of the Cosmic Star Formation Rate Density, 1.2hrs, (co-I) *2016*
Tracing the star formation law in the early Universe, 1.0hrs, (PI) *2016*
ISM physics at high−z: cold gas and CO excitation for 75 galaxies at $z \sim 1.5$*, 9.0hrs*, (co-I) *2016*
Properties of a temperature-unbiased sample of 250μm-selected galaxies at $z > 2.5$*, 5.1hrs*, (co-I) *2015*
Molecular gas content of EXTREME outliers from the SMS at $z \sim 6.4$*, 14.6hrs*, (co-I) *2015*
Probing the $z = 1.0$ *K-S law by combining ALMA and VLT KMOS observations, 4.1hrs*, (co-I) *2013*
IRAM 30m and PdBI (selected)
Exploring the connection between PAHs and cold gas in galaxies over 10 Gyr, 14.2hrs, (co-PI) *2018*
[CI] emission from a template starburst galaxy at $z = 4.05$*, 7hrs*, (PI) *2017*
Scaling Laws of star formation across cosmic time, 80hrs, (PI) *2015 - 2016*
What fuels the star formation of Lyman Break Galaxies?, 10hrs, (PI) *2014*
Bridging the local and high-z ULIRGs, 32hrs, (PI) *2014*
Probing the molecular gas reservoir of normal galaxies at $z \sim 3$*, 8hrs*, (PI) *2011*
ESO - APEX (selected)
The evolving ISM of Ultra Luminous Infrared Galaxies, 32hrs, (PI) *2013*
Herschel Space Observatory (selected)
Buried Engines: Extreme Silicate Absorbers in WISE, 12.7hrs, (co-I) *2012*

Unravelling the physical processes that regulate star formation and AGN activity in ordinary galaxies at $z = 2$, 196.3hrs, (co-I) *2012*
Herschel Spectroscopic Survey of far-IR Infrared Fine Structure Lines in the Intermediate Redshift ULIRGs, 89hrs, (co-I) *2012*
ESO-VLT (selected)
Can we use giant Lyα nebulae to trace the early heating of intracluster plasma in cluster progenitors?, 1night, (co-I) *2016*
A Kinematic Study of Herschel selected ULIRGs at $z > 2$, 1night (co-PI) *2016*
The KMOS Kinematic Survey of ∼1000 star-forming galaxies; Tracing their Dynamics, Star-Formation and Chemical Properties, 40 nights, (co-I) *2013 - 2015*
A detailed Kinematic Study of star forming galaxies at $z > 2$, 1night, (co-PI) *2013*

Observing experience: IRAM 30m ∗ VLT (KMOS) ∗ Palomar Observatory (SWIFT) ∗ Caltech Sub-millimeter 10.4m Observatory ∗ MMT (Hectospec) ∗ Skinakas 1.3m Optical Observatory

MAIN COLLABORATIONS AND TEAMS

Major Collaborations
Cosmic Dawn Center, Dark Cosmology Center /NBI/KU (Denmark) ∗ University of Oxford (UK) ∗ CEA/Sacley (Paris, France) ∗ Max Plank Institute for Extra-terrestrial Physics (MPE, Germany) ∗ Center for Astrophysics (CfA/Harvard, USA) ∗ National Optical Astronomy Observatory (NOAO, USA) ∗ Caltech (USA) ∗ University of Crete (Greece) ∗ ESO (Germany) ∗ IAASARS (National Observatory of Athens, Greece)
Major Teams
PEP ∗ GOODS ∗ GOODS-Herschel ∗ HerMES ∗ CLS ∗ KROSS ∗ COSMOS-Herschel ∗ Candels-Herschel, ∗ SPICA science consortium ∗ FIRSPEX ∗ HARMONI

TECHNICAL AND OTHER QUALIFICATIONS

Computers & Programming
Windows/Unix/MacOs; Fortran 77, Python, IDL, LATEX, HTML
Astronomical Packages
Starfinder, DAOPHOT, Sextractor, IRAF, GALFIT, PEGASE, Hyper-z, EASY, LePHARE, CIGALLE, SPICE (among others)
Languages
Native Greek, Fluent English, Conversational French

REFERENCES

Prof. Sune Toft, University of Copenhagen (sune@dark-cosmology.dk)
Dr David Elbaz, CEA/Saclay (elbaz@cea.fr)
Dr Emanuele Daddi, CEA/Saclay (edaddi@cea.fr)
Prof. Dimitra Rigopoulou, University of Oxford (dar@astro.ox.ac.uk)
Dr Jiasheng Huang, CfA/Harvard (jhuang@cfa.harvard.edu)
Prof. Martin Bureau, University of Oxford, (bureau@astro.ox.ac.uk)
Dr Mark Dickinson, NOAO (med@noao.edu)
Prof. Vassilis Charmandaris, University of Crete / NOA (vassilis@physics.uoc.gr)