



# **Benjamin Davis**

PostDoc Position at Swinburne University of Technology

 Department of Centre for Astrophysics and Supercomputing

CITATIONS99Independent278Total401

CONTACT INFO

Bendavis007@hotmail.com

#### PROFESSIONAL SKILLS

- > Galaxy Evolution
- Extragalactic Astronomy
- Astronomy
- Astronomy & Astrophysics
- Optical Astronomy
- Theoretical Astrophysics
- Galaxy

#### **ABOUT**



I work at the Center for Astro, Particle, and Planetary Physics (CAP3) at New York University Abu Dhabi, where I am a CAP3 Fellow, Research Associate. My research involves studying the structure of spiral galaxies. To do this, I examine the geometry of spiral arms using a suite of custom software I helped design. I also perform multi-component decompositional analysis of the galaxies to separate them into their constituent components (i.e., bulge, disk, bar, spiral arms, nucleus, etc.). With this detailed knowledge of the galaxy composition and geometry, I can then construct accurate black hole mass scaling relations that can be used to predict the mass of the central massive black hole in galaxies. By conducting a census of black hole demography in galaxies, future studies can better understand the intimate relationship between central black holes and their host galaxies and garner information about their coevolution.

I am also a classically trained musician who regularly performs on the violin or viola with various professional and amateur ensembles. Past positions have involved playing with the Southeast Kansas Symphony Orchestra, the PSU Chamber Orchestra, the North Arkansas Symphony Orchestra, the University of Arkansas Symphony Orchestra, national Broadway tours of "South Pacific" and "West Side Story," the Arkansas New Music Ensemble, the Arkansas Philharmonic Orchestra, the Victorian Amateur Chamber Music Society, a soloist with the Yachad Chamber Orchestra, and various ad hoc string quartets and chamber ensembles.

#### **EDUCATION BACKGROUND**



2008 O University of Arkansas
2015 Doctoral Degree, Space & Planetary Sciences

2003 Pittsburg State University
2008 Packelor's Degree Mathematics &



#### RESEARCH EXPERIENCE -



2008/08 · Graduate Assistant 2015/05

**University of Arkansas** 

#### WORK EXPERIENCE -



2015/08 Visiting Assistant Professor of Physics

Research Fellow

New York University Abu Dhabi

Postdoctoral Research Fellow

Swinburne University of Technology



**Arkansas Tech University** 

# 2015/08 Visiting Assistant Professor of Physics 2015/12



**University of Arkansas** 



#### **PUBLICATION ANALYTICS**



**Book** 

# **Total Number of Publications**

**Publications** 

# **Amount of Publications** in Top 5 Active Field

Physics	24
Astronomy	20
Astrophysics	19
Optics	3
Topology	1

# **Amount of Publications** by Category

Journal

Conference **Others** 



### **ALL PUBLICATIONS**

Journal

Measurement of Galactic Logarithmic Spiral Arm Pitch Angle Using Twodimensional Fast Fourier Transform Decomposition

2 Benjamin L Davis, Joel C Berrier, Douglas W Shields, Julia Dusk Kennefick, 2012

- Journal | The Astrophysical Journal Supplement Series
- Astronomy; Physics; Astrophysics
- 2. Further evidence for a supermassive black hole mass-pitch angle relation
- 2 Joel C Berrier, Benjamin L Davis, Daniel Kennefick, 2013
- Journal | The Astrophysical Journal
- Astronomy; Physics; Astrophysics
- 3. The black hole mass function derived from local spiral galaxies
- 2 Benjamin L Davis, Joel C Berrier, L Johns, Dw Shields, Mt Hartley, D Kennefick, 2014
- Journal | The Astrophysical Journal
- Astronomy; Physics; Astrophysics
- **Updating the (supermassive black hole mass)–(spiral arm pitch angle)** 4. relation: a strong correlation for galaxies with pseudobulges
- 2 Benjamin L Davis, Alister W Graham, Marc S Seigar, 2017
- Journal | Monthly Notices of the Royal Astronomical Society
- Astronomy; Physics; Astrophysics
- 5. Strong Evidence for the Density-wave Theory of Spiral Structure in Disk **Galaxies**
- H Pour-Imani, Daniel Kennefick, 2016
- Journal | The Astrophysical Journal Letters
- Astronomy; Physics; Astrophysics; Optics

Citation

62/76 Ind. total

Citation 29/47

Ind. total

Citation

24/35 Ind. total

Citation

19/32

Ind. total

Citation 27/28 Ind. total



6. Black Hole Mass Scaling Relations for Spiral Galaxies. II. M BH-M\*, tot and M BH-M\*, disk

Citation 17/26 Ind. total

- Benjamin L Davis, Alister W Graham, Ewan Cameron, 2018
- Journal | The Astrophysical Journal
- Astronomy; Physics; Topology
- 7. Black Hole Mass Scaling Relations for Spiral Galaxies. I. M BH-M\*, sph
- Benjamin L Davis, Alister W Graham, Ewan Cameron, 2019
- Journal | The Astrophysical Journal
- Physics; Astrophysics

Citation

**11/20** Ind. total

- 8. A Fundamental Plane of Spiral Structure in Disk Galaxies
- Benjamin L Davis, Daniel Kennefick, 2015
- Journal | The Astrophysical Journal Letters
- Astronomy; Physics; Astrophysics

Citation

16/20

Ind. total

- Black Hole Mass Scaling Relations for Early-type Galaxies. I. M BH-M\*, sph and M BH-M\*, gal
- N Sahu, Alister W Graham, Benjamin L Davis, 2019
- Journal | The Astrophysical Journal
- Physics; Astrophysics

**Citation 11/17** 

Ind. total

- 10. Searching for intermediate-mass black holes in galaxies with lowluminosity AGN: a multiple-method approach
- Filippos Koliopanos, Bc Ciambur, Aw Graham, Na Webb, M Coriat, Natalie a Webb, Burcin Mutlupakdil, Benjamin L Davis, Olivier Godet, 2017
- Journal | Astronomy & Astrophysics
- Astronomy; Physics; Astrophysics

Citation

12/17

Ind. total

- 11. Expected intermediate mass black holes in the Virgo cluster. II. Late-type galaxies
- Alister W Graham, Roberto Soria, Bl Davis, 2018
- Journal | Monthly Notices of the Royal Astronomical Society
- Astronomy; Physics; Astrophysics

Citation 8/16

. . . . .

Ind. total

- 12. THE LOCAL BLACK HOLE MASS FUNCTION DERIVED FROM THE M BH-P AND THE M BH-n RELATIONS
- B Mutlu-Pakdil, Marc S Seigar, Benjamin L Davis, 2016
- Journal | The Astrophysical Journal
- Astronomy; Physics; Astrophysics

Citation
12/16
Ind. total

- 13. Constraining dark matter halo profiles and galaxy formation models using spiral arm morphology. II. Dark and stellar mass concentrations for 13 nearby face-on galaxies
- Marc S Seigar, Bl Davis, J Berrier, D Kennefick, 2014
- Journal | The Astrophysical Journal
- Astronomy; Physics; Astrophysics

Citation 8/14

Ind. total



2

14. Spirality: Spiral arm pitch angle measurement

Dw Shields, B Boe, C Pfountz, Bl Davis, M Hartley, H Pour Imani, Z Slade, 2015

Journal | Astrophysics Source Code Library

Citation
4/7
Ind. total

 Investigating the Origins of Spiral Structure in Disk Galaxies through a Multiwavelength Study

Citation

R Miller, Daniel Kennefick, 2019

5/6

Journal | The Astrophysical Journal

Astronomy; Physics; Astrophysics

Ind. total

16. 2DFFT: Measuring Galactic Spiral Arm Pitch Angle

Bl Davis, Jc Berrier, Dw Shields, J Kennefick, 2016

Journal | Astrophysics Source Code Library

Citation 2/6

17. Revealing Hidden Substructures in the M BH- $\sigma$  Diagram, and Refining the Bend in the L- $\sigma$  Relation

Citation 1/4

N Sahu, Aw Graham, Bl Davis, 2019

■ Journal | The Astrophysical Journal

Ind. total

18. A Consistent Set of Empirical Scaling Relations for Spiral Galaxies: The (v max, M oM)–( $\sigma$  0, M BH,  $\Box$  ) Relations

Citation

Benjamin L Davis, Alister W Graham, F Combes, 2019
 Journal | The Astrophysical Journal

3/4 Ind. total

Astronomy; Physics; Astrophysics

19. Testing the Correlation between Spiral Arm Pitch Angle and Central Black Hole Mass

Citation

Douglas W Shields, Ja Hughes, Sr Barrows, B Davis, D Kennefick, 2010
 Journal | Aip Conference Proceedings

1/2 Ind. total

Activities Physics Activities

Astronomy; Physics; Astrophysics

20. Spirality: A Novel Way to Measure Spiral Arm Pitch Angle

Douglas W Shields, Benjamin Boe, Casey Pfountz, Benjamin L Davis, Matthew T Hartley, Hamed Pour Imani, Zac Slade, Daniel Kennefick, Julia Dusk Kennefick, 2015 O/1

■ Journal | Arxiv Preprint Arxiv:1511.06365

Astronomy; Physics; Optics

21. Spiral Arm Pitch Angle Measurements of Galaxies in Different Wavelengths of Light to Investigate a Prediction of Density Wave Theory

H Pour Imani, Bl Davis, Dw Shields, J Kennefick, 2015

Journal | Iau General Assembly

1/1
Ind. total

22. A Study of the Relation between the Spiral Arm Pitch Angle and the Kinetic Energy of Random Motions of the Host Spiral Galaxies

I Al-Baidhany, M Seigar, P Treuthardt, a Sierra, B Davis, D Kennefick, 2014

Journal | Journal of the Arkansas Academy of Science

Citation 0/1

Ind. total



23. Determining the Co-Rotation Radii of Spiral Galaxies Using Spiral Arm Pitch Angle Measurements at Multiple Wavelengths

S Abdeen, D Kennefick, 2020

■ Journal | Arxiv Preprint Arxiv:2002.02307

O/O
Ind. total

24. Determining the local SMBH mass function using spiral arm pitch angles and Sersic indices

M Seigar, B Mutlu, B Davis, J Berrier, 2015

Journal | Iau General Assembly

O/O
Ind. total

25. The Arkansas Galaxy Evolution Survey: Supermassive Black Holes in the Universe

Marc S Seigar, Daniel Kennefick, 2009

Journal | Proceedings of the International Astronomical Union

Astronomy; Physics; Astrophysics

O/O
Ind. total

26. Strong Evidence for the Density-Wave Theory of Spiral Structure in Disk Galaxies: Pitch Angle Measurements in Different Wavelengths of Light.

H Pour-Imani, Daniel Kennefick, 2017

Journal | Bulletin of the American Physical Society

Physics; Optics

Citation
0/0
Ind. total

27. Minor Planet Observations [H48 PSU Greenbush Observatory, Pittsburg]

▲ Dm Kuehn, 2006

Journal | Minor Planet Circulars

O/O
Ind. total

Conference

1. Reflectance Spectra of Low-Temperature Chloride and Perchlorate Hydrates and their Relevance to the Martian Surface

Bl Davis, Vincent F Chevrier, Ts Altheide, C Swaffar, 2009

■ Conference | Lunar and Planetary Science Conference

Inorganic Chemistry; Chemistry

Citation 4/4

Ind. total

2. Reflectance spectra of low-temperature chloride and perchlorate hydrates and their relevance to the martian surface

▲ J Hanley, Vf Chevrier, Bl Davis, Ts Altheide, a Francis, 2009

■ Conference | The New Martian Chemistry Workshop

1/1
Ind. total

3. Strong Evidence for the Density-Wave Theory of Spiral Structure Based on Variations in Pitch Angle When Viewed Across Optical and non-Optical Wavelengths

H Pour-Imani, D Kennefick, 2017

■ Conference | American Astronomical Society Meeting Abstracts

Citation

0/0 Ind. total



4. The Arkansas Galaxy Evolution Survey: SMBH Mass and Spiral Arm Morphology

Ms Seigar, Jc Berrier, Bl Davis, D Kennefick, 2014

Conference | Structure and Dynamics of Disk Galaxies

0/0 Ind. total

Citation

5. Logarithmic Spiral Arm Pitch Angle of Late-Type Galaxies: Measurement and Relationship to Galactic Nuclear Supermassive Black Hole Mass

Citation 0/0

■ Bl Davis, 2013

Conference | American Astronomical Society Meeting Abstracts# 221

Ind. total

6. A Comparison of Methods for Measuring Supermassive Black Hole Methods

Citation

I Ahdulla Akhlite Al-Baidhany, Ms Seigar, P Treuthardt, D Kennefick, 2012

0/0 Ind. total

Conference | American Astronomical Society Meeting Abstracts# 219

7. Testing SMBH scaling relations using cosmological simulations and optical/near-IR imaging data

Citation

0/0

B Mutlu Pakdil, Ms Seigar, Bl Davis, Pm Treuthardt, J Berrier, 2017
 Conference | American Astronomical Society Meeting Abstracts

Ind. total

8. Evolution of Spiral Arm Pitch Angle

Dw Shields, C Henderson, Bl Davis, L Johns, Jc Berrier, D Kennefick, 2014

Citation

0/0

Conference | Structure and Dynamics of Disk Galaxies

Ind. total

9. Calculating a Galaxies Central Black Hole Mass Using the Sersic Index

M Hartley, Jc Berrier, M Seigar, Bl Davis, D Kennefick, 2013

■ Conference | American Astronomical Society Meeting Abstracts# 221

O/O
Ind. total

10. A Comparison of Two Independent Techniques for Measuring Supermassive Black Hole Masses

I Ahdulla Akhlite Al-Baidhany, Marc S Seigar, P Treuthardt, Benjamin L Davis, Daniel Kennefick, Julia Dusk Kennefick, Claud H Sandberg Lacy, Misty C Bentz, 2011

Citation 0/0

Ind. total

- Conference | Bulletin of the American Astronomical Society
- Astronomy; Physics; Astrophysics

11. The Local Black Hole Mass Function Derived from the MBH-Pitch Angle and the MBH-Sersic Index Relations

Citation

0/0

Ind. total

■ B Mutlu Pakdil, Ms Seigar, Bl Davis, 2016

■ Conference | American Astronomical Society Meeting Abstracts

#### 12. Mass Distribution & Morphology of Simulated Spiral Galaxies

J Berlanga Medina, J Berrier, M Hartley, D Kennefick, Bl Davis, D Shields, 2014

Conference | American Astronomical Society Meeting Abstracts# 223

Citation

0/0

Ind. total



#### 13. The Supermassive Black Hole Mass Function in Spiral Galaxies

▲ Jd Kennefick, Jc Berrier, 2013

■ Conference | American Astronomical Society Meeting Abstracts# 221

O/O
Ind. total

#### 14. Quasar Black Hole Mass

Amanda S Schilling, Ashley Carlton, a Kashkanova, Julia Dusk Kennefick, 2010

- Conference | Bulletin of the American Astronomical Society
- Astronomy; Physics; Astrophysics

Citation 0/0

Ind. total

# 15. Constraining dark matter halo profiles using spiral arm morphologies: Dark and stellar mass concentrations for 13 nearby face-on galaxies

▲ M Seigar, Bl Davis, Jc Berrier, D Kennefick, 2014

■ Conference | American Astronomical Society Meeting Abstracts# 223

O/O
Ind. total

#### 16. The Local Black Hole-Mass Function Derived from Spiral Galaxies

■ Bl Davis, Jc Berrier, L Johns, Dw Shields, D Kennefick, 2012

■ Conference | American Astronomical Society Meeting Abstracts# 220

O/O
Ind. total

# 17. Investigating the Clustering and Color of Galaxies in the COMBO-17 Chandra Deep Field South Survey and Possible Effects on Spiral Arm Pitch Angle

■ Benjamin L Davis, J E Berlanga Medina, Douglas W Shields, Julia Dusk Kennefick, 2010

- Conference | Bulletin of the American Astronomical Society
- Astronomy; Physics

Citation 0/0

Ind. total

# 18. Multi-wavelength Study of Spiral Structure and Star-Formation Region in Disk Galaxies

- R Miller, D Kennefick, 2019
- Conference | American Astronomical Society Meeting Abstracts

Citation 0/0

Ind. total

# 19. A Study of Supermassive Black Holes and the Properties of Their Host Galaxies

I Ahdulla Akhlite Al-Baidhany, M Seigar, Pm Treuthardt, a Sierra, 2014

■ Conference | American Astronomical Society Meeting Abstracts# 223

O/O
Ind. total

#### 20. Pitch Angles Of Artificially Redshifted Galaxies

Dw Shields, B Davis, L Johns, Jc Berrier, D Kennefick, 2012

■ Conference | American Astronomical Society Meeting Abstracts# 220

O/O
Ind. total

#### 21. Black Hole Mass Scaling Relations

Bl Davis, a Graham, N Sahu, E Cameron, 2019

■ Conference | American Astronomical Society Meeting Abstracts

Citation 0/0

Ind. total



#### 22. The Supermassive Black Hole Mass-Pitch Angle Relation in Spiral Galaxies

D Kennefick, Jc Berrier, 2013

O/O
Ind. total

# 23. A Comparison of Four Methods for Measuring Supermassive Black Hole Masses

Ahdulla Akhlite Al-Baidhany, Ms Seigar, P Treuthardt, D Kennefick, 2012

■ Conference | American Astronomical Society Meeting Abstracts# 220

O/O
Ind. total

# 24. An Upper-Division Astronomy Laboratory Course for Undergraduate Physics Majors

David M Kuehn, Barbara Lockett Davis, 2006

- Conference | Bulletin of the American Astronomical Society
- Physics; Engineering Physics; Applied Mathematics

Citation
0/0
Ind. total

# 25. Exploration of a SMBH Mass-Pitch Angle Relation at Intermediate Redshifts

Lh Jones, a Schilling, Bl Davis, Rs Barrows, Jd Kennefick, 2015

■ Conference | American Astronomical Society Meeting Abstracts

O/O
Ind. total

# 26. The Effects of Dark Matter Halo Concentration of the Morphology of Simulated Galaxies

J Berlanga Medina, Jc Berrier, M Hartley, D Kennefick, Bl Davis, 2013

■ Conference | American Astronomical Society Meeting Abstracts# 221

O/O
Ind. total

# 27. Supermassive Black Hole Mass and Spiral Galaxy Pitch Angle at Intermediate to High Redshift

Ja Hughes, Rs Barrows, Jc Berrier, Bl Davis, D Kennefick, 2012

Conference | American Astronomical Society Meeting Abstracts# 219

O/O
Ind. total

#### 28. Observational Confirmations of Spiral Density Wave Theory

▲ Jd Kennefick, 2017

■ Conference | American Astronomical Society Meeting Abstracts

O/O
Ind. total

#### 29. The Spiral Structure of AGN Host Galaxies

J Kennefick, Rs Barrows, Ja Hughes, a Schilling, B Davis, D Shields, 2014

Conference | Structure and Dynamics of Disk Galaxies

0/0 Ind. total

Citation

# 30. Evolution of Spiral Arm Pitch Angle and the Masses of Supermassive Black Holes

Dw Shields, Cl Henderson, Bl Davis, L Johns, Jc Berrier, D Kennefick, 2013

■ Conference | American Astronomical Society Meeting Abstracts# 221

O/O
Ind. total



# 31. Determining the Local Black Hole Mass Function from the Pitch Angles of Nearby Spiral Galaxies

L Johns, D Kennefick, Jc Berrier, Bl Davis, Dw Shields, 2012

■ Conference | American Astronomical Society Meeting Abstracts# 219

O/O
Ind. total

#### Uncategorized

 Pitch Angle Distribution Function of Local Spiral Galaxies and Its Role in Galactic Structure

Galactic Structure

Ms Fusco, Bl Davis, D Kennefick,

Other | N/A

O/O
Ind. total

- 2. In Pursuit of the Elusive Intermediate-mass Black Holes
- Bl Davis,
- Other | N/A

O/O
Ind. total

- 3. Arkansas Natural Heritage Commission; Ouachita National Forest
- ▲ I Al-Baidhany, M Seigar, P Treuthardt, a Sierra, B Davis,
- Other | N/A

O/O
Ind. total

4. Logarithmic Spiral Arm Pitch Angle of Spiral Galaxies: Measurement and Relationship to Galactic Structure and Nuclear Supermassive Black Hole Mass

Benjamin Lee Davis, 2015

- Other | N/A
- Astronomy; Physics; Astrophysics

O/O
Ind. total

- 5. Multiple (consistent) mass estimates suggest a central intermediatemass black hole in NGC 3319
- Bl Davis, Aw Graham,
- Other | N/A

O/O
Ind. total



# METRICS AND RANKS OF JOURNALS WHERE I PUBLISHED ARTICLES —



# ▶ Journal Rankings: Google Scholar

Journal	h5	Journal Ra	nk Papers	Category
the Astrophysical Journal	158	1 / 20	5	Astronomy & Astrophysics
Monthly Notices of the Royal Astronomical Society	140	2 / 20	2	Astronomy & Astrophysics
the Astrophysical Journal Supplement Series	75	4 / 20	1	Astronomy & Astrophysics
Astronomy & Astrophysics	52	7 / 20	1	Astronomy & Astrophysics
lau General Assembly	33	19 / 20	1	Astronomy & Astrophysics

# ► Journal Rankings: Eigenfactor

Journal	Eigenfactor	Journal Rank	Papers	Category
Astrophysical Journal	0.426	1 / 62	5	Astronomy & Astrophysics
Monthly Notices of the Royal Astronomical Society	0.303	2 / 62	2	Astronomy & Astrophysics
Astronomy & Astrophysics	0.240	4 / 62	1	Astronomy & Astrophysics
Astrophysical Journal Letters	0.139	5 / 62	2	Astronomy & Astrophysics
Astrophysical Journal Supplement Series	0.071	7 / 62	1	Astronomy & Astrophysics

# ► Journal Rankings: Scimago

Journal	SJR	Journal Rank	Papers	Category
Astrophysical Journal, Supplement Series	4.565	4 / 82	1	Space and Planetary Science, Astronomy and Astrophysics
Astrophysical Journal Letters	3.864	5 / 82	2	Space and Planetary Science, Astronomy and Astrophysics
Astrophysical Journal	2.741	10 / 82	5	Space and Planetary Science, Astronomy and Astrophysics
Astronomy and Astrophysics	2.527	12 / 82	1	Space and Planetary Science, Astronomy and Astrophysics
Monthly Notices of the Royal Astronomical Society	2.422	13 / 82	2	Space and Planetary Science, Astronomy and Astrophysics



# ▶ Journal Rankings: Thomson Reuters

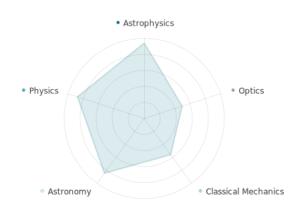
Journal	IF	Journal Ra	ınk Paper	s Category	
Astrophysical Journal Letters	8.374	4 / 54	2	Space Science	
Astrophysical Journal Supplement Series	8.311	5 / 54	1	Space Science	
Astronomy & Astrophysics	6.209	8 / 54	1	Space Science	
Astrophysical Journal	5.58	10 / 54	5	Space Science	



# **ACADEMIC RANKING**



# **The Academic Ranking**



# Times Cited and Ranking in Top 50% Cited Academic Fields

	Discipline	Citations	Percentile
	Astrophysics	41	Top 5.92%
	Physics	44	Top 12.38%
	Astronomy	42	Top 15.61%
	Classical Mechan	nics 5	Top 44.05%
	Optics	3	Top 50.2%
G-in	idex <b>19</b>	Impact Fac	tor <b>0.845</b>

# **CITATION ANALYTICS**

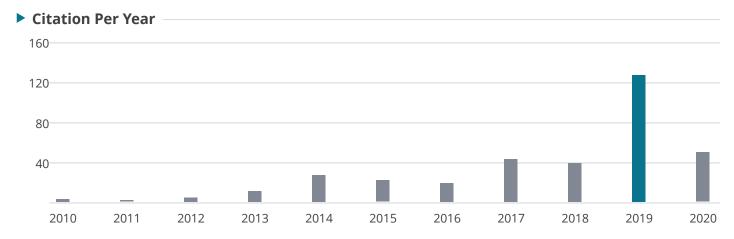


► Total Number of Citations

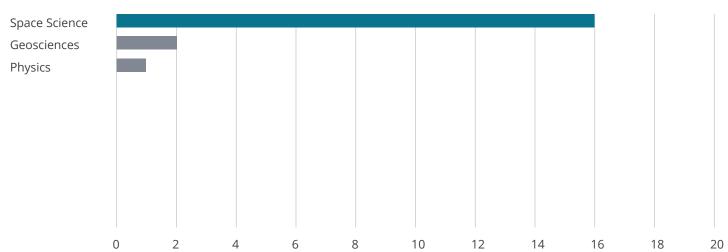
**401** 

275

Past 3 Years **213** 



# ► Citations by Category





# METRICS AND RANKS OF JOURNALS WHICH CITED MY PUBLICATIONS -



Citing Journal	Journal ImpactFactor Journal Rank Catego		
Astrophysical Journal Letters	8.374	4 / 54	Space Science
Space Science Reviews	8.142	6 / 54	Space Science
Astronomy & Astrophysics	6.209	8 / 54	Space Science
Physics of the Dark Universe	5.66	9 / 54	Space Science
Astrophysical Journal	5.58	10 / 54	Space Science
Journal of Cosmology and Astroparticle Physics	5.524	11 / 54	Space Science
Publications of the Astronomical Society of Australia	4.878	14 / 54	Space Science
Icarus	3.565	18 / 54	Space Science
Publications of the Astronomical Society of the Pacific	3.47	19 / 54	Space Science, Space Science
Earth and Planetary Science Letters	4.637	26 / 412	Geosciences
Geoscience Frontiers	4.16	37 / 412	Geosciences
Physical Review D	4.368	45 / 314	Physics, Physics



Germany

Belgium

Sweden

France

Spain

#### **CITING COUNTRY MAP** Europe **North America** 61% 22% 103 / 448 275 / 448 **South America** Asia 2% 10 / 448 28 / 448 **Africa** Oceania 0% Country Citation Country Citation Country Citation Russian Federation 125 Japan 8 South Africa 2 **United States** 100 China 6 Taiwan 1 United Kingdom 49 Brazil 6 Oman 1 Italy 39 Israel 6 Austria Australia 30 Netherlands 5 Estonia

3

3

3

3

Denmark

Argentina

Greece

Switzerland

**United Arab Emirates** 

# **GLOBAL CITATION DISTRIBUTION MAP (GCDM)**

12

12

9

8

Finland

Canada

Armenia

Chile

India



1

1





#### **CITING INSTITUTIONS**

100

#### multiple University of California, Irvine

- United States
- ★ Top 40 university in United States according to TIMES HIGHER EDUCATION
- ★ Top 78 university in the world according to US NEWS

Citation

# 

- United Kingdom
- ★ Top 1 university in Computer science field according to TIMES HIGHER EDUCATION
- ★ Top 1 university in United Kingdom according to TIMES HIGHER EDUCATION
- ★ Top 1 university in the world according to TIMES HIGHER EDUCATION
- ★ Top 1 university in europe according to US NEWS

Citation 13

#### 

#### United Kingdom

- ★ Top 6 university in pharmacy-pharmacology field according to TOP UNIVERSITIES
- ★ Top 15 university in United Kingdom according to TOP UNIVERSITIES
- ★ Top 82 university in the world according to TOP UNIVERSITIES

Citation 12

# 

#### United Kingdom

- ★ Top 9 university in nursing field according to TOP UNIVERSITIES
- ★ Top 10 university in United Kingdom according to US NEWS
- ★ Top 94 university in the world according to US NEWS

Citation

#### multiple University of Florence

- Italy
- ★ Top 9 university in Italy according to US NEWS
- ★ Top 233 university in the world according to US NEWS

Citation

7

# math Curtin University

#### Australia

- ★ Top 2 university in engineering-mineral-mining field according to TOP UNIVERSITIES
- ★ Top 13 university in Australia according to TOP UNIVERSITIES
- ★ Top 250 university in the world according to TOP UNIVERSITIES

Citation

7

# 

- Australia
- ★ Top 9 university in engineering-mineral-mining field according to TOP UNIVERSITIES
- ★ Top 4 university in Australia according to TOP UNIVERSITIES
- ★ Top 45 university in the world according to TOP UNIVERSITIES
- ★ Top 6 university in australia-new-zealand according to US NEWS

Citation

7

# University of Arizona

- United States
- ★ Top 10 university in space-science field according to US NEWS
- ★ Top 43 university in United States according to US NEWS
- ★ Top 81 university in the world according to US NEWS

Citation

6

# Rutgers, The State University of New Jersey--New Brunswick

- United States
- ★ Top 47 university in United States according to US NEWS
- ★ Top 103 university in the world according to US NFWS

Citation

6

# 

- Netherlands
- ★ Top 1 university in communication-media-studies field according to TOP UNIVERSITIES
- ★ Top 1 university in Netherlands according to US NEWS
- ★ Top 51 university in the world according to US NEWS



#### Peking University

- China
- Top 6 university in modern-languages field according to TOP UNIVERSITIES
- Top 2 university in China according to TIMES HIGHER EDUCATION
- Top 30 university in the world according to TOP UNIVERSITIES
- Top 1 university in emerging economies ranking according to TIMES HIGHER EDUCATION

Citation

# University of Melbourne

#### Australia

- Top 6 university in education-training field according to TOP UNIVERSITIES
- Top 1 university in Australia according to TIMES HIGHER EDUCATION
- Top 26 university in the world according to US NFWS
- Top 1 university in australia-new-zealand according to US NEWS

Citation

#### **United States**

- Top 10 university in environment-ecology field according to US NEWS
- Top 26 university in United States according to US
- Top 41 university in the world according to US **NEWS**

Citation

5

# Harvard University

#### **United States**

- Top 1 university in Life sciences field according to TIMES HIGHER EDUCATION
- Top 1 university in United States according to US **NEWS**
- Top 1 university in the world according to US NEWS

Citation

4

### University of Cologne

- Germany
- Top 37 university in classics-ancient-history field according to TOP UNIVERSITIES
- Top 16 university in Germany according to TIMES HIGHER EDUCATION
- Top 146 university in the world according to TIMES HIGHER EDUCATION

Citation

4

# University of California, San Diego

#### United States

- Top 2 university in pharmacology-toxicology field according to US NEWS
- Top 15 university in United States according to US
- Top 17 university in the world according to US NEWS

Citation

3

# University of Oulu

- Finland
- Top 4 university in Finland according to TIMES HIGHER EDUCATION
- Top 251 university in the world according to TIMES HIGHER EDUCATION

Citation

### University of Michigan

#### United States

- Top 3 university in dentistry field according to TOP UNIVERSITIES
- Top 11 university in United States according to TOP UNIVERSITIES
- Top 20 university in the world according to TIMES HIGHER EDUCATION

Citation

3

#### Scuola Normale Superiore di Pisa

- 9
- Top 40 university in classics-ancient-history field according to TOP UNIVERSITIES
- Top 2 university in Italy according to TIMES HIGHER EDUCATION
- Top 161 university in the world according to TIMES HIGHER EDUCATION

Citation

3

# Shanghai Jiao Tong University

- China
- Top 10 university in engineering field according to
- Top 4 university in China according to TOP UNIVERSITIES
- Top 59 university in the world according to TOP UNIVERSITIES
- Top 7 university in emerging economies ranking according to TIMES HIGHER EDUCATION



#### multiple University of the Witwatersrand

- South Africa
- ★ Top 2 university in South Africa according to TIMES HIGHER EDUCATION
- ★ Top 201 university in the world according to TIMES HIGHER EDUCATION
- ★ Top 12 university in emerging economies ranking according to TIMES HIGHER EDUCATION

Citation

# multiple University of Maryland, College Park

United States

★ Top 13 university in linguistics field according to TOP UNIVERSITIES

★ Top 31 university in United States according to US NEWS

★ Top 51 university in the world according to US NEWS

Citation

2

#### Ohio State University

#### United States

- ★ Top 16 university in veterinary-science field according to TOP UNIVERSITIES
- ★ Top 28 university in United States according to TOP UNIVERSITIES
- ★ Top 46 university in the world according to US NEWS

Citation

2

# Saint Petersburg State University

#### Russian Federation

- ★ Top 2 university in Russian Federation according to TOP UNIVERSITIES
- ★ Top 235 university in the world according to TOP UNIVERSITIES
- ★ Top 3 university in eeca (emerging europe & central asia) according to TOP UNIVERSITIES

Citation

2

#### multiple University of Edinburgh

#### United Kingdom

- ★ Top 5 university in linguistics field according to TOP UNIVERSITIES
- ★ Top 5 university in United Kingdom according to TOP UNIVERSITIES
- ★ Top 18 university in the world according to TOP UNIVERSITIES
- ★ Top 6 university in europe according to US NEWS

Citation

2

# â Carnegie Mellon University

#### United States

- ★ Top 3 university in computer-science-informationsystems field according to TOP UNIVERSITIES
- ★ Top 16 university in United States according to TIMES HIGHER EDUCATION
- ★ Top 24 university in the world according to TIMES HIGHER EDUCATION

Citation

2

# Tel Aviv University

#### Israel

- ★ Top 2 university in Israel according to TIMES HIGHER EDUCATION
- ★ Top 174 university in the world according to US NEWS
- ★ Top 25 university in asia university rankings according to TIMES HIGHER EDUCATION

Citation

2

# multiple University of Birmingham

#### United Kingdom

- ★ Top 5 university in sports-related-subjects field according to TOP UNIVERSITIES
- ★ Top 12 university in United Kingdom according to US NEWS
- ★ Top 79 university in the world according to TOP UNIVERSITIES

Citation

2

#### Texas A&M University

#### United States

- ★ Top 10 university in veterinary-science field according to TOP UNIVERSITIES
- ★ Top 49 university in United States according to TOP UNIVERSITIES
- ★ Top 125 university in the world according to US NEWS

Citation

### 

#### Canada

- ★ Top 19 university in hospitality-leisuremanagement field according to TOP UNIVERSITIES
- ★ Top 7 university in Canada according to TOP UNIVERSITIES
- ★ Top 163 university in the world according to TOP UNIVERSITIES



#### Kyoto University

- Japan
- ★ Top 5 university in engineering-chemical field according to TOP UNIVERSITIES
- ★ Top 2 university in Japan according to TIMES HIGHER EDUCATION
- ★ Top 35 university in the world according to TOP UNIVERSITIES
- ★ Top 9 university in asia according to US NEWS

Citation

Autonomous University of MadridSpain

- ★ Top 30 university in dentistry field according to TOP UNIVERSITIES
- ★ Top 4 university in Spain according to TOP UNIVERSITIES
- ★ Top 200 university in the world according to US NEWS

Citation

2

#### **a** Cornell University

#### United States

- ★ Top 2 university in veterinary-science field according to TOP UNIVERSITIES
- ★ Top 7 university in United States according to TOP UNIVERSITIES
- ★ Top 14 university in the world according to TOP UNIVERSITIES

Citation

### mcGill University

#### Canada

- ★ Top 3 university in engineering-mineral-mining field according to TOP UNIVERSITIES
- ★ Top 2 university in Canada according to TOP UNIVERSITIES
- ★ Top 33 university in the world according to TOP UNIVERSITIES

Citation

1

#### mathematical Northwestern University

#### United States

- ★ Top 5 university in chemistry field according to US NEWS
- ★ Top 16 university in United States according to TOP UNIVERSITIES
- ★ Top 24 university in the world according to US NEWS

Citation

1

#### illi University of Pennsylvania

#### United States

- ★ Top 1 university in nursing field according to TOP UNIVERSITIES
- ★ Top 9 university in United States according to TIMES HIGHER EDUCATION
- ★ Top 12 university in the world according to TIMES HIGHER EDUCATION

Citation

1

# Heidelberg University

#### Germany

- ★ Top 9 university in classics-ancient-history field according to TOP UNIVERSITIES
- ★ Top 2 university in Germany according to US NEWS
- ★ Top 47 university in the world according to TIMES HIGHER EDUCATION

Citation

1

# 

#### Estonia

★ Top 5 university in eeca (emerging europe & central asia) according to TOP UNIVERSITIES

Citation

1

#### University of Tsukuba

#### Japan

- ★ Top 25 university in sports-related-subjects field according to TOP UNIVERSITIES
- ★ Top 11 university in Japan according to TOP UNIVERSITIES
- ★ Top 260 university in the world according to TOP UNIVERSITIES

Citation

1

### 

#### United Kingdom

- ★ Top 1 university in anthropology field according to TOP UNIVERSITIES
- ★ Top 2 university in United Kingdom according to TIMES HIGHER EDUCATION
- ★ Top 2 university in the world according to TIMES HIGHER EDUCATION
- ★ Top 2 university in europe according to US NEWS



#### math Colorado School of Mines

- **United States**
- Top 1 university in engineering-mineral-mining field according to TOP UNIVERSITIES
- Top 72 university in United States according to TIMES HIGHER EDUCATION
- Top 251 university in the world according to TIMES HIGHER EDUCATION

Citation

# multiple University of Innsbruck

Austria

- Top 3 university in Austria according to TOP UNIVERSITIES
- Top 279 university in the world according to TOP UNIVERSITIES

Citation

1

#### m Monash University

- Australia
- Top 2 university in pharmacy-pharmacology field according to TOP UNIVERSITIES
- Top 4 university in Australia according to US NEWS
- Top 59 university in the world according to TOP UNIVERSITIES
- Top 4 university in australia-new-zealand according to US NEWS

Citation

# University of Tasmania

- Australia
- Top 17 university in Australia according to TOP UNIVERSITIES
- Top 287 university in the world according to TOP UNIVERSITIES

Citation

1

#### Paris-Sud University

- France
- Top 5 university in France according to TIMES HIGHER EDUCATION
- Top 201 university in the world according to TIMES HIGHER EDUCATION

Citation

# mathematical Pontifical Catholic University of Chile

- Chile
- Top 21 university in education-training field according to TOP UNIVERSITIES
- Top 1 university in Chile according to TOP UNIVERSITIES
- Top 132 university in the world according to TOP UNIVERSITIES
- Top 1 university in latin america according to TOP UNIVERSITIES

Citation

# Massachusetts Institute of Technology

- **United States**
- Top 1 university in mathematics field according to TOP UNIVERSITIES
- Top 1 university in United States according to TOP UNIVERSITIES
- Top 1 university in the world according to TOP UNIVERSITIES

Citation

# Sultan Qaboos University

- Oman
- Top 10 university in arab region according to TOP UNIVERSITIES

Citation

#### Princeton University

- **United States**
- Top 1 university in Physical sciences field according to TIMES HIGHER EDUCATION
- Top 5 university in United States according to TIMES HIGHER EDUCATION
- Top 7 university in the world according to TIMES HIGHER EDUCATION

Citation

#### im Indian Institute of Science

- India
- Top 1 university in India according to TIMES HIGHER EDUCATION
- Top 170 university in the world according to TOP UNIVERSITIES
- Top 10 university in brics according to TOP UNIVERSITIES



#### 

- United Kingdom
- ★ Top 25 university in United Kingdom according to TIMES HIGHER EDUCATION
- ★ Top 167 university in the world according to TIMES HIGHER EDUCATION

Citation

1

### math Brown University

- United States
- ★ Top 26 university in development-studies field according to TOP UNIVERSITIES
- ★ Top 21 university in United States according to TOP UNIVERSITIES
- ★ Top 53 university in the world according to TIMES HIGHER EDUCATION

Citation

1

#### 

### United Kingdom

- ★ Top 14 university in classics-ancient-history field according to TOP UNIVERSITIES
- ★ Top 18 university in United Kingdom according to TOP UNIVERSITIES
- ★ Top 97 university in the world according to TOP UNIVERSITIES

Citation

1

# math Scuola Superiore Studi Pavia IUSS

- Italy
- ★ Top 5 university in Italy according to US NEWS
- ★ Top 193 university in the world according to US NEWS

Citation

1

#### multiple University of Leeds

#### United Kingdom

- ★ Top 14 university in earth-marine-sciences field according to TOP UNIVERSITIES
- ★ Top 16 university in United Kingdom according to TOP UNIVERSITIES
- ★ Top 93 university in the world according to TOP UNIVERSITIES

Citation

1

# multiple University of Zurich

#### Switzerland

- ★ Top 11 university in dentistry field according to TOP UNIVERSITIES
- ★ Top 3 university in Switzerland according to TIMES HIGHER EDUCATION
- ★ Top 61 university in the world according to US NEWS

Citation

1

# 

#### United States

- ★ Top 4 university in Psychology field according to TIMES HIGHER EDUCATION
- ★ Top 5 university in United States according to TOP UNIVERSITIES
- ★ Top 9 university in the world according to TOP UNIVERSITIES

Citation

1

### 

#### United Kingdom

- ★ Top 1 university in development-studies field according to TOP UNIVERSITIES
- ★ Top 21 university in United Kingdom according to US NEWS
- ★ Top 161 university in the world according to TIMES HIGHER EDUCATION

Citation

1

# University of Tokyo

# Japan

- ★ Top 7 university in modern-languages field according to TOP UNIVERSITIES
- ★ Top 1 university in Japan according to TIMES HIGHER EDUCATION
- ★ Top 23 university in the world according to TOP UNIVERSITIES
- ★ Top 4 university in asia according to US NEWS

Citation

1

#### multiple Universidade Federal de São Paulo

- Brazil
- ★ Top 6 university in agricultural-sciences field according to US NEWS
- ★ Top 1 university in Brazil according to TIMES HIGHER EDUCATION
- ★ Top 118 university in the world according to TOP UNIVERSITIES
- ★ Top 1 university in latin-america according to US NEWS





# 

- Spain
- $\bigstar$  Top 5 university in Spain according to US NEWS
- Top 264 university in the world according to US NEWS

