

Joaquín Hernández-Yévenes

ASTRONOMER

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Education

Universidad de Concepción

MASTER DEGREE (MSc, ASTRONOMY)

Concepción, Chile

2022 – today

- Thesis title: **WISE2MBH: A simple algorithm for morphology, bulge fraction and black hole mass estimation using WISE catalogs**
- Supervisor: DR. NEIL NAGAR

Universidad de Concepción

BACHELOR AND PROFESSIONAL (CHL) DEGREE IN ASTRONOMY

Concepción, Chile

2018 – 2023

Research Internships

Discussion of the WISE2MBH algorithm and ngEHT prospects

BHL at Harvard, Massachusetts, USA

WORKGROUP: DOMINIC PESCE, ANGELO RICARTE, YURI KOVALEV AND OTHERS

Mar. – Apr. 2023

- Late stage development of the WISE2MBH algorithm that estimate supermassive black hole masses from WISE data.
- Explore uses for ngEHT, MOJAVE and ALMA to present proposals based on the algorithm estimates and population predictions.
- Discussion about WISE2MBH parent and final sample, and possible interest of the community.
- Discussion over super massive black hole binary candidates and strategies to detect them.

Publications

- WISE2MBH: A SIMPLE ALGORITHM FOR MORPHOLOGY, BULGE FRACTION AND BLACK HOLE MASS ESTIMATION USING WISE CATALOGS
Hernández-Yévenes J., Nagar N., Arratia V. & Jarrett T.H.
Submitted to MNRAS
2023
- EVENT HORIZON AND ENVIRONS (ETHER): A CURATED DATABASE FOR EHT AND ngEHT TARGETS AND SCIENCE
Ramakrishnan V., Nagar N., Arratia V., Hernández-Yévenes J., Pesce D.W., Nair D.G., Bandyopadhyay B., Medina-Porcile C., Krichbaum T.P., Doleman S., Ricarte A., Fish V.L., Blackburn L., Falcke H., Bower G., & Natarajan P.
Galaxies
2023

Successful PI and Co-PI observing proposals

- TOWARDS RESOLVING ORBITING BINARY SMBH, PLUS SHADOWS, JETS, AND ACCRETION FLOWS OF SINGLE SMBH: ACA FLUXES
PI, 72.6 hours (7M), Priority C
ALMA Cycle 10
2023
- IMAGING M84 AND SOMBRERO AT < 50 GRAVITATIONAL RADII: JETS AND ACCRETION INFLOW
Co-PI (PI: Dhanya Nair), 12 hours (12M), Priority B
ALMA Cycle 10
2023
- A SAMPLE OF SMBH SHADOWS, RINGS, ACCRETION FLOWS AND JET BASES: EXPLORATORY EHT+ALMA FLUX MEASUREMENTS
Co-PI (PI: Neil Nagar), 45 hours (12M), Priority B
ALMA Cycle 10
2023
- A SAMPLE OF SMBH SHADOWS, RINGS, ACCRETION FLOWS AND JET BASES: EXPLORATORY EHT+ALMA FLUX MEASUREMENTS
Co-PI (PI: Neil Nagar), 36 hours (12M), Priority B
ALMA Cycle 9
2022
- NGC4261: THE 2ND JET AT < 50 GRAVITATIONAL RADII (AND THE 3RD BLACK HOLE SHADOW?)
Co-PI (PI: Neil Nagar), 6 hours (12M), Priority B
ALMA Cycle 9
2022

Assistanships

Astronomía Extragaláctica

PROFESSOR: DR. RICARDO DEMARCO

UdeC, Concepción, Chile

Semester II. 2023

Radioastronomía

PROFESSOR: DR. NEIL NAGAR

UdeC, Concepción, Chile

Semester II. 2023

Outreach

2022 **La nueva generación del Telescopio Horizonte de Eventos (ngEHT) y Chile**

*Viernes Estelares de
Astronomía, UdeC*

Leadership & Community Service

WISE2MBH algorithm (package and repository)

DEVELOPER AND MAINTAINER

[GitHub](#)

2023-today

SciCat: Grupo de apoyo creado por y para estudiantes

FOUNDER, CONTENT CREATOR AND COMMUNITY MANAGER

[Instagram / YouTube](#)

2020-2022

Workshops & Certificates

2023 **Certification in Machine Learning with Python**, freeCodeCamp
2022 **Certification in Data Analysis with Python**, freeCodeCamp
2022 **Certification in Scientific Computing with Python**, freeCodeCamp
2022 **Certificado en Cloud Computing**, Google & Esc. de Org. Industrial
2021 **Escuela de Física del Magister en Cs. Físicas**, Universidad del Bío Bío (UBB)
2019 **Curso de Inglés Avanzado**, SNBP & BiblioRedes

[Certificate](#)

[Certificate](#)

[Certificate](#)

Skills

Programming Python, TeX, git, Bash
Data analysis NumPy, Pandas, Matplotlib, Seaborn, SciPy, scikit-learn, Tensorflow
Photography Gimp, Inkscape
Video Olive

Other

Citizenship Chilean
Birth year 1999 (24 years old)
Languages Spanish (native), English