Joaquín **Hernández-Yévenes**

Astronomer

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Education

Universidad de Concepción   *Concepción, Chile*

MASTER DEGREE (MSc, ASTRONOMY)   *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   *Concepción, Chile*

BACHELOR AND PROFESSIONAL (CHL) DEGREE IN ASTRONOMY   *2018 – 2023*

Research Internships

Discussion of the WISE2MBH algorithm and ngEHT prospects   *BHI 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

2   WISE2MBH: A SIMPLE ALGORITHM FOR MORPHOLOGY, BULGE FRACTION AND BLACK HOLE MASS ESTIMATION USING WISE CATALOGS   *2023*

Hernández-Yévenes J., Nagar N., Arratia V. & Jarrett T.H.   *Submitted to MNRAS*

1   EVENT HORIZON AND ENVIRONS (ETHER): A CURATED DATABASE FOR EHT AND ngEHT TARGETS AND SCIENCE   *2023*

*Ramakrishnan V., Nagar N., Arratia V., **Hernández-Yévenes J.**, Pesce D.W., Nair D.G., Bandyopadhyay B., Medina-Porcile C., Krichbaum T.P., Doeleman S., Ricarte A., Fish V.L., Blackburn L., Falcke H., Bower G., & Natarajan P.*   *Galaxies*

Successful PI observing proposals

1   TOWARDS RESOLVING ORBITING BINARY SMBH, PLUS SHADOWS, JETS, AND ACCRETION FLOWS OF SINGLE SMBH: ACA FLUXES   *2023*

Hernández-Yévenes J., Arevalo P., Arratia V., Bower G., Cuadra J., Gurwell M., Krichbaum T., Leigh N., Lira P., Nagar N., Nair D., Ramakrishnan V., Rao R., Reeves R. & Sasikumar S.   *ALMA Cycle 10*

Assistanships

Astronomía Extragalactica   *UdeC, Concepción, Chile*

PROFESSOR: DR. RICARDO DEMARCO   *Semester II. 2023*

Radioastronomía   *UdeC, Concepción, Chile*

PROFESSOR: DR. NEIL NAGAR   *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) *GitHub*
Developer and Maintainer *2023-today*

SciCat: Grupo de apoyo creado por y para estudiantes *Instagram / YouTube*
Founder, Content Creator and Community Manager *2020-2022*

Workshops & Certificates

2023	**Certification in Machine Learning with Python**, freeCodeCamp	*Certificate*
2022	**Certification in Data Analysis with Python**, freeCodeCamp	*Certificate*
2022	**Certification in Scientific Computing with Python**, freeCodeCamp	*Certificate*
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	

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