

## Dr. Itziar Aretxaga

Researcher/Investigadora Titular C

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### PERSONAL INFORMATION

Citizenship: Mexican/Spanish

Gender: Female

Birthplace: Bilbao, Spain, 20th November, 1965

### EDUCATION

PhD	Physics	Univ. Autónoma de Madrid (UAM), Spain	1993
MSc	Physics	Univ. Autónoma de Madrid (UAM), Spain	1990
BSc	Physics	Univ. Complutense de Madrid (UCM), Spain	1988

### PROFESIONAL AFFILIATIONS

1993: Spanish Astronomy Society / Sociedad Española de Astronomía (SEA)

European Astronomical Society (EAS)

2000: National Researchers' System / Sistema Nacional de Investigadores (currently SNI III = Full Professor), Consejo Nacional de Ciencia y Tecnología (Conacyt), Mexico

2003: Mexican Academy of Sciences / Academia Mexicana de Ciencias (AMC)

2006: International Astronomical Union (IAU)

2016: Mexican Physics Society / Sociedad Mexicana de Física (SMF)

**RESEARCH INTERESTS.** Astrophysics and Cosmology: galaxy formation and evolution, active galactic nuclei, starbursts, supernovae

### POSITIONS AND APPOINTMENTS

2018-: *Director* of the International School for Young Astronomers, IAU.

2016-2018: Deputy Director of the International School for Young Astronomers, IAU.

2015-2018: Treasurer and Member of the *Directing Board*, Southeastern Region AMC.

2011-2016: *Head of the Department* of Astrophysics, INAOE, Mexico.

2006-2013: *Coordinator*, Astronomy Section, AMC, Mexico.

1998-: *Researcher* (current level Full Professor), INAOE, Mexico, tenured since 2004.

1996-1998: *Marie Curie Fellow*, Max-Planck Institut für Astrophysik, Germany.

1993-1996: *Marie Curie & Basque Gov. Research Fellow*, Royal Greenwich Obs., UK.

1992-1993: *Teaching Assistant*, Theoretical Physics Dept., Univ. Autónoma de Madrid, Spain.

## SELECTION OF RESEARCH ACTIVITIES

- *142 refereed papers* in international journals, 14 invited review papers and 56 contributed papers in conference proceedings, 3 chapters of books, 7 books/reports.
- *> 7000 citations* (NASA's Astrophysics Data System), with a Hirsch index  $H=49$ .
- *54 review/invited talks* in conferences and workshops, 57 colloquia in research institutes.
- SOC member of 30+ national and international conferences (Argentina, China, Colombia, France, Egypt, Ethiopia, Italy, Mexico, Spain, South Africa, S. Korea, USA)
- *10 funded research projects as principal investigator*, >10 as co-investigator.
- *Project scientist of TolTEC* (bolometer camera for 50m LMT), co-investigator of the following science teams: AzTEC (1.1mm camera, 50m LMT), CanariCam (IR camera, 10m-GTC), Cosmology Legacy Survey (SCUBA2), H-ATLAS (Herschel).

## SELECTION OF TEACHING ACTIVITIES

- 14 invited lecture courses in IAU schools or other university PhD programs (Costa Rica, Spain, USA, Venezuela).
- Lecturer of 24 MSc/PhD courses at INAOE (since 1998) and 5 BSc courses as assisting professor at UAM-Spain (1989-1993), as member of staff.
- (Co-)/supervisor of 7 PhD, 6 MSc, 2 BSc theses and 12 BSc research projects.
- Director of 6 IAU International Schools for Young Astronomers (Inc. INAOE, 2005).

## SELECTION OF OUTREACH ACTIVITIES

- Co-author (compiler, editor and translator) of the book "The Large Millimeter Telescope: Neighbors Explore the Cosmos" (in English & Spanish)
- 22 science-popularization papers in printed media (in Spanish & Basque).
- 50+ science-popularization talks (in Spanish & Basque), + social media outreach posts

## SELECTION OF COMMITTEE WORK

- *Coordinator/coauthor* of Conacyt-PILA plan "Nature of the Universe" (2014-2018) and of the National Science Plan, UNAM (2018).
- *(Co-)author of reports* on the state of astronomy research in Mexico (Academia Mexicana de Ciencias, Colegio Nacional, Mexico 2008, 2010, 2013), and of research-project evaluation in Mexico (FCCyT 2014).
- *Researchers hiring/assessment*: SNI (Mexico, 2014, 2018-2021, chair 2020), Hubble Fellows (USA, 2014), Ramón y Cajal Fellows (Spain, 2013), universities/institutes in Mexico, USA.
- *Member, CONACYT committees* for funding of basic science (Mexico, 2009, 2010).
- Frequent *referee/evaluator* of peer-reviewed research journals (MNRAS, ApJ, A&A), MSc/PhD theses (Mexico, USA, Spain), science funding agencies (Argentina, Canada, The Netherlands, Mexico, Spain), and TACs (Germany, Spain, UK).
- *Time Allocation Committees (TACs)*: ALMA (2019), Hubble Space Telescope (1999, 2004-2006, 2011, 2017, 2018), Canary Island telescopes (2005), 10-m Gran Telescopio Canarias (cochair 2008-2013), OAGH-INAOE (chair 2005-2006).

# Curriculum Vitae in Extenso

## 1. FIVE HIGHLIGHTED RESEARCH PRODUCTS (see full list in section 12)

- Zavala, J. A. (student), Aretxaga, I., Dunlop, J. S. et al., 2018, MNRAS 475, 5585: *The SCUBA-2 Cosmology Legacy Survey: The EGS deep field - II. Morphological transformation and multiwavelength properties of faint submillimetre galaxies.*  
*We exploit the deepest single-dish survey at 450/850um in the Extended Groth Strip by the Scuba-2 Cosmology Legacy Survey. It sets the grounds on how we will perform deep surveys with the LMT/ToI TEC. We identify the optical-IR counterparts of the dusty galaxies detected at mm-wavelengths in HST/CANDELS imaging with good single-dish astrometry, determine their redshifts and stellar mass and star-formation properties. We establish that faint sub-mm galaxies are massive and fall in the extreme end of the main sequence of star formation or are starbusts. We claim to witness the morphological transformation of faint submillimeter galaxies, with the development of bulges happening towards lower redshifts.*
- Martínez-Paredes M. (student), Aretxaga I., Alonso-Herrero A. et al., 2017, MNRAS, 468: *The dusty tori of nearby QSOs as constrained by high-resolution mid-IR observations.*  
*We model the properties of the tori of a representative sample of nearby, X-ray bright QSOs, and with the same techniques, make a comparison with those of Seyfert galaxies, establishing a sequence of properties, and reinforcing the need for complex unification schemes, where luminosity is also a unifying factor. We present evidence for a receding torus model, where luminosity sets the inner radius and extent of the torus.*
- Negrello M. et al., 2010, Science, 330, 880: *The Detection of a Population of Submillimeter-Bright, Strongly-Lensed Galaxies.*  
*Using the photometric method in Aretxaga et al. 2003, and spectroscopic follow up at the photometric solutions, we establish the 100% effectiveness of a selection technique to extract gravitational lenses from large-area (sub-)mm wavelength surveys. The selected sources are galaxy-galaxy lenses which are now being used to constrain dark halo models.*
- Aretxaga I., Hughes D.H., Chapin E.L. et al. 2003, MNRAS, 342, 759. *“Breaking the ‘Redshift Deadlock’ - II: The redshift distribution of the submillimetre population of galaxies”.*  
*It sets the method to derive prior-constrained Monte Carlo photometric redshifts from FIR-mm-radio photometry of sub-millimeter galaxies, where the optical-IR methods fail. This technique is currently well established and it is used in several papers, including some Nature and Science papers (see Negrello et al. 2010) and others led by myself and Herschel, AzTEC, SCUBA2 team members, with high citations indices (e.g. Aretxaga et al. 2007, 2011).*
- Aretxaga I., Joguet B., Kunth D., Melnick J., Terlevich R.J., 1999, Ap. J. Lett., 519, L123. *“Seyfert 1 mutation of the classical Seyfert 2 nucleus NGC 7582.”*  
*It establishes the changing nature and classification of low-luminosity active galactic nuclei (AGN). This object, originally a Seyfert 2 that transits into Seyfert 1 nature, still poses a mystery for tori models of AGN and unification schemes, including the now popular clumpy dusty models. The tight timing of the changing event, serendipitously discovered, sets constraints on the dispersal of clouds in the obscuring torus or the sporadic episode of a SN with AGN impostor properties (SN IIn, like SN1988Z, Aretxaga et al. 1999) in the existing nuclear starburst ring.*

## 2. LARGE INTERNATIONAL RESEARCH PROJECTS

- Project Scientist of the *ToI TEC instrument* for the 50m Large Millimeter Telescope.
- Member of the *AzTEC science team*, for the 50m Large Millimeter Telescope.
- Member of the *CanariCam science team*, for the 10.4m Gran Telescopio Canarias.
- Co-investigator of *S2CLS "SCUBA2 Cosmology Legacy Survey"*, Coordinators J.S.Dunlop (IfA-Edinburgh, UK), I. Smail (U. Durham, UK), P. van den Werf (Leiden U., the Netherlands), M. Halpern (U. British Columbia, Canada).
- Co-investigator of *HATLAS "Herschel Astrophysical Terahertz Large Area Survey"*, IPs S. Eales (Cardiff Univ., UK), L. Dunne (Nottinham U., UK).
- Collaborator of 2m *BLAST "Balloon-borne Large-Aperture Sub-millimeter Telescope"* (NASA).
- Co-investigator of *SHADES "SCUBA HALF-square Degree Survey"*, PI J.S.Dunlop (IfA-Edinburgh, UK).
- Member of the ALFA Project "*Latin American - European Network for Astrophysics and Cosmology*" lead by C. Baugh (Univ. Durham, UK).

## 3. INDIVIDUAL / GROUP / (INTER-)INSTITUTIONAL PROJECTS WITH EXTERNAL FUNDING

### 3.1 RESEARCH GRANTS AS PI (10)

- **2019-2021:** *AMEXCID (SRE)* grant for Mexico-Costa Rica cooperation project "Cooperación científica entre INAOE y CINESPA".
- **2018-2021:** *CONACyT "Ciencia Básica"* grant for 3 year to support the research program: "Propiedades físicas de starbursts maximales en galaxias en formación y cuásares" (cont.).
- **2017-2021:** *CONACyT "Fronteras de la Ciencia"* grant FDC2016-1848 "Censos panorámicos profundos del cielo a 1.1/1.4/2.1mm con la nueva cámara polarimétrica ToI TEC".
- **2016-2018:** *AMEXCID (SRE)* grant for Mexico-Costa Rica cooperation project "Consolidación de Cooperación Científica CINESPA-INAOE".
- **2014-2016:** *AMEXCID (SRE)* grant for Mexico-Costa Rica cooperation Project "Acercamiento científico entre el Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE) y el Centro de Investigaciones Espaciales (CINESPA)".
- **2012-2016:** *CONACyT "Ciencia Básica"* grant to support the research program: "Propiedades físicas de starbursts maximales en galaxias en formación y cuásares".
- **2007-2011:** *CONACyT "Ciencia Básica"* grant to support the research program: "Nueva generación de distancias cósmicas a galaxias fuertemente oscurcidas".
- **2005:** *AMC-RS Exchange* program fellowship for an extended research visit to the Univ. of Kent (UK).
- **2003-2007:** *CONACyT "Ciencia Básica"* grant to support the research program: "Los entornos estelares de los núcleos galácticos activos".
- **1998-2002:** *CONACyT "Ciencia Básica"* to support the research program: "La física de las SN II<sup>n</sup>".

### 3.2 PRE/POST-DOCTORAL FELLOWSHIPS

- **1996-1997:** *Marie Curie TMR Fellowship* of the Galaxy Formation and Evolution Network, ERB FMRX-CT96-086 at Max-Planck Institute für Astrophysik, Garching bei München, Germany.
- **1994-1996:** *Individual Marie Curie Fellowship* of the program EU Human Capital and Mobility, ERB4001GT931611 at Royal Greenwich Observatory, UK.
- **1993-1994:** of the Program of Researchers Development of the *Autonomous Community of the Basque Country* BFI93.009 at Royal Greenwich Observatory, UK.
- **1988-1992:** Predoctoral Fellowship of the Program of Researchers Development of the *Autonomous Community of the Basque Country* BFI88.009 at Universidad Autónoma de Madrid, Spain.

### 3.3 OTHER FELLOWSHIPS AND GRANTS

- **2012:** Coordinator of the INAOE team for the *CONACyT-PEF program* grant to fund scientific instrumentation, in order to get INAOE in a position to lead astronomical instrumentation packages. (*13M-Mx\$ ~1M-USD*).
- **2009:** Visiting scientist grant, *European Southern Observatory*.
- **2004-2007:** Participant of the ALFA (*America Latina Formación Académica*) project LENAC (Latin American European Network for Astrophysics and Cosmology), awarded 950,000 euros for the training of students and the cooperation between higher-education institutes in Latin America (Mexico, Chile, Brazil, Argentina) and Europe (UK, Germany, Spain, France).
- **1998-:** Participant of ~10 other *CONACyT research grants*.
- **1989-1998:** 12 other grants received from several governmental institutes, organizing committees or universities in order to participate in courses, national or international meetings.
- **1989-1998:** researcher or student attached to 6 Spanish and European research grants (coordinated by others).
- **1997:** Fellowship of the EOU TMR program to observe in the Observatory of Roque de los Muchachos.

## 4. TEACHING AND SUPERVISION EXPERIENCE

### 4.1 THESIS SUPERVISION (15)

#### 4.1.1 PhD Theses

- **2018:** *Emmaly Aguilar* (INAOE, Mexico), PhD thesis “Evolución de la población de galaxias fuertemente oscuras con altos corrimientos al rojo, en campos sin sesgos, con SPIRE y AzTEC”. Current position: LMT support astronomer.

- **2017:** *Jorge Zavala* (INAOE, Mexico), PhD thesis “Multi-wavelength Studies of Submillimeter Galaxies: Constraining their Physical Properties through Cosmic Time”, (co-supervised with D.H. Hughes, INAOE). *Prizes:* best national thesis of Astronomy 2019 by SMF. Current position: staff at National Astronomical Obs. Japan, SNI 1.
- **2016:** *Mariela Martínez* (INAOE, Mexico), PhD thesis “Búsqueda IR de starburst y del toroide de polvo oscurecedor en QSO”, co-supervised with A. Alonso-Herrero (CSIC, Spain). *Prizes:* honorable mention in national competition for best PhD thesis on Astronomy, 2017. Current position: postdoc in KASI, South Korea (Korean funding).
- **2013:** *Milagros Zeballos* (INAOE, Mexico), PhD thesis “Studying the formation and evolution of massive galaxies towards protoclusters using millimetre observations”, co-supervised with D.H. Hughes (INAOE). Current position: professor-researcher at Universidad de las Américas (UDLA), Mexico, SNI 1.
- **2019-:** *Luisa Cardona* (INAOE, Mexico), PhD thesis, co-supervised with A. Montaña (INAOE/Conacyt). In process.
- **2020-:** *Araceli Nava* (INAOE, Mexico), PhD thesis, co-supervised with A. Montaña (INAOE/Conacyt). In process.
- **2020-:** *Edgar Peralta* (INAOE, Mexico), PhD thesis, co-supervised with A. Montaña (INAOE/Conacyt). In process.

#### 4.1.2 MSc Theses

- **2020:** *Edgar Peralta* (INAOE, Mexico), MSc thesis “Agrupamiento de galaxias en grandes censos cosmológicos” (co-supervised with A. Montaña, INAOE/Conacyt). In process.
- **2019:** *Araceli Nava* (INAOE, Mexico), MSc thesis “Simulaciones a 1.1/1.4/2.0 mm de la estructura a gran escala del Universo a estudiar con TolTEC” (co-supervised with A. Montaña, INAOE/Conacyt).
- **2019:** *Luisa Cardona* (INAOE, Mexico), MSc thesis “Comparison of star-formation rates for the deep field Extended Groth Strip and its Dusty Star Forming Galaxies population” (co-supervised with A. Montaña, INAOE/Conacyt). Current position: PhD student, INAOE.
- **2009:** *Emmaly Aguilar* (INAOE, Mexico), MSc thesis “Evolución de la población de galaxias fuertemente oscurecidas con alto corrimiento al rojo en campos sin sesgo con BLAST y AzTEC” (co-supervised with D.H. Hughes, INAOE). Current position: LMT support astronomer.
- **2001:** *Olga Vega* (INAOE, Mexico), MSc Thesis “Caracterización Estadística de Supernovas de Tipo II<sup>n</sup>”. Current position: Researcher, INAOE. SNI 1.
- **2018-:** *Fabián Cháverri* (Univ. de Costa Rica), MSc Thesis “Cálculo del corrimiento al rojo fotométrico de galaxias submilimétricas cercanas a núcleos galáctivos de galaxias” (co-supervised with Milagros Zeballos, UDLA, Mexico). In process. Current position: lecturer at Univ. Costa Rica

#### 4.1.3 BSc Theses

- **2018:** *Karla García Rivera* (Univ. de las Américas, Mexico), BSc Thesis “Estudio morfológico de galaxias submilimétricas a alto corrimiento al rojo”, (co-supervised with A. Montaña, INAOE/Conacyt, and M.A. Ocaña Bribiesca as internal UDLA assessor).
- **2020-:** *Carlos Tecalero Zaldivar* (BUAP, Mexico), BSc Thesis, “Caracterización de fondos extragalácticos milimétricos” (co-supervised with Iván Rodríguez Montoya, INAOE/Conacyt). In process.

#### 4.2 OTHER STUDENT SUPERVISIONS (12)

- 2020:** *Eliana Vargas Sánchez* (UDLA, Mexico), Professional Practice, “Medida de la formación estelar de galaxias oscuras”
- **2020:** *Carlos Tecalero Zaldivar* (BUAP, Mexico), Profesional Practice “Caracterización de fondos extragalácticos milimétricos”
- **2017:** *Marianela Quirós* (Univ. de Costa Rica), Laboratorio Avanzado II for BSc degree (research project).
- **2017:** *Lirio Alexa Ordoñez*, Mentorship women in STEM (secondary school), US-México Foundation .
- **2018:** *Karla Alicia García Rivera* (Univ. de las Américas, Mexico), Social Service, “Investigación sobre la morfología de galaxias”.
- **2018:** *Karla Alicia García Rivera* (Univ. de las Américas, Mexico), Professional Practice "Análisis morfológico de galaxias cercanas II”.
- **2017:** *Karla Alicia García Rivera* (Univ. de las Américas, Mexico), Professional Practice "Análisis morfológico de galaxias cercanas I”.
- **2016:** *Rafael Oreamundo* (Univ. Costa Rica), MSc summer research internship from the program “Verano de la Investigación Científica INAOE” on “Formación de galaxias masivas en 17 proto-cúmulos a  $0.5 < z < 6.5$ ”.
- **2015:** *Edgar Martínez* (Univ. Juárez Autónoma de Tabasco, Mexico), BSc summer research internship from the program “Verano de la Investigación Científica UJAT. Work on “Sub-mm photometric redshifts”.
- **2007:** *Víctor Manuel Vázquez Báez* (BUAP, Mexico), BSc summer research internship from the program “El Verano de la Investigación” of the Mexican Academy of Sciences. Work on “Sub-mm photometric redshifts for SPIRE”.
- **2006:** *Carlos Zagoya* (UAM, Mexico), BSc summer research internship from the program “El Verano de la Investigación” of the Mexican Academy of Sciences. Work on “MIR simulations of nearby QSOs”.
- **2003:** *Julie Roberts* (UVic, Canada), BSc Thesis, as part of the requirements to obtain her BSc “Seyfert transition of NGC7582”.

#### 4.2 ASSOCIATED JUNIOR RESEARCH STAFF (7)

- **2018-2019:** *Dr. Javier Zaragoza*, Conacyt project postdoc. Current position: INAOE/Conacyt researcher, SNI I.



- 2016-2017: *Dr. Edgar Ramírez*, Conacyt PNPC postdoc. Current position: lecturer.
- 2016-2017: *Dr. Milagros Zeballos*, Peru funded postdoctoral researcher. Current position: professor-researcher at Universidad de las Américas (Mexico), SNI I.
- 2015-2017: *Dr. Iván Rodríguez*, Conacyt project postdoc. Current position: INAOE/Conacyt researcher, SNI I.
- 2013: *Dr. Iván Rodríguez*, LMT postdoc. Current position: INAOE/Conacyt researcher, SNI I.
- 2009-2011: *Dr. Andrew Humphrey*, CONACyT PNPC postdoc. Current position: Researcher, Univ. Porto, Portugal.
- 2007-2008: *Ms. Oliva Lima*, INAOE Software Technician, PNSAV database development.

#### 4.3 UNIVERSITY/GRADUATE-SCHOOL LECTURE COURSES AND WORKSHOPS (55)

- May-Jun 2021: *Career Development Workshop* (10 hr) to MSc/PhD at INAOE, Mexico.
- Mar 2021: *Machine Learning in Astronomy* (2 hr) to MSc at CIMAT, Mexico.
- Jan 2021: *Career Development Workshop* (9 hr) to MSc/PhD at IRyA-UNAM, Mexico.
- Jan-May 2021: *Extragalactic Astronomy and Cosmology* (20 hr) to MSc students at INAOE.
- Jan-May 2020: *Extragalactic Astronomy and Cosmology* (20 hr) to MSc students at INAOE.
- Oct 2019: *Galaxies* (6 hr), to MSc/PhD students of Astronomy attending the 42<sup>nd</sup> International School for Young Astronomers, Kunming, China.
- Oct 2019: *Career Development Workshop* (6 hr), to MSc/PhD students of Astronomy attending the 42<sup>nd</sup> International School for Young Astronomers, Kunming, China
- Oct 2019: *Career Development Workshop* (6 hr) to MSc/PhD at INAOE, Mexico.
- Aug 2019: Astronomy, BSc, BUAP, coordinated by Abraham Luna: *module "Introduction to Cosmology"* (4 hr)
- Jan-May 2019: *Extragalactic Astronomy and Cosmology* (20 hr) to MSc students at INAOE.
- Jul 2018: *Active Galactic Nuclei* (3 hr), to MSc/PhD students of Astronomy attending the 41<sup>st</sup> International School for Young Astronomers, Socorro, Colombia.
- Jul 2018: *Career Development Workshop* (6 hr), to MSc/PhD students of Astronomy attending the 41<sup>st</sup> International School for Young Astronomers, Socorro, Colombia.
- Apr 2018: *Galaxies* (8 hr), to MSc/PhD students of Astronomy attending the 40<sup>th</sup> International School for Young Astronomers, Kottamia Obs./Cairo, Egypt.
- Apr 2018: *Career Development Workshop* (3 hr), to MSc/PhD students of Astronomy attending the 40<sup>th</sup> International School for Young Astronomers, Kottamia Obs./Cairo, Egypt.
- Jan-May 2018: *Extragalactic Astronomy and Cosmology* (20 hr) to MSc students, INAOE.
- Aug 2017: *Galaxies* (6 hr), to MSc/PhD students of Astronomy at Universidad de Costa Rica.
- Jun 2017: "Active Galactic Nuclei" (1 hr) in Taller de Astronomía Milimétrica, INAOE.
- Apr 2017: *Galaxies* (6 hr), to MSc/PhD students of Astronomy attending the 39<sup>th</sup> International School for Young Astronomers, Addis Ababa, Ethiopia
- Apr 2017: *Virtual Observatory* (1.5 hr), to MSc/PhD students of Astronomy attending the 39<sup>th</sup> International School for Young Astronomers, Addis Ababa, Ethiopia
- Apr 2017: *Career Development* (3 hr), to MSc/PhD students of Astronomy attending the 39<sup>th</sup> International School for Young Astronomers, Addis Ababa, Ethiopia

- Jan-May 2017: *Astrofísica Extragaláctica y Cosmología* (half of a course of 45 hr), INAOE.
- Aug 2016: *Active Galactic Nuclei* (3 hr), to MSc/PhD students of Astronomy attending the 38<sup>th</sup> International School for Young Astronomers, Tehran, Iran.
- Jul 2016: *Active Galactic Nuclei* (1 hr), to BSc and MSc students of the “Taller de Radioastrofísica”.
- Jan-May 2016: *Astrofísica Extragaláctica y Cosmología* (half of a course of 45 hr), INAOE.
- Jan-May 2015: *Astrofísica Extragaláctica y Cosmología* (half of a course of 45 hr), INAOE.
- Jan-May 2014: *Astrofísica Extragaláctica y Cosmología* (half of a course of 45 hr), INAOE.
- Jan-May 2013: *Astrofísica Extragaláctica y Cosmología* (half of a course of 45 hr), INAOE.
- Jan-May 2012: *Astrofísica Extragaláctica y Cosmología* (half of a course of 45 hr), INAOE.
- May 2012: *Introducción a la cosmología*, in *Tópicos de Astrofísica* (3 hr), to BSc. students of BUAP, Mexico.
- Sep -Dec 2011: *Galaxias* (8 hr as part of the course), to MSc and PhD students of Astronomy, INAOE.
- Jan-May 2011: *Astrofísica Extragaláctica y Cosmología* (half of a course of 45 hr), INAOE.
- Jan-May 2010: *Astrofísica Extragaláctica y Cosmología* (half of a course of 45 hr), INAOE.
- Jan-May 2009: *Astrofísica Extragaláctica y Cosmología* (half of a course of 45 hr), INAOE.
- Oct 2009: *Bancos de Datos* (8 hr of a Diploma course), to BSc graduate staff of Parque Nacional Sistema Nacional Veracruzano (PNSAV, CONANP), Veracruz, Mexico.
- Sep-Dec 2008: *Galaxias* (6hr as part of the course), to MSc and PhD students of Astronomy, INAOE.
- Jan-May 2008: *Astrofísica Extragaláctica y Cosmología* (half of a course of 45 hr), to MSc and PhD students of Astronomy, INAOE.
- Dec 2007: *The hosts and environments of Active Galactic Nuclei* (6 hr) in I Madrid Advanced School of Astrophysics and Cosmology, El Escorial (Spain), to PhD students, mainly, from the Spanish community.
- Nov 2007: *Núcleos Activos de Galaxias* (6 hr) in Escuela Internacional de Astronomía, Centro de Investigaciones de Astronomía (CIDA), Mérida, Venezuela, to MSc/PhD Latin American students.
- Jan-May 2007: *Astrofísica Extragaláctica y Cosmología* (half of a course of 45 hr), to MSc and PhD students of Astronomy, INAOE.
- Apr 2007: *Active Galactic Nuclei* (6 hr), to PhD students of Astrophysics, INAOE.
- Apr 2007: *Estadística básica para biólogos* (4 hr), Parque Nacional Sistema Arrecifal Veracruzano (CONANP, Mexico), to BSc graduate staff.
- Aug-Dec 2005: *Astrofísica Computacional* (half of a course of 45 hr), to MSc and PhD students of Astronomy, Instrumentation and Computational Astrophysics, INAOE.
- Aug-Dec 2004: *Astrofísica Computacional* (half of a course of 45 hr), to MSc and PhD students of Astronomy, Instrumentation and Computational Astrophysics, INAOE.
- Aug-Dec 2003: *Astrofísica Computacional* (half of a course of 45 hr), to MSc and PhD students of Astronomy, Instrumentation and Computational Astrophysics, INAOE.
- Apr 2003: *Active Galactic Nuclei* (6 hr), to PhD students of Astronomy from the Univ. of Pennsylvania, Dexter Univ., Univ. of British Columbia, Brown Univ. and Univ. of Toronto, UPenn, USA.

- **Aug-Dec 2002:** *Astrofísica Computacional* (half of a course of 45 hr), to MSc and PhD students of Astronomy, Instrumentation and Computational Astrophysics, INAOE.
- **Aug 2002:** *Active Galactic Nuclei* (6 hr), at the 26<sup>th</sup> International School for Young Astronomers, IAU+UNESCO, to MSc and PhD students of Astronomy from Latin America, El Leoncito, Argentina.
- **Aug-Dec 2001:** *Astrofísica Computacional* (half of a course of 45 hr), to MSc and PhD students of Astronomy, Instrumentation and Computational Astrophysics, INAOE.
- **May 2001:** *Astroestadística* (30 hr), to PhD students of Astronomy, Univ. Autónoma de Madrid, Spain.
- **Aug-Dec 1999:** *Astrofísica Computacional* (45 hr), to MSc and PhD students of Astronomy, Instrumentation and Computational Astrophysics, INAOE.
- **Oct 1992 - Jun 1993:** *Laboratory of Mechanics and Waves* (100 hr) to 2<sup>nd</sup> year students of Physics. Univ. Autónoma de Madrid, Spain.
- **Jul 1995:** Lecture "*Galaxiak eratu zireneko aroaren bila*" (1 hr), Udako Euskal Unib., Spain, mainly to BSc students from the Basque Country (Spain/France).
- **Jul 1994:** *Oinarrizko Astrofisika* (6 hr), Udako Euskal Unib., Spain, mainly to BSc students from the Basque Country (Spain/France).
- **Oct 1991:** *Astronomía Elemental*. (6 hr) Univ. de Santiago de Compostela (Spain), mainly to BSc students.
- **Mar 1990 - Jun 1993:** Exercise classes of *General Physics* (~25 hr/yr during 3 years) to 1st year BSc students in Mathematics, Chemistry and Biology, Univ. Autónoma de Madrid, Spain.

#### 4.4 CURRICULA DESIGN

- **2016-:** International Schools for Young Astronomers, OYA-IAU. Director team. Ongoing. Each school has a unique design with a set of common topics.
- **2009:** Astronomical Instrumentation, MSc Program, INAOE. Chair of the committee that redesigned the program.
- **2009:** Diploma on Data Bases (180 hr), to staff of Parque Nacional Sistema Nacional Veracruzano (PNASV, CONANP), Veracruz, Mexico. Head of program INAOE-CONANP, under formal agreement.

## 5 INVITED RESEARCH REVIEWS, TALKS & COURSES

### 5.1 INVITED AND REVIEW TALKS IN SYMPOSIA AND WORKSHOPS (54)

- **Aug 2020:** "LMT surveys of cluster and protocluster environments" in Protoclusters: Galaxies in Confinement, Virtual International Workshop.
- **May 2020:** "Career Development thoughts from the Office of Young Astronomers", Virtual Reunion 1st Light School, Brasil, 29 de mayo 2020.

- Mar 2020: "Career Development" Workshop, IAU Symposium 359: Galaxy Evolution and Feedback Across Different Environments (GALFEED), Bento Goncalves, Brazil, 2-6 marzo 2020
- Dec 2018: VI meeting on Science with GTC, splinter session of collaborative GTC and LMT projects: *"SMGs discovery and follow-up"*
- Aug 2018: "Under One Sky. The IAU Centenary Symposium", IAU Symposium No. 349, IAU General Assembly, *"The future of the International Schools for Young Astronomers"*, 28-31 August.
- Aug 2018: Focus Meeting 15 "Astronomy for Development", IAU General Assembly, round table with Sze-Leung Cheung (NAOJ, Japan); Oddbjorn Engvold (NASL, Norway); Kevin Govender (SAO, South Africa) and Itziar Aretxaga (INAOE, Mexico): *"Panel Discussion: IAU's Offices"*
- Aug 2018: 2 Mini-talks (~5min) at Young Astronomers' Lunch, IAU General Assembly, 20-31 August, 2018: *"The International Schools for Young Astronomers"*.
- Jul 2018: Guillermo Haro 2018 Workshop: September 3-14, 2018, Tonantzintla, Puebla Synergy between the GTC and GTM/LMT: *"ToI TEC Legacy Surveys"*
- Nov 2017: in 'Knowledge across Borders: a celebration of the US-Mexico scholarly exchanges', *"ToI TEC: a large-format camera to image the sky with the Large Millimeter Telescope"*, University of Massachusetts, USA, 13th November 2017.
- Oct 2017: XVI Congreso Nacional de Astronomía (CNA), Monterrey, Mexico: *"Búsqueda de galaxias en formación a alto-z"*.
- Sep 2017: Coloquio del Fondo Mixto, CONACYT-CONCYTEP, Pue., *"ToI TEC: la nueva cámara de censos panorámicos del Gran Telescopio Milimétrico"*, 8th September 2017.
- Apr 2017: IV African and Middle-Eastern Astronomy Regional IAU Meeting, Addis Ababa, Ethiopia: *"The International School for Young Astronomers"*
- Aug 2016: II Simposio Ciencia y Humanismo, Mexico City, Mexico: *"Galaxias infantiles en los confines del Universo"*.
- Jun 2016: Aspen Center for Physics workshop on "Dusty Starbursts", Colorado, USA, invited participant, several talks and discussion sessions.
- Dec 2015: Vth Science with the GTC Meeting, Puebla, Mexico: *"High redshift star-forming galaxies: Frontier Fields"*
- Nov 2015: Congreso internacional Luz Ciencia y Arte (I-CILCA), BUAP, Puebla, Mexico: *"Telescopios naturales de lentes oscuras: sacando provecho de la gravedad"*.
- Oct 2015: LVIII Congreso Nacional de Física y Congreso Latinoamericano de Física 2015, Mérida, Mexico: *"Brotos estelares maximales en galaxias en formación"*.
- Jul 2015: Guillermo Haro 2015 Workshop "Forming and Fueling Supermassive Black Hole Seeds", INAOE, Mexico: *"AGN Tori"*
- Jun 2015: I Coloquio Iberoamericano Diálogo de saberes y políticas de ciencia, tecnología e innovación con perspectiva de género, Cuernavaca, Mexico: *"Observaciones de emisión de polvo y de líneas de emisión de CO en galaxias submilimétricas a z=2.0-4.7 amplificadas por lentes gravitatorias"*.
- Apr 2015: Workshop Stars, Interstellar Medium, Galaxies and the chemistry between them", Miraflores de la Sierra, Spain: *"Maximal starbursts in submillimeter galaxies"*

- [Jul 2014](#): Guillermo Haro Workshop on "Observations and Modeling of Circumstellar Disks", INAOE, Mexico: *"Large area surveys with the LMT"*.
- [Dec 2013](#): Guillermo Haro Conference on "Massive Young Star Clusters Near and Far: From the Milky Way to Re-ionization", INAOE, Mexico: *"Bright submillimeter galaxies: evidence for maximal starbursts"*.
- [Oct 2013](#): Congreso Nacional de Astronomía, DF, Mexico: *"AzTEC Community Science Case"*.
- [Oct 2013](#): Congreso Nacional de Astronomía, DF, Mexico, round table: *"Fronteras de la Astronomía"*.
- [May 2013](#): Aspen Center for Physics workshop on "Dusty Starbursts", Colorado, USA: *"Selection of SMGs at 1.1mm"* and *"Overdensities of SMGs around HzRGs"*.
- [Apr 2013](#): Round table "Hacia dónde va la astronomía en México", Instituto de Astronomía, UNAM, DF, Mexico, organized by Academia Mexicana de Ciencias: *"Demografía de la astronomía mexicana 2013"*.
- [Dec 2012](#): Torus Workshop 2012, University of Texas, San Antonio, USA: "Lessons Learned and Future Directions" *concluding remarks* and leading concluding discussion with A. Lawrence (U. Edinburgh, UK).
- [Oct 2012](#): Congreso Nacional de la Sociedad Mexicana de Física, Morelia, Mexico: round table *"Los posgrados de astrofísica en México"*.
- [Jan 2011](#): National Radio Observatory Workshop, Tokyo, Japan: *"The AzTEC COSMOS Survey"*
- [Jan 2011](#): National Radio Observatory Workshop, Tokyo, Japan: *"ACES: AzTEC Cluster Evolution Survey"*
- [Jun 2010](#): All-wavelength Extended Groth strip International Survey Meeting, Santa Cruz, USA: *"The AzTEC 2 sq. deg. blank field survey"*
- [Apr 2010](#): Reunión Anual de la División de Gravitación y Física Matemática de la Sociedad Mexicana de Física, DF, Mexico, review: *"Determinaciones de la masa y agrupamiento de galaxias masivas a alto-z"*
- [Mar 2010](#): National Radio Observatory workshop, Nobeyama, Japan: *"Blank-field AzTEC surveys"*.
- [Dec 2009](#): All-wavelength Extended Groth Strip International Survey Meeting, Toledo, Spain: *"Blank field surveys of the extragalactic mm sky"*.
- [Sep 2009](#): XXIII Congreso Nacional de Astronomía, Ensenada, Baja California, Mexico, review: *"Estructura a gran escala a bajo y alto-z de galaxias milimétricas"*.
- [May 2008](#): II Encuentro Blas Cabrera: "Ciencia y Tecnología con SIDE (Super IFU Deployable Experiment)", Instituto Politécnico Nacional, Mexico: *"First objects"*.
- [Feb 2008](#): I Congreso de Cosmología, Instituto Avanzado de Cosmología, León, Mexico: *"Large mm surveys towards blank and biased extragalactic fields"*.
- [Nov 2007](#): XII Latin-American Regional International Astronomical Union Meeting, Isla de Margarita, Venezuela, review: "Wide extragalactic (sub-)millimeter surveys with SCUBA and AzTEC".
- [Jan 2006](#): Atacama Large Millimeter Array (ALMA) workshop "From z-Machines to ALMA: (Sub-)millimeter Spectroscopy of Galaxies", Charlottesville, Virginia, USA: "Photometric redshifts for submillimeter galaxies".

- [Apr 2005](#): The 9th Texas-Mexico Conference on Astrophysics, San Antonio, Texas, USA: *"The photometric view of the cosmic distribution of obscured starbursts"*.
- [Jul 2004](#): Guillermo Haro International Workshop "Violent Star Formation and the Legacy Tool", INAOE, Mexico: *"Deriving the star formation rate of high-z dust-enshrouded starbursts"*.
- [Jun 2004](#): International Workshop "Multiwavelength Observations of the Subaru-XMM-Newton Deep Surveys", Kyoto, Japan: *"Photometric View of the Cosmic Distribution of Sub-mm Galaxies"*.
- [May 2003](#): Atacama Large Millimeter Telescope (ALMA) workshop "Star Formation Near and Far: the ALMA Promise", Elba, Italy: *"Measuring the redshift distribution of sub-millimetre galaxies"*.
- [Sep 2002](#): International Conference 'Star formation through time', Granada, Spain: *"Variability of AGN"*.
- [Sep 2002](#): International Conference 'Winds, Bubbles and Explosions', Pátzcuaro, Morelia, Mexico, invited talk: *"Line formation in the circumnuclear regions of AGN"*.
- [Jul 2002](#): Guillermo Haro International Workshop, INAOE, Mexico: *"Photometric redshifts for obscured galaxies"*.
- [Oct 2001](#): XV Reunión Anual de Astronomía, INAOE, Mexico: *"Corrimientos al rojo fotométricos en bandas milimétricas a infrarrojas lejanas"*.
- [Sep 2000](#): Ringberg Workshop "Starburst Galaxies: Near and Far", Ringberg, Germany: *"Galaxy formation: early vs late bulge formation"*.
- [Jul 2000](#): Guillermo Haro International Workshop "The Starburst-AGN connection", INAOE, Mexico: *"Stellar populations of nearby radiogalaxies"*.
- [Jul 1999](#): Guillermo Haro International Workshop "The Energy Input from Stars: Supernovae and Chemodynamical Evolution", INAOE, Mexico: *"The hypernova SN1988Z"*.
- [Nov 1998](#): International Astronomical Union Symposium "Wolf-Rayet activity in Massive Stars and Starbursts", Puerto Vallarta, Mexico: *"When SN explode in starbursts: transitions among AGN"*.
- [Jul 1998](#): Guillermo Haro International Workshop "The Formation and Evolution of Galaxies" Tonantzintla, Pue., Mexico, invited talk: *"The host galaxies of high-redshift QSOs: a search for early spheroids"*.
- [May 1997](#): Training and Mobility of Researchers Network of Galaxy Formation and Evolution, Ringberg, Germany, review: *"Starbursts and H II galaxies and their relationship with AGN"*.
- [Jun 1996](#): Guillermo Haro International Workshop "Starburst and Active Galactic Nuclei" Tonantzintla, Pue., Mexico: *"Variability of AGN"*.
- [May 1996](#): Guillermo Haro International Conference 'Starburst Activity in Galaxies', Puebla, Pue., Mexico: *"Variability of AGN: from Seyfert to QSOs"*.

## 5.2 INVITED LECTURE COURSES (14, also contained in section 4.3)

- [Oct 2019](#): 42nd International School for Young Astronomers, Kunming, China, *"Galaxies"* (6 hr), *"Career Development"* (6 hr).

- Jul 2018: 41st International School for Young Astronomers, Socorro, Colombia: “Active Galactic Nuclei” (3 hr), Career Development (4.5 hr).
- Mar 2018: 40th International School for Young Astronomers, Kottamia Obs./Cairo, Egypt: “Galaxies” (8 hr), Career Development (3 hr).
- Aug 2017: Universidad de Costa Rica, San José: “Galaxies” (6 hr).
- May 2017: 39th International School for Young Astronomers, Addis Ababa, Ethiopia: “Galaxies” (6 hr), “Virtual Observatory” (1.5hr) and “Career Development (1.5 hr).
- Aug 2016: 38th International School for Young Astronomers, Tehran, Iran: “Active Galactic Nuclei” (3 hr).
- Dec 2007: I Madrid Advanced School of Astrophysics and Cosmology, “Getting Ready for the Upcoming IR to Millimeter Observing Facilities”, El Escorial, Spain: “The hosts and environments of Active Galactic Nuclei” (6 hr).
- Nov 2007: Escuela Internacional de Astronomía Mérida 2007, Centro de Investigaciones de Astronomía (CIDA), Mérida, Venezuela: “Núcleos Activos de Galaxias” (6 hr).
- Apr 2003: Univ. of Pennsylvania, USA, “Active Galactic Nuclei” (6 hr).
- Aug 2002: International Astronomical Union, 26th International School for Young Astronomers, El Leoncito, Argentina: “Active Galactic Nuclei” (6 hr).
- May 2001: Univ. Autónoma de Madrid (Spain): “Astroestadística” (30 hr).
- Jul 1995: Udako Euskal Unibertsitatea, Pamplona, Spain: “Galaxiak eratu zireneko aroaren bila” (1 hr).
- Jul 1994: Udako Euskal Unibertsitatea, Pamplona, Spain: “Oinarrizko Astrofisika” (6 hr).
- Oct 1991: Univ. de Santiago de Compostela, Spain: “Astronomía Elemental” (6 hr).

### 5.3 INVITED SEMINARS IN RESEARCH INSTITUTES (57)

- Apr 2021: Univ. Texas Austin, USA: “Dusty star-forming galaxies in deep fields: the morphological transformation”.
- Feb 2021: Latin American Webinars in Physics (*lawphysics*), international (online): “Scientific career development: the danger roadmap”
- Nov 2020: Oss Valongo, UFRJ, Brazil: “Dusty galaxies in the high redshift Universe”.
- Dec 2019: Euskal Herriko Unibertsitatea / Universidad del País Vasco, Dept. Física Teórica e Historia de la Ciencia, Spain, “Dusty galaxies in formation 1-2 Gyrs after the Big Bang”.
- Dec 2019: Donostia International Physics Center, Spain, “Dusty galaxies in formation 1-2 Gyrs after the Big Bang”.
- Dec 2019: Norwegian Academy of Science and Letters, Norway, “International Schools for Young Astronomers: present and future”.
- Oct 2019: Yunnan Observatories, China, “Dusty galaxies in formation 1-2 Gyrs after the Big Bang”.
- Apr 2019: Univ. Oslo, Norway, “Dusty galaxies in formation 1-2 Gyrs after the Big Bang”,
- Feb 2019: Inst. Física, BUAP, Pue., Mexico, “Galaxias en formación a 1-2 Gyr del Big-Bang”
- Sep 2017: Benemérita Universidad Autónoma de Puebla, Mexico, Facultad de Ciencias Físico Matemáticas, “Galaxias infantiles en los confines del Universo.”

- [Nov 2016](#): Instituto de Radioastronomía y Astrofísica, UNAM, Mexico, "*Brotos estelares maximales en galaxias en formación*"
- [Nov 2016](#) Instituto de Radioastronomía y Astrofísica, UNAM, Mexico, "*ToI TEC: la nueva cámara de imagen de GTM, oportunidades de explotación científica*"
- [Nov 2016](#) Instituto de Astronomía, UNAM, Mexico, "*ToI TEC: la nueva cámara de imagen de GTM, oportunidades de explotación Científica*".
- [May 2016](#) Instituto de Astronomía, UNAM, Mexico, "*Infant galaxies at z=2-6*"
- [Mar 2015](#) Instituto Avanzado de Cosmología/Instituto de Física UNAM, Mexico, "*Large area surveys with the LMT AzTEC/ToI TEC*"
- [Jun 2014](#) CINESPA, Universidad de Costa Rica, "*Censos cosmológicos de gran campo con GTM*"
- [Apr 2014](#) IEEC/CSIC, Univ. Autónoma de Barcelona, Spain, "*Large area surveys with the LMT/ToI TEC*"
- [Feb 2014](#) Instituto Tecnológico de Cananea, Mexico, "*ToI TEC: la necesidad de un nuevo instrumento de gran formato para el Gran Telescopio Milimétrico*"
- [Jun 2013](#): Instituto Astrofísico de Canarias, Spain, "*Overdensities of powerful high-redshift starbursts revealed at 1.1mm as possible proto-clusters*".
- [Mar 2012](#): Univ. California Santa Cruz, USA, "*AzTEC extragalactic surveys, a probe for massive galaxy formation*".
- [May 2012](#): Univ. Autónoma de Madrid, Spain, "*Powerful high-z starbursts revealed at 1.1mm*"
- [Dec 2011](#): Instituto de Física de Cantabria, Spain, "*AzTEC extragalactic surveys: a probe for massive galaxy formation*".
- [Jul 2009](#): European Southern Observatory, Germany, "*AzTECs in COSMOS*".
- [Jul 2009](#): European Southern Observatory, Germany, "*Galaxy evolution studies with AzTEC*".
- [Jun 2008](#): Univ. Nacional Autónoma de México, "*Pesando gigantes: la probable historia de formación de los esferoides*".
- [Mar 2008](#): Benemérita Univ. Autónoma de Puebla, Fac. Biología, Mexico, "*Programa REEF de seguimiento de peces arrecifales*".
- [Apr 2007](#): Benemérita Univ. Autónoma de Puebla, Mexico, "*QSO host galaxies and their environments*".
- [May 2006](#): Univ. Edinburgh, UK, "Radio-FIR photometric redshifts of SHADES sources".
- [Oct 2005](#): Univ. Kent, UK, "*The cosmic distribution of SHADES sources*".
- [Jan 2004](#): IEEC, Barcelona, Spain, "*Visión fotométrica de la distribución cósmica de galaxias starburst fuertemente oscurecidas*".
- [May 2004](#): INAOE, Puebla (Mexico), "*Visión fotométrica de la distribución cósmica de galaxias starburst fuertemente oscurecidas*".
- [Apr 2003](#): Univ. Villanova, Pennsylvania, USA, "*The properties of type II supernovae*".
- [Mar 2002](#): Oss. Trieste, Italy, "*Breaking the redshift deadlock: the submilimetre population of galaxies*".
- [Mar 2002](#): Oss. Padova, Italy, "*Breaking the redshift deadlock: the submilimetre population of galaxies*".



- Sep 2000: Inst. of Astronomy, Cambridge, UK, *"The stellar populations of nearby radiogalaxies"*.
- Sep 1999: CINVESTAV, Mexico City, *"Supernovas de tipo II, las impostoras de cuásares"*.
- Jun 1999: IA-UNAM, Mexico City: *"Mutación Seyfert 1 del núcleo Seyfert 2 en NGC 7582"*.
- Apr 1999: INAOE, Puebla: *"Mutación Seyfert 1 del núcleo Seyfert 2 en NGC 7582"*.
- Apr 1999: Univ. Autónoma de Madrid, Spain: *"Mutación Seyfert 1 del núcleo Seyfert 2 en NGC 7582"*.
- Feb 1999: BUAP, Puebla, Mexico: *"Supernovas de tipo II, las impostoras de galaxias Seyfert"*.
- Jun 1998: München Sternwarte, Germany: *"The host galaxies of high-redshift QSOs: a search for early spheroids"*.
- Jun 1998: Hamburg Sternwarte, Germany: *"Adaptive Optics observations of QSO hosts at high-z"*
- May 1998: Max-Planck Institut für Astrophysik, Garching, Germany: *"Star Formation in QSOs"*.
- Apr 1998: Laboratorio de Astrofísica Espacial y Física Fundamental, Madrid, Spain: *"Galaxias madres de cuásares: en busca de los esferoides primitivos"*.
- Mar 1998: Leiden Obs., The Netherlands: *"The host galaxies of high-redshift QSOs"*.
- Feb 1998: Univ. Autónoma de Madrid, Spain: *"Galaxias madres de cuásares: en busca de los esferoides primitivos"*.
- Feb 1998: Inst. de Matemática Aplicada y Física Teórica, Madrid, Spain: *"Galaxias madres de cuásares: en busca de los esferoides primitivos"*.
- Feb 1997: Max-Planck Institut für Astrophysik, Garching, Germany: *"Quasar hosts"*.
- Jan 1997: Inst. of Astronomy, Cambridge, UK: *"The optical variability of AGN"*.
- Mar 1996: Inst. of Astronomy, Cambridge, UK: *"QSO host galaxies at  $z = 2$ "*.
- Mar 1996: Univ. País Vasco, Leioa, Spain: *"Starburst models for AGN"*.
- Dec 1995: Univ. Autónoma de Madrid, Spain: *"Galaxias alrededor de cuásares de alto redshift"*.
- Dec 1995: European Southern Obs., Garching, Germany: *" $z = 2$  QSOs: Why all that fuzz?"*.
- Nov 1995: European Southern Obs., Santiago, Chile: *"Extensions around  $z = 2$  QSOs"*.
- Nov 1995: Univ. Sao Paulo, Brazil: *"The optical variability of QSOs"*.
- Mar 1994: Oss. Padova, Italy: *"Models for the optical variability of QSOs"*.
- Sep 1992: Inst. of Astronomy, Cambridge, UK: *"The optical variability of starburst powered AGN"*.

## 6 NATIONAL/INTERNATIONAL COMMITTEE WORK

### 6.1 COMMUNITY DEVELOPMENT

- 2018-: Director, *International School for Young Astronomers*, Office of Young Astronomers, International Astronomical Union.
- 2017-: Member of the *Consulting Council of Innovation and Research*, Univ. Guanajuato, Mexico.

- **2017-2018:** Member of the workforce 7 (evaluation of the research system) to define the *Science, Technology and Innovation Agenda for Mexico*.
- **2016-2018:** Deputy Director, *International School for Young Astronomers*, International Astronomical Union.
- **2016-2017:** Member of Steering Committee, *Office of Young Astronomers*, International Astronomical Union.
- **2015-2018:** Treasurer/Member, *Directing Board*, Academia Mexicana de Ciencias, Región Sureste II, Mexico.
- **2015-2018:** Member, *Directing Board*, Consejo de Ciencia y Tecnología del Estado de Puebla, Mexico.
- **2015-2018:** Member, *Science and Technology Subcommittee*, Consejo de Ciencia y Tecnología del Estado de Puebla, Mexico.
- **2015-2017:** Co-coordinator of the *Long-range Development Program* (Programa de Investigación de Largo Aliento) "*The Nature of the Universe*", Consejo Nacional de Ciencia y Tecnología centers, Mexico.
- **2015:** Member of the Mexican delegation in the *Mexico-South African Workshop* on Astronomy, CONACYT/Secretaría de Relaciones Exteriores, Mexico.
- **2013-2014:** Member of the *working group of evaluation of scientific evaluation*, Foro Consultivo Científico y Tecnológico, Mexico.
- **2013-2014:** Astronomy advisor of the *scientific nomenclature working group* of the Royal Academy of the Basque Language (Euskaltzaindia), Spain.
- **2007-2009:** Advisor of the *Teaching Astronomy and Development group*, International Astronomical Union.
- **2006- 2013:** Coordinator, *Astronomy Section*, Academia Mexicana de Ciencias, Mexico.

## 6.2 HIRING AND PROMOTION OF RESEARCHERS (14)

- **2021:** Consejo Nacional de Ciencia y Tecnología, Mexico: member of the Committee of the *National Researchers' System* awards, Emeritus level, Mexico.
- **2018-2020:** Consejo Nacional de Ciencia y Tecnología, Mexico: member (in 2020 chair) of the Committee of the *National Researchers' System* awards, Area I, Mexico.
- **2017:** Consejo Nacional de Ciencia y Tecnología, Mexico: evaluation committee of 3-yr production of researchers in *tenure-track positions* at the national level (cátedras).
- **2017:** *Consejo Nacional de Ciencia y Tecnología*, Mexico: on-line evaluator for the selection of scientific projects to hire researchers in *tenure-track positions* at the national level (cátedras).
- **2016:** University of Massachusetts, Amherst, USA: evaluator for promotion to *Associate Professor*.
- **2016-2017:** Instituto Nacional de Astrofísica, Óptica y Electrónica, Mexico: member of the *hiring and promotion evaluation committee*.
- **2016-2018:** Universidad Nacional Autónoma de México: member of *the hiring and promotion evaluation committee* of the Institute of Astronomy.
- **2015:** Catholic University of America, USA: evaluator for a promotion to Full Professor.

- **2015:** Consejo Nacional de Ciencia y Tecnología, Mexico: member of the Astronomy subcommittee of the Appeals Committee of the *National Researchers' System* awards, Area I, Mexico.
- **2014:** National Aeronautics and Space Administration (NASA), USA: member of the panel to select *Hubble Fellows* for the Cosmic Origins program (Hubble, Herschel, Spitzer, Stratospheric, and James Webb telescopes).
- **2013:** Agencia Nacional de Evaluación y Prospectiva, Spain: member of the panel to select *Ramón y Cajal researchers* for Physics and Space Sciences.
- **2013:** Catholic University of America, USA: evaluator for tenure of an *Associate Professor*.
- **2012:** Consejo Nacional de Ciencia y Tecnología, Mexico: member of the panel to select researchers under the *repatriation program*.
- **2011:** University of Massachusetts, Amherst, USA: evaluator for promotion to *Full Professor*.

### 6.3 RESEARCH FUNDING AGENCIES AND TELESCOPE TIME ALLOCATION COMMITTEES (14)

- **2019:** Member of the Telescope Allocation Committee (Cycle 7), *Atacama Large Millimeter Array*, high-redshift galaxies and cosmology.
- **2018:** Member of the TAC of the *Hubble Space Telescope* (Cycle 26), on Active Galactic Nuclei
- **2017:** Member of the Review Panel of the *Hubble Space Telescope* (Cycle 25), on Active Galactic Nuclei and Black Holes.
- **2011:** Member of the Review Panel of the *Hubble Space Telescope* (Cycle 19), Exgal-2 on the stellar populations and interstellar medium of galaxies.
- **2010:** Member of the Committee for allocating funding to *research projects in Basic Sciences*, Section of Groups and Networks in Mathematics and Physics, Consejo Nacional de Ciencia y Tecnología, Mexico.
- **2009:** Member of the Committee for allocating funding to *research projects in Basic Sciences*, Section of Groups and Networks in Mathematics and Physics, Consejo Nacional de Ciencia y Tecnología, Mexico.
- **2008-2013:** Co-chair of the Mexican Time Allocation Committee, *10.4m Gran Telescopio Canarias*, Mexico
- **2006:** Member of the Review Panel of the *Hubble Space Telescope* (Cycle 15), Exgal-3 on Active Galaxies.
- **2005:** Member of the Review Panel of the *Hubble Space Telescope* (Cycle 14), Exgal-2 on Galaxies, Active Galactic Nuclei and Quasars.
- **2004:** Member of the Review Panel of the *Hubble Space Telescope* (Cycle 13), Exgal-4 on the High Redshift Universe.
- **2003-2005:** Member of the Time Allocation Committee of *the Northern European Observatory*, Canary Islands, Spain.
- **2004-2005:** Chair of the Time Allocation Committee of the *Guillermo Haro Obs.*, Cananea, Mexico.
- **2003-2005:** Member of the Time Allocation Committee of the *Guillermo Haro Obs.*, Cananea, Mexico.

- 1999: Member of the Review Panel of the *Hubble Space Telescope* (Cycle 9), Exgal-1 on Local Galaxies and Active Galactic Nuclei.

#### 6.4 ORGANIZATION OF CONFERENCES AND SCHOOLS (32)

- 2021: Member of *SOC of conference* Ikergazte, Vitoria-Gasteiz, Spain.
- 2021: Co-chair of SOC of Focus Meeting at the IAU General Assembly “The school model for the Office for Young Astronomers”, Bussan, South Korea, August 2021 (postponed 2022).
- 2021: SOC member of Focus Meeting at the IAU General Assembly “The astronomical symposium in the 21st century” Bussan, South Korea, August 2021 (postponed 2022).
- 2020: Co-director of the 44th *International School for Young Astronomers (ISYA)* in Cape Town/Sutherland, South Africa, November 2020 (postponed 2022)
- 2020: Co-director of the 43rd *International School for Young Astronomers (ISYA)* in San Cristóbal de las Casas, Mexico, June 2020 (cancelled due to COVID19 pandemic)
- 2019: Co-director of the 42nd *International School for Young Astronomers (ISYA)* in Kunming, China, October 2019
- 2019: Member of the Scientific Organizing Committee of the *IAU Symposium* Nuclear Activity in Galaxies across Cosmic Time, Addis Ababa, Ethiopia
- 2019: Member of *SOC of conference* Ikergazte, Baiona, France.
- 2018: member of the national committee to attract the *IAU General Assembly* in 2024 to Mexico (not awarded).
- 2018: Co-director of the 41st *International School for Young Astronomers (ISYA)* in Socorro, Colombia, July 2018
- 2018: Co-director of the 40th *International School for Young Astronomers (ISYA)* in Kottamia Obs./Cairo, Egypt, March-April 2018
- 2018: Member of *SOC of conference* "VI Science with GTC", Valencia, Spain.
- 2018: Member of the *SOC of conference* “The Universe by the Light of CANDELS: Past and Future, UMass, Amherst, USA.
- 2017: co-director of the 39th *International School for Young Astronomers (ISYA)* in Addis Ababa, Ethiopia, may 2017.
- 2017: Member of the *SOC of the Astrophysics Section* of the National Physics Conference, Sociedad Mexicana de Física, Monterrey, Mexico.
- 2017: Member of the *SOC of conference* “Ikergazte 2017”, Pamplona, Spain.
- 2017: Member of the *SOC of the Guillermo Haro School*, “Modeling the Ionized Universe”, Puebla, Mexico.
- 2016: Member of *the SOC of the Guillermo Haro School*, “Molecular Astrophysics”, Puebla, Mexico.
- 2016: Member of the *SOC of the Astrophysics Section* of the National Physics Conference, Sociedad Mexicana de Física, León, Mexico.
- 2015: Member of the *SOC of the Guillermo Haro Workshop*, “Forming and Fueling Supermassive Black Hole Seeds”, Puebla, Mexico.
- 2015: Member of *the SOC of the conference* Ikergazte, Udako Euskal Unibertsitatea, Durango, Spain.

- 2015: Member of the *SOC of the Winter School* of the Valongo Observatory, Rio de Janeiro, Brazil
- 2014: Member of the *SOC of the ALMA Workshop* "Transformational Science in the ALMA Era: Multi-wavelength Studies of Galaxy Evolution", NRAO, Charlottesville, VA, USA.
- 2012-2017: Member of the *Scientific Supervising Committee* of the Guillermo Haro International Program of Advanced Astrophysics, INAOE, Mexico.
- 2012: Member of the *SOC of the Academia Mexicana de Ciencias Symposium* "Ciencia en Sociedad", DF, Mexico.
- 2012: Member of the *SOC of the COSPAR Workshop* on Space Research, Buenos Aires, Argentina.
- 2012: Member of the *SOC of the conference* on "Interacting Galaxies and Binary Quasars: A Cosmic Rendezvous", Trieste, Italy.
- 2006: Member of the *SOC of the 3rd GTC conference* "First Light Science with the GTC", Florida, USA.
- 2005: *Co-director and chair* of the International Astronomical Union School, 28th International School for Young Astronomers, Tonantzintla, Mexico.
- 2000: Co-chair of the *SOC of the 5th Guillermo Haro Workshop* "The AGN-Starburst Connection", Puebla, Mexico.
- 2000: *Co-chair of the SOC* of the 1st Guillermo Haro Advance-Lectures "The AGN-Starburst Connection", Puebla, Mexico.
- 1999: *Chair of the LOC* of the 3rd Guillermo Haro Conference "Cosmic Evolution and Galaxy Formation", Puebla, Mexico.
- 1992: Member of the *LOC of the conference* "The Nearest Active Galaxies", Madrid, Spain.

## 6.5 AWARDS

- 2017: Member of the Committee *Best PhD Thesis* in Astronomy Prize, Mexico.
- 2014: Member of the prize awarding committee of the *competition txiotesia2* (Tweet your thesis in 6 tweets, 2nd edition), Udako Euskal Unibertsitatea, Spain.
- 2008: Chair of the Committee to select the *Best PhD Thesis* in Astronomy Prize, Mexico.

## 6.6 THESES EXAMINATIONS (21)

- 2020: Examiner of Ana Luisa García Morán, PhD thesis (INAOE, Mexico)
- 2020: Examiner of Jessica Luna, MSc, (UNAM, Mexico)
- 2020: Examiner of David Pérez Millán, PhD Candidacy (UNAM, Mexico)
- 2018: Examiner of PhD thesis of Karla Ziboney Arellano (INAOE, Mexico).
- 2018: Examiner of PhD thesis of Devaraj Ranwaswamy, INAOE (INAOE, Mexico)
- 2016: Examiner of the PhD thesis of Víctor Patiño (INAOE, Mexico).
- 2016: Examiner of the PhD thesis of Sunil Fernandes (Univ. Texas, San Antonio, USA).
- 2015: Examiner of the MSc thesis of Leticia Juan de Dios Tomás (INAOE, Mexico).
- 2012: Examiner for the PhD Qualifying Exam of Sunil Fernandes (Univ. Texas San Antonio, USA).
- 2012: Examiner for the MSc thesis of Víctor Patiño (INAOE, Mexico).

- 2010: Examiner for the PhD thesis of Filiberto Hueyotl (INAOE, Mexico).
- 2010: Examiner for the MSc thesis of Noé Suárez (INAOE, Mexico).
- 2010: Examiner for the MSc thesis of Ricardo Chávez (INAOE, Mexico).
- 2009: Examiner for the MSc thesis of David Sánchez Argüelles (INAOE, Mexico).
- 2008: Examiner for the MSc thesis of Abril Suárez (CINVESTAV, Mexico).
- 2007: Examiner for the PhD thesis of Ramona Núñez (IA-UNAM, Mexico).
- 2006: Examiner for the PhD thesis of Jeffrey Wagg (INAOE, Mexico).
- 2005: Examiner for the MSc thesis of Jesús González (INAOE, Mexico).
- 2002: Examiner for the MSc thesis of Ary Rodríguez (INAOE, Mexico).
- 2002: Examiner for the PhD thesis of César Álvarez (INAOE, Mexico).
- 1993: Examiner for the MSc thesis of Jorge Iglesias Páramo (Univ. Autónoma de Madrid, Spain).

## 6.7 FREQUENT REFEREE FOR

- Monthly Notices of the Royal Astronomical Society, UK.
- Astrophysical Journal, USA.
- Astronomy and Astrophysics, Europe.
- Consejo Nacional de Ciencia y Tecnología (Conacyt), Mexico.
- Universidad Nacional Autónoma de México
- Academia Mexicana de Ciencias, Mexico
- Natural Sciences and Engineering Research Council (NSERC), Canada.
- Netherlands Organization for Scientific Research (NWO), the Netherlands
- Consejo Nacional de Investigadores Científicas y Técnicas (Conicet), Argentina.
- Agencia Nacional de Evaluación y Prospectiva, Consolider, ... Spain
- Time Allocation Committees of international observing facilities: Calar Alto, Northern European Observatory, Isaac Newton Group (Spain, UK, Germany).

## 7 INSTITUTIONAL TECHNICAL/ADMINISTRATIVE DUTIES

- **2018-:** Member of the hiring committee, Dept. Astrophysics, INAOE
- **2015-2016:** Member of the Grants Committee, INAOE.
- **2014-2016:** Member of the Gender and Equality Committee, INAOE.
- **2011-2016:** *Head of Department of Astrophysics*, INAOE.
- **2010-2011:** *Astrophysics Representative in the Internal Advisory Council*, INAOE.
- **2008-2010:** *Astrophysics Representative in the INAOE Teaching Committee*, in charge of organizing the graduate program and students. Major tasks: new Instrumentation Program, set of courses and syllabi for MSc, overview of Conacyt/PNPC renewals.
- **2007-2010:** Deputy Astrophysics Representative in the Internal Advisory Council, INAOE.
- **2006-2008:** Member of the Instrument Definition Team of the instrument SIDE, a multi-object spectrograph for the 10.4m GTC, La Palma, Spain.
- **2006:** co-editor and co-translator of the LMT Project Web Pages.
- **2002-2007:** Organizer of the weekly 'Cosmology Discussion Club', at INAOE.

- **2001-2010:** Member of the LMT Observatory, in charge of safety policies (facilities group).
- **2001:** Secretary of staff meetings of the Dept. of Astrophysics, at INAOE.
- **1999-2004:** Representative for Astrophysics in the Library Committee of INAOE.
- **1998-2000:** Member of the Instrument Definition Team of the consortium COSMOS to design and build the infrared multi-object spectrograph EMIR, to be operated in the 10m GTC, La Palma, Spain.
- **1990-1992:** System Manager of the VAX/VMS cluster of the group of Astrophysics in Univ. Autónoma de Madrid, Spain.

## 8 OUTREACH

### 8.1 ARTICLES, BOOKS and BLOGS (see full list in section 12)

- 20 astronomy articles in science magazines and newspapers in Mexico and Spain
- 2 marine biology photographic albums in science magazines in Mexico and Spain
- 12 threads on Twitter explaining to the general public recent research papers authored by myself (new project 2018-), ~2000 caracteres, 7 images, within a month ~7000-10000 views and ~250 interactions.
- 1 book in English and Spanish on the Large Millimeter Telescope
- 3 chapters of books on the sociology of Astronomy in Mexico

### 8.2 SCIENCE POPULARIZATION/MOTIVATIONAL TALKS (59)

- **Nov 2020:** “Galaxias infantiles en los confines del Universo”, Planetarios de Quintana Roo, Mexico.
- **Nov 2020:** “El telescopio espacial Hubble: cazador de galaxias distantes”, Noche de las Estrellas Atlixco/Tepeaca, Mexico.
- **Nov 2020:** “Galaxias infantiles en los confines del Universo”, Universidad Industrial de Santander, Colombia.
- **Nov 2020:** “Cartografía del cielo: más allá de lo que vemos”, Festival Multicultural de México, Domingos en la Ciencia, AMC, Mexico.
- **Apr 2020:** “Conozcamos a los monstruos: hoyos negros supermasivos”, Astronomía ABC, INAOE, Mexico
- **Feb 2020:** «Estudiar ciencias y no morir en el intento», Universidad Autónoma de Tlaxcala, Mexico
- **Feb 2020:** «La escala tlaxcalteca del Universo», Universidad Autónoma de Tlaxcala, Mexico.
- **Jan 2020:** “Galaxien haurtzaroa”, Oñati, Gipuzkoa, Spain.
- **Dec 2019:** “La cosmovisión grecorromana en ‘La República’ de Cicerón”, Irún, Gipuzkoa, Spain.
- **Dec 2019:** “Unibertsoaren eskalak”, Orozkoko eskola, Bizkaia, Spain
- **Nov 2019:** “La escala cholulteca del Universo”, Noche de las Estrellas, San Andrés Cholula, Pue., Mexico.

- **Nov 2019:** "Hace mucho tiempo en una galaxia muy, muy lejana", Programa "Análisis de las intervenciones para fomentar y reforzar vocaciones científicas" BUAP/Conacyt/Red Mexciteg, Preparatoria BUAP Lázaro Cárdenas, Puebla, Pue., Mexico.
- **Sep 2019:** "Los viajeros de Starwars", Programa "Mi ciencia en la Ciencia Ficción" BUAP, Preparatoria de Tecamachalco, Pue., Mexico.
- **Aug 2019:** "Haciendo ciencia y astronomía a 4600m", Programa "Diálogos entre la ciencia y el arte", with film director Hugo Felix Mercado, IMAP, Puebla, Mexico.
- **Jul 2019:** "Quiero ser astrónoma", Campamento de Empoderamiento Científico, INAOE, Pue., Mexico.
- **Jun 2019:** "Hace mucho tiempo en una galaxia muy, muy lejana", Programa Domingos en la Ciencia, Academia Mexicana de Ciencias, Secundaria Gen. Gabino A. Palma, Tlaxcala, Mexico.
- **Jun 2019:** "Hace mucho tiempo en una galaxia muy, muy lejana", Programa Domingos en la Ciencia, Academia Mexicana de Ciencias, Secundaria Lázaro Cárdenas, Santa Apolonia Teacalco, Tlaxcala, Mexico.
- **May 2019:** "Hace mucho tiempo en una galaxia muy, muy lejana", Casa de la Cultura Tlanczcalli, San Andrés Cholula, Pue., Mexico.
- **Feb 2019:** "Estudiar ciencias y no morir en el intento: un proyecto de vida", Día Internacional de la Mujer y la Niña en la Ciencia, Fac. Ingeniería BUAP, Pue., México.
- **Dec 2018:** Roundtable "Propiedades estructurales de las galaxias", Feria Internacional del Libro de Guadalajara, with Roberto Terlevich (INAOE) and Jesús González (IA-UNAM)
- **Nov 2018:** "Telescopes" Preparatoria Regional de Tequila, Jalisco, with Sandra Faber (UC Santa Cruz, EEUU), as part of the FIL Joven, Ecos de la FIL program, ", Feria Internacional del Libro de Guadalajara.
- **Apr 2018:** "Unibertsoaren eskalak", Orozkoko eskola, Bizkaia, Spain.
- **Sep 2017:** "ToITEC, la cámara de imagen de GTM de nueva generación: censos panorámicos del cielo en ondas milimétricas con luz polarizada", Tec. de Monterrey-INAOE week.
- **Jul 2017:** "Censos profundos del cielo extragaláctico: la historia de formación estelar del Universo", Programa Verano de Investigación Científica INAOE.
- **Jul 2017:** "Hace mucho tiempo en una galaxia muy muy lejana", Bar Karuzo, Puebla, Pue., Mexico.
- **Apr 2017:** "Hace mucho tiempo en una galaxia muy muy lejana", Carrusel de la Ciencia CONCYTEP-AMC, Cuetzalan, Pue., Mexico.
- **Apr 2017:** "Perspectivas y retos de las investigadoras en Astrofísica", Campamento Mariposas, Puebla, Mexico.
- **Mar 2017:** "Galaxias infantiles en los confines del Universo", VII congreso de Física y Matemáticas, UDLA, Puebla, Mexico
- **Feb 2017:** "Hace mucho tiempo en una galaxia muy muy lejana", Feria Internacional de Lectura, INAOE, Pue., Mexico.
- **Dec 2016:** "El mundo de la investigación científica", Colegio Urdaneta, Bilbao, Bizkaia, Spain.
- **Oct 2016:** "La historia de formación de las galaxias gigantes", Foro Astrolab, Universum, UNAM, CDMX, Mexico



- [May 2016](#): “El Gran Telescopio Milimétrico”, Ciclo de Charlas de Astronomía, Universum, UNAM, CDMX, Mexico
- [Mar 2016](#): “Starbursts maximales en galaxias en formación”, Sexto congreso de Física y Matemáticas, UDLA, Puebla, Mexico
- [Mar 2016](#): “El Universo (des)conocido: componentes invisibles”, XXVI Jornadas de Divulgación de la Ciencia en memoria del Ing. Luis Rivera Terrazas, BUAP, Puebla, Mexico
- [Jan 2016](#): “Vivencias de una científica”, Campamento Mariposas, Puebla, Mexico.
- [Jul 2015](#): “Telescopios naturales de lentes oscuras: sacando provecho de la gravedad”, BUAP, Puebla, Mexico.
- [May 2015](#): “Telescopios naturales de lentes oscuras: sacando provecho de la Gravedad”, Foro de Radioastronomía, Astrolab, Universum, UNAM, Mexico.
- [Dec 2014](#): “Astronomo baten bizipenak”, Elorrioko DHB Institutua, Bizkaia, Spain (2 sessions).
- [Dec 2014](#): “Unibertso (ez)ezaguna”, Berrizko DHB Institutua, Bizkaia, Spain. (2 sessions)
- [Oct 2014](#): “La historia de formación de las galaxias gigantes”, Planetario de Puebla, Mexico.
- [Oct 2014](#): “Más y más allá: en búsqueda de las primeras galaxias”, Astrolab, Universum, UNAM, Mexico.
- [Sep 2014](#): “Astronomo baten bizipenak”, Berrizko DHB Institutua, Bizkaia, Spain.
- [Sep 2014](#): “Unibertso (ez)ezaguna”, Berrizko DHB Institutua, Bizkaia, Spain.
- [Dec 2012](#): “El mundo de la investigación científica”, Colegio Urdaneta, Bilbao, Bizkaia, Spain.
- [Dec 2011](#): “Ser investigadora científica”, Colegio Urdaneta, Bilbao, Bizkaia, Spain.
- [Dec 2011](#): “El universo (des)conocido”, Kultur Etxea, Ibarrangelu, Bizkaia, Spain.
- [Apr 2010](#): “El universo conocido”, Planetario de Puebla, Mexico. (6 x 15 min.)
- [Nov 2009](#): “Hace mucho tiempo, en una galaxia muy, muy lejana”, Año Internacional de la Astronomía, Palacio de Minería, DF, Mexico.
- [Feb 2008](#): “AzTEC busca las primeras galaxias”, Univ. Veracruzana, Xalapa, Mexico.
- [May 2007](#): “Más y más lejos: en busca de las primeras galaxias”, Planetario de Puebla, Puebla, Mexico.
- [Dec 2006](#): “El gran telescopio milimétrico”, Instituto Tecnológico de Texmelucan, Puebla, Mexico.
- [May 2004](#): “Agujeros negros sobre La Negra”, Escuela Nacional de Conservación y Restauración y Museografía (ENCRyM), Mexico City, Mexico
- [Oct 2002](#): “¿Cómo se forman las galaxias?”, Semana de la Ciencia, INAOE, Puebla, Mexico.
- [May 2002](#): “¿Cómo se forman las galaxias?”, Museo de Ferrocarriles, Puebla, Mexico.
- [May 2002](#): “El Universo primitivo y la formación de galaxias”, Univ. Guanajuato, Mexico.
- [Mar 1996](#): “Quasarrak: Unibertsoaren astrorik urrutienak”, Euskal Herriko Unib., Leioa, Spain.
- [Oct 1993](#): “Aintzinean eta urrun: quasarrak eta galaxien jaiotza”, Aranzadi Society of Sciences, Donostia, Spain.
- [Oct 1991](#): Coloquium “Astronomía: Divulgación e Investigación”, Univ. de Santiago de Compostela, Spain.
- [Mar 1990](#): “Origen y Evolución del Universo”, Centro Cultural El Pardo, Madrid, Spain.

### 8.3 MEDIA INTERVIEWS (80)

- 2020: Interview with Guillermo Roa for Euskadi Irratia, Spain, program Norteko Ferrokarrila.
- 2020: Interview with Margarita Martínez for radio Universidad Autónoma de Tlaxcala, Mexico
- 2020: Interview with Daniel Mocencagua for “Nichjama thi taani”, Mexico.
- 2019: Interview in Puebla Comunicación, Radio Puebla, Mexico, about the Hubble Space Telescope.
- 2019: Interview with Amaia Gurrutxaga for newspaper Berria, Spain, with Alvaro Arrizabalaga (anthropologist), about the interconnections of science and research world.
- 2019: Interview with Iván Carrillo for ADN40, TV, Mexico, about TolTEC
- 2019: Interview Radio Universidad, UA Tlaxcala, Mexico, about galaxies.
- 2019: Interview in Con Ciencia para Crecer with Carlos Martínez, Radio/TV México Prioridad., about my trajectory.
- 2019: Interview in Ciencia a Tiempo, Radio BUAP, Mexico, about my trajectory.
- 2019: Interview in Radio BUAP, feria Día de la Mujer y la Niña en la Ciencia, Mexico.
- 2019: Interview in Faktoria with Maite Artola, Euskadi Irratia, Spain, about the philosophy of Astronomy and science in Mexico.
- 2019: Interview in Teknopolis with Iñaki Leturia, Euskal Telebista, Spain, about women in science and science in Mexico.
- 2018: Interview to TV Universidad Industrial Santander, Colombia, about ISYA program.
- 2018: Interview to TV Educativa, with Ana Cristina Olvera, CDMX, Mexico, about ISYA program.
- 2018: Interview Radio BUAP, Estamos al Aire, Puebla, Mexico, about gender issues in science.
- 2018: Interview in Onda Vasca, Euskadi Hoy, with Javier Vizcaíno, Bilbao, Spain, about science in Mexico.
- 2018: Interview to diario.es with Jesús Travieso, Spain.
- 2018: Interview to Unibertsitatea.net, Spain.
- 2017: Interview to AMC news agency, Mexico, on high-z galaxy paper.
- 2017: Interview to TV for kids, Mexico, on astronomy in Mexico.
- 2017: Interview to CONACYT news agency, Mexico, on TolTEC.
- 2017: Round table for the TV program “El Universo invisible, materia y energía oscuras” of the series “Ciencia en Todos Lados” CCU-UNAM, Mexico.
- 2017: Interview to Berria newspaper, Spain, about gravitational lenses.
- 2017: Interview to TV educativa, Mexico, about ISYA program.
- 2017: Interview to Canal-22, Mexico, about the lunar eclipse
- 2017: Interview to Canal-22 TV, Mexico, about galaxy formation.
- 2017: Interview to radio Estamos al Aire, Mexico, on galaxy formation.
- 2016: Member of the closing ceremony board of the Mexican Biology Olympics, BUAP, Puebla, Mexico.
- 2016: Interview to national Chinese press service, on TolTEC.

- 2016: Advisor of the TV documentary, Ciencia en Todos Lados, Universo Oscuro, AMC, Mexico.
- 2015: Interview for TV documentary, Ciencia en Todos Lados, Universo Oscuro, AMC, Mexico.
- 2015: Interview for radio programme Al Aire, Puebla, Mexico.
- 2015: Appearance in film "Toch", Planetario Torreón Full Dome, Mexico.
- 2015: Radio capsule for Radio Tlaxcala about distant galaxies, INAOE, Mexico.
- 2015: Interview with Physics World, about Science in Mexico, UK.
- 2014: Interview to science magazine Elhuyar, Spain, about BICEP2 CMB results.
- 2014: Interview to newspaper Berria, Spain, about BICEP2 CMB results.
- 2014: Interview to newspaper Berria, Spain, about my research in Mexico.
- 2014: Interview to radio program Boulevard, Radio Euskadi, Spain, about my research in Mexico
- 2013: Interview to radio Estamos Al Aire with Raúl Mújica, Puebla, Mexico, about the Astrophysics Dept. at INAOE.
- 2013: Staff in kiosk Large Millimeter Telescope of Noche de las Estrellas, Puebla, Mexico.
- 2013: Interview to Radio Tecnológico Cananea, Sonora, Mexico, about the Guillermo Haro Observatory
- 2012: Participation in presidium, prizes of Sociedad Mexicana para la Divulgación de la Ciencia y la Técnica, DF, Mexico.
- 2012: Staff in kiosk "Astrónomos distinguidos" of Noche de las Estrellas, DF, Mexico.
- 2012: Interview to Euskadi Irratia, Spain, with Jaime Otamendi, program Mezularia, about research in galaxies.
- 2012: Interview to La Jornada newspaper, Mexico, with Ariane Díaz, about women scientists in Mexico.
- 2012: Interview to the Radio SICOM, Mexico, with Máximo Romero, program "Desarrollando ciencia", about the International Astronomical Union.
- 2011: Interview to the REEF newsletter, USA, about fish identification in the Veracruz National Park.
- 2011: Interview to the magazine Maxim, Mexico, about the Large Millimeter Telescope.
- 2011: Interview to the newspaper El Universal, Mexico, about the Physics Nobel Prize.
- 2011: Interview to Radio Fórmula, Mexico, with Denise Maerker, about the Physics Nobel Prize.
- 2009: Interview with Carolina Estrada for CONACyT, Mexico, about the Tamura et al. Nature paper, for CONACyT anual report on achievements.
- 2009: Interview to Radio Educación, Mexico, with Gladis Peña (editor), about the Nature paper by Tamura et al. 2009.
- 2009: Interview to Euskadi Irratia, program Norteko Ferrokarrila, about the Large Millimeter Telescope, Basque Country, Spain.
- 2009: Interview to Diario Reforma, Mexico, about recent BLAST results published in Nature, Mexico.
- 2009: Author of radio capsule "La paradoja de Orlbergs" (5 min.) for Radio UNAM, Mexico
- 2009: Author of radio capsule "Polvo de Estrellas" (5 min.) for Radio UNAM, Mexico.
- 2008: Exhibitor at La Noche de las Estrellas, site "Conoce a tu astrónomo", Mexico.

- 2008: Interview to Radio 660, Mexico, as a female researcher
- 2008: Exhibitor at "Eclipse en el Zócalo", site "Conoce a tu astrónomo", Mexico City.
- 2006: Translator and editor of the Spanish web pages of the Large Millimeter Telescope.
- 2006: Leader of 3 guided tours to the Large Millimeter Telescope during the dedication ceremonies.
- 2006: Round table "Creando y compartiendo el éxito profesional", Benemérita Univ. Aut. Puebla, Mexico.
- 2006: Interviews to EFE press agency, Spain.
- 2006: Interview to W Radio, Mexico City.
- 2006: Interview to Diario el Informador, Guadalajara, Mexico.
- 2006: Interview to Diario Reforma, Mexico.
- 2006: Interview to Diario La Razón, Mexico.
- 2006: Interview to Revista Conozca Más, Mexico.
- 2006: Interview to Revista MX, Mexico.
- 2006: Interview to Canal 11 TV, Mexico, about astrophysics in general, the Large Millimeter Telescope and millimeter astronomy.
- 2005: 2 interviews to Diario Reforma, Mexico.
- 2005: Interview to TV canal 11, Mexico.
- 2005: Interview to Radio Esmeralda, Cd. Serdán, Mexico, about the Large Millimeter Telescope and millimeter astronomy.
- 2005: Exhibitor for the Large Millimeter Telescope in the Feria Ciudad Serdán, Mexico.
- 2004: Interview to the magazine Cambio, Mexico.
- 2004: Interview to TV station Canal 11, Mexico to elaborate programs on the Large Millimeter Telescope and millimeter astronomy.
- 2004: Interview with the news agency Reuters about the Large Millimeter Telescope. Published in CNN and several newspapers around the world.
- 2000: Several interviews to local Puebla radio stations to encourage the participation in the popular talk series organized within the Guillermo Haro 2000 international workshop.
- 1993: Interview to Euskal Irratia about astrophysics and cosmology, Basque Country, Spain.

#### 8.4 EDITORIAL WORK

- 2018-: Editorial board member, magazine Elementos, BUAP, Mexico

## 9 ATTENDANCE TO SYMPOSIA, WORKSHOPS AND COURSES

### 9.1 INTERNATIONAL

- Aug 2020: Protoclusters: Galaxies in Confinement, Virtual International Workshop, 31 Aug-4 Sept 2020.
- Feb 2020: IAU Symposium 359: Galaxy Evolution and Feedback Across Different Environments (GALFEED), Bento Goncalves, Brasil, 2-6 March 2020.

- Dec 2019: Olentzero Workshop, EHU-UPV, Leioa, Spain.
- Oct 2019: 42<sup>nd</sup> International School for Young Astronomers, OYA-IAU, Kunming, China.
- Apr 2019: IAU 100 Years Under One Sky, Brussels, Belgium.
- Dec 2018: "VI meeting on Science with GTC", Valencia, Spain.
- Oct 2018: "The Universe by the Light of CANDELS: Past and Future", UMass, USA.
- Sep 2018: Guillermo Haro 2018 Workshop, INAOE, Puebla Mexico "Synergy between the GTC and GTM/LMT"
- Aug 2018: IAU General Assembly, Viena, Austria.
- Jul 2018: 41<sup>st</sup> International School for Young Astronomers, OYA-IAU, Socorro, Colombia.
- Mar 2018: 40<sup>th</sup> International School for Young Astronomers, OYA-IAU, Cairo, Egypt.
- Nov. 2017: "Knowledge across Borders: a celebration of the US-Mexico scholarly exchanges", UMass, USA.
- Jun 2017: European Week of Astronomy and Space Science, Prague, Czech Rep.
- May 2017: 4th Middle-East and Africa Regional IAU Meeting, Addis Ababa, Ethiopia.
- May 2017: Science Communication Workshop, Square Kilometer Array, Addis Ababa, Ethiopia.
- Apr 2017: 39<sup>th</sup> International School for Young Astronomers, OYA-IAU, Addis Ababa, Ethiopia.
- Mar 2017: Radio-Astronomy workshop UK-Mexico, British Embassy, CDMX, Mexico.
- Oct 2016: LIX Congreso Nacional de Física y Congreso Latinoamericano de Física, León, Mexico.
- Ago 2016: 39th International School for Young Astronomers, Tehran, Iran.
- Jul 2016: XII Reunión Científica de la Sociedad Española de Astronomía, 18-22 July 2016, Bilbao, Spain.
- May 2016: Aspen workshop "New Frontiers in FIR and Sub-millimeter Astronomy" 29 May-12 June 2016, Aspen, CO, USA.
- Dec 2015: Vth Science with the GTC Meeting, Puebla, Mexico
- Nov 2015: Congreso internacional Luz Ciencia y Arte (I-CILCA), BUAP, Puebla, Mexico.
- Oct 2015: LVIII Congreso Nacional de Física y Congreso Latinoamericano de Física, Mérida, Mexico.
- Aug 2015: XXIX General Assembly, Honolulu, Hawaii, USA.
- Aug 2015: Astronomy conference in honor of Nick Scoville, Honolulu, Hawaii, USA.
- Jul 2015: Guillermo Haro Workshop, Forming and Fueling Supermassive Black Hole Seeds, Tonantzintla, Puebla, Mexico
- Jun 2015: I Coloquio Iberoamericano Diálogo de saberes y políticas de ciencia, tecnología e innovación con perspectiva de género.
- Apr 2015: Workshop Stars, Interstellar Medium, Galaxies and the chemistry between them" Miraflores de la Sierra, Madrid, Spain.
- Sep 2014: XI Reunión Científica de la Sociedad Española de Astronomía, Teruel, Spain.
- Aug 2014: ALMA Workshop "Transformational Science in the ALMA Era: Multiwavelength Studies of Galaxy Evolution", Charlottesville, VA, USA.
- Jul 2014: Guillermo Haro Workshop "Observations and Modeling of Circumstellar Disks. A workshop in Memory of Paola D'Alessio", Tonantzintla, Pue., Mexico.

- May 2014: "The Formation and Growth of Galaxies in the Young Universe", Obergurgl, Austria.
- Dec 2013: Guillermo Haro Conference, "Massive Young Star Clusters Near and Far: From the Milky Way to Re-ionization", Puebla, Mexico.
- May 2013: Workshop on dusty starbursts, Aspen Center for Physics, Colorado, USA.
- Dec. 2012: Torus Workshop 2012, Univ. of Texas, San Antonio, USA.
- Nov. 2011: IV Science with the GTC Meeting, La Palma, Spain.
- Jan 2011: National Radio Astronomy Workshop, Tokyo, Japan.
- Nov. 2010: XIII Latin American Regional IAU Meeting, Morelia, Mexico.
- Oct. 2010: "Galaxy Evolution: Infrared to Millimeter Wavelength Perspective", Guilin, China.
- Jun. 2010: All-wavelength Extended Groth strip International Survey Meeting, Santa Cruz, USA.
- Dec. 2009: All-wavelength Extended Groth strip International Survey Meeting, Toledo, Spain.
- Dec. 2009: "The origins of galaxies: lessons from the distant universe", Obergurgl, Austria.
- Aug 2009: General Assembly of the International Astronomical Union, workshop "First Objects", Rio de Janeiro, Brazil.
- Jul. 2009: "SZ @ Bonn: a multiwavelength look at galaxy clusters", Bonn, Germany
- Feb 2009: "Impacto de ALMA en la Astronomía Extragaláctica Española", Granada, Spain.
- May 2008: II Encuentro Blas Cabrera: "Ciencia y Tecnología con SIDE (Super IFU Deployable Experiment)", Instituto Politécnico Nacional, Mexico City, Mexico.
- Nov 2007: XII Latin-American Regional International Astronomical Union Meeting, Isla de Margarita, Venezuela.
- Jul 2007: "From IRAS to Herschel and Planck", London, UK.
- Mar 2007: "The Origin of Galaxies!: Exploring Galaxy Evolution with the New Generation of Infrared-Millimetre Facilities", Obergurgl, Austria.
- Jan 2007: Winter American-Astronomical Society Meeting, Seattle, USA.
- Jun 2006: "First Light Science with the GTC", Miami, Florida, USA.
- Jan 2006: "From z-Machines to ALMA: (Sub)Millimeter Spectroscopy of Galaxies", Charlottesville, Virginia, USA.
- Jan 2006: Winter American-Astronomical Society Meeting, Washington, USA.
- Sep 2005: ASTRO-F workshop, Canterbury, UK.
- Jul 2005: 28th International School for Young Astronomers, Tonantzintla, Puebla, Mexico.
- Jun 2005: International Advanced School: A Pan-Chromatic View of Clusters of Galaxies and the Large-Scale Structure, Guillermo Haro Programme, Tonantzintla - Puebla, Mexico.
- Apr 2005: The Ninth Texas-Mexico Conference on Astrophysics, San Antonio, Texas, USA, April 14-16, 2005.
- Oct 2004: "Large Submillimetre Telescopes", Edinburgh, UK.
- Jul 2004: "GH 2004: Violent Star Formation and the Legacy Tool", Tonantzintla, Mexico.
- Jun 2004: "Multiwavelength Observations of the Subaru/XMM-Newton Deep Survey Field", Kyoto, Japan.
- Feb 2004: "II International Workshop on Science with the GTC: 1st-light instruments and the LMT ", Mexico City, Mexico.

- Jun 2003: "Multiwavelength Cosmology", Mykonos, Greece.
- May 2003: "Star formation near and far: the ALMA promise", Elba, Italy.
- Apr 2003: "Supernovae: 10 years after SN 1993J", Valencia, Spain.
- Sep 2002: "Star Formation through Time", Granada, Spain.
- Sep 2002: "Winds, Bubbles and Explosions", Pátzcuaro, Mexico.
- Jul 2002: "GH2002: Milimetre Cosmology", Tonantzintla, Mexico.
- Jun 2002: "Eighth synthesis imaging summer school", Socorro, USA.
- Apr 2002: "Galaxy Evolution: Theory and Observations", Cozumel, Mexico.
- Feb 2002: "Science with the GTC", Granada, Spain.
- Jul. 2001: 2K1 Workshop on "Experimental Cosmology", Cervina, Italy.
- Sep. 2000: Ringberg 2000 Workshop on "Starbursts Near and Far", Ringberg Castle, Germany.
- Jun. 2000: Advanced Lectures on "The Starburst-AGN Connection", Tonantzintla, Mexico.
- Nov. 1999: 3rd Guillermo Haro Conf. "Cosmic Evolution and Galaxy Formation: Structure, Interactions and Feedback", Puebla, Mexico.
- Oct. 1999: "Astrophysical Plasmas: Codes, Models and Observations", Mexico City, Mexico.
- Jul. 1999: Guillermo Haro Workshop "The Energy Input from Stars: Supernovae and Chemodynamical Evolution ", INAOE, Tonantzintla, Mexico.
- May. 1999: "The Largest Explosions Since the Big Bang: Supernovae and Gamma Ray Bursts", May99 Symposium, STScI, USA.
- Nov. 1998: IX IAU Latinoamerican Meeting, Tonantzintla, Mexico.
- Nov. 1998: IAU Symposium "Wolf-Rayet activity in Massive Stars and Starbursts", Puerto Vallarta, Mexico.
- Jul. 1998: Guillermo Haro workshop 'Galaxy Formation and Evolution'. Tonantzintla, Mexico.
- Sep. 1997: "The Young Universe", Oss. Roma, Italy.
- Mar. 1997: XXXIIInd Rencontres de Moriond "Extragalactic Astronomy in the Infrared". Les Arcs, France.
- Sep. 1996: "QSO Hosts" European Southern Obs./Int. Astrofísica de Canarias, Puerto de la Cruz, Tenerife, Spain.
- Jul. 1996: "HST and the high-z Universe" 37th Herstmonceux Conf. Royal Greenwich Obs./Inst. of Astronomy. Cambridge, UK.
- May-Jun. 1996: Guillermo Haro workshop 'Starburst Activity in Galaxies', Tonantzintla, Mexico.
- May 1996: Congreso Guillermo Haro 'Starburst Activity in Galaxies', Puebla, Mexico.
- Jul. 1995: 11th IAP Astrophysics Meeting on "The Interplay between Massive Star Formation, the ISM and Galaxy Evolution". European Assotiation for Research in Astronomy, Paris, France.
- Jun. 1995: IAU Symposium 171 on "New Light on Galaxy Evolution", Heidelberg, Germany.
- Jul. 1994: 35th Herstmonceux Conference on "Wide Field Spectroscopy and the Distant Universe". Royal Greenwich Obs./Inst. of Astronomy, Cambridge, UK.
- May 1994: "Reverberation Mapping of the Broad-Line Region of Active Galactic Nuclei". 10th Rutherford Appleton Laboratory Workshop, Abingdon, UK.

- Nov. 1993: Conference on "Violent Star Formation: from 30 Doradus to QSOs". Inst. Astrofísico de Canarias/Royal Greenwich Obs., Puerto Naos, La Palma, Spain.
- Sep. 1993: IAU Symposium 159 on "Active Galactic Nuclei across the Electromagnetic Spectrum", Geneva, Switzerland.
- Jul. 1992: 33rd Herstmonceux Conference on "The Nature of Compact Objects in AGN", Royal Greenwich Obs./Inst. of Astronomy, Cambridge, UK.
- Jul. 1992: 8th IAP Astrophysics Meeting on "First Light in the Universe: Stars or QSO's?", European Association for Research in Astronomy, Paris, France.
- May 1992: Conference on "The Nearest Active Galaxies", Univ. Autónoma de Madrid / TelAviv Univ., Madrid, Spain.
- Dic. 1991: III Winter School of the Canary Islands: "Star Formation in Stellar Systems", Univ. Internacional Menéndez Pelayo / Inst. de Astrofísica de Canarias, Tenerife, Spain.
- Jun. 1991: Conference on "Physics of Active Galactic Nuclei", Landessternwarte Heidelberg-Königstuhl, Heidelberg, Germany.
- Jul. 1990: 31st Herstmonceux Conference on "Elements and the Cosmos", Royal Greenwich Obs., Cambridge, UK.
- Jul. 1989: XI European Regional Astronomy Meeting of the IAU on "New Windows to the Universe", Inst. Astrofísico de Canarias, Tenerife, Spain.

## 9.2 NATIONAL

- Oct 2020: Congreso Nacional de la Sociedad Mexicana de Física (online).
- Dec 2019: II Reunión Extragaláctica de México, Morelia, Mexico.
- Oct 2017: Congreso Nacional de Astronomía, Monterrey, Mexico.
- Sep 2017: II Foro Nacional para la Evaluación del Desarrollo Profesional Femenino, Instituto Tecnológico Superior de Xalapa, Veracruz, Mexico
- Oct 2013: Congreso Nacional de Astronomía, DF, Mexico.
- Oct 2012: Congreso Nacional de la Sociedad Mexicana de Física, Morelia, Mexico.
- Sep 2011: XXIV Congreso Nacional de Astronomía, Univ. Guadalajara, Mexico.
- Apr 2010: Reunión Anual de la División de Gravitación y Física Matemática de la Sociedad Mexicana de Física, DF, Mexico.
- Sep 2009: XXIII Conferencia Nacional de Astronomía, IA-UNAM, Ensenada, Mexico.
- Mar 2008: XXII Conferencia Nacional de Astronomía, Univ. Iberoamericana, Mexico City.
- Feb 2008: I Congreso de Cosmología, Instituto Avanzado de Cosmología, León, Mexico
- Mar 2007: XXI Conferencia Nacional de Astronomía, INAOE, Puebla, Mexico.
- May 2006: XX Conferencia Nacional de Astronomía, CRyA, Morelia, Mexico.
- May 2003: XVII Reunión Anual de Astronomía. INAOE, Mexico City, Mexico.
- Oct 2001: XV Reunión Anual de Astronomía. INAOE, Tonantzintla, Pue., Mexico.
- May 1995: Astrofísica con plataformas espaciales". Sociedad Española de Astronomía, Sitges (Barcelona), Spain.
- May 1994: National Astronomy Meeting, Royal Astronomical Society, Cardiff, UK.
- Dec. 1990: V Asamblea Nacional de Astronomía y Astrofísica. Obs. Astronómico de Yebes, Madrid, Spain.



## 10 TECHNICAL SKILLS

### 10.1 TELESCOPE USE (PI/co-I of successful projects at)

- IRAM, the Plateau de Bure interferometer (mm), France
- Large Millimeter Telescope (mm), Mexico.
- Combined Array for Research in Millimeter-Wave Astronomy (mm), USA.
- Australia Telescope Compact Array (mm), Australia.
- European Southern Observatory, Paranal/La Silla, Chile (optical/IR): 8m VLT, 3.6m ESO.
- European Space Agency: Herschel
- European Northern Observatory, Canary Islands, Spain (optical/IR): 10.4m GTC, 4.2 WHT, 2m NOT, 1m JKT.
- Obs. Calar Alto Hispano-Alemán: 3.5m (optical/IR).
- Mauna Kea, Hawaii, Observatories, USA: Sub-Millimeter Array (SMA, mm), 3.5m UKIRT (IR), 15m JCMT (mm).
- National Astronomy Obs. of Japan in Chile: 10m ASTE (mm)
- National Radio Astronomy Observatory, USA: Very Large Array (radio), 100m GBT, ALMA (mm).
- National Optical Astronomy Observatory, USA: 8m Gemini, 4m Blanco (optical).
- Obs. Astronomico. Nacional, Mexico (optical/IR): 2.1m OAN, 1m OAN.
- Obs. Astrofísico Guillermo Haro, Mexico (optical): 2.1m OAGH.
- Spitzer Space Telescope (IR).
- LN2 and LHe cryogenics maintenance experience for instruments.

### 10.2 COMPUTING

Data reduction and analysis with current standard packages (Python, IRAF, IDL ...). Ability to program in several languages (FORTRAN,C, IDL, Python...) and install and administer packages in several operating systems (linux, Windows...). Experience in administering computers in Unix, VMS, Windows.

### 10.3 OTHER TECHNICAL WORK

- 2007-2009: Design and supervision of the Parque Nacional Sistema Arrecifal Veracruzano (PNASV, CONANP) software tool to organize and grow the database of monitoring of species.

## 11 LANGUAGES

English, Spanish, Basque: fluent, written and spoken.

## 12 FULL PUBLICATION LIST

The full list can also be seen, with active links at <http://itziararetxaga.net/publications/>

ORCID number: 0000-0002-6590-3994

142 refereed publications, 26 as first author or with my students and postdocs as first authors, marked in blue. Only work started as students or postdocs is highlighted. In addition, 15 publications as 2nd or 3rd author, including those led by students supervised by colleagues, in which I have played a major role in paper definition (e.g. led by Austermann, Chapin, Cid-Fernandes, Scott, Wagg), not highlighted.

Number of citations: > 7000 Hirsch index = 49

### Refereed papers:

1. A. Pichel, C. Donzelli, D. Rosa-Gonzalez, M. Fernandez Alonso, A. C. Rovero, H. Muriel, Y. D. Mayya, I. Aretxaga, J. Becerra González, A. Carramiñana, J. Mendez-Abreu, O. Vega, E. Terlevich, and R. J. Terlevich, 2021, *PASP*, 133, 4102: *New Observations with Gemini and GTC of the VHE Blazar KUV 00311-1938: About Its Redshift and Environment*
2. Cruz-González, I.; Gómez-Ruiz, A. I.; Calduf-Primo, A.; Benítez, E.; Rodríguez-Espinosa, J. M.; Krongold, Y.; Aretxaga, I.; Snell, R.; González-Martin, O.; Negrete, C. A.; Narayanan, G.; Hughes, D. H.; Yun, M. S.; Fazio, G. G.; Chavushyan, V.; Hiriart, D.; Jiménez-Bailón, E.; Herrera-Endoqui, M.; Martínez-Paredes, M.; González, J. J., 2020, *MNRAS*, 499, 2042: *Early science with the LMT: molecular torus in UGC 5101*
3. Zaragoza-Cardiel, Javier; Fritz, Jacopo; Aretxaga, Itziar; Mayya, Yalia D.; Rosa-González, Daniel; Beckman, John E.; Bruzual, Gustavo; Charlot, Stephane, 2020, *MNRAS*, 499, 1172: *A quantitative demonstration that stellar feedback locally regulates galaxy growth*
4. Rodríguez-Puebla, A.; Avila-Reese, V.; Cano-Díaz, M.; Faber, S. M.; Primack, J. R.; Franco, J., Aretxaga, I., Santiago-Mayoral, E., 2020, *ApJ*, 905, 171: *The star-forming main sequence and the contribution of dust-obscured star formation since  $z=4$  from the FUV+IR luminosity functions*
5. Jiménez-Andrade, E. F.; Zavala, J. A.; Magnelli, B.; Casey, C. M.; Liu, D.; Romano-Díaz, E.; Schinnerer, E.; Harrington, K.; Aretxaga, I.; Karim, A.; Staguhn, J.; Burnham, A. D. et al. 2020, *ApJ*, 890, 171: *The redshift and star formation mode of AzTEC2: a pair of massive galaxies at  $z=4.63$*
6. Tadaki, Ken-ichi; Iono, Daisuke; Yun, Min S.; Aretxaga, Itziar; Hatsukade, Bunyo; Lee, Minju M.; Michiyama, Tomonari; Nakanishi, Kouichiro; Saito, Toshiki; Ueda, Junko; Umehata, Hideki; 2020, *ApJ* 889,141: *A non-corotating gas component in an extreme starburst at  $z=4.3$*
7. Martínez-Paredes M.; González-Martín, O.; Esparza-Arredondo, D.; Kim, M.; Alonso-Herrero, A.; Krongold, Y.; Hoang, T.; Ramos Almeida, C.; Aretxaga, I.; Dultzin, D.; Hodgson, J., 2020, *ApJ*, 890, 152: *Modelling the strongest silicate emission features of local type 1 AGN*
8. Greenslade, J., Aguilar, E., Clements, D.L., et al. ,2019, *Monthly Notices of the Royal Astronomical Society*, 490, 5317: *A SCUBA-2 selected Herschel-SPIRE dropout and the nature of this population*
9. Lee, M.M., Tanaka, I., Kawabe, R., Aretxaga, I., Hatsukade, B., Izumi, T., et al., 2019, *The Astrophysical Journal*, 883, 92: *A Radio-to-millimeter Census of Star-forming Galaxies in Protocluster 4C 23.56 at  $z = 2.5$ : Global and Local Gas Kinematics*
10. Sharda, P., da Cunha, E., Federrath, C., Wisnioski, E., Di Teodoro, E.M., Tadaki, K., Yun, M.S., Aretxaga, I., and Kawabe, R., 2019, *Monthly Notices of the Royal Astronomical Society*, 487, 4305: *"Testing star formation laws on spatially resolved regions in a  $z \approx 4.3$  starburst galaxy"*
11. **Zaragoza-Cardiel, J.**, Fritz, J., Aretxaga, I., Mayya, D., Rosa-González, D., Beckman, J.E., Bruzual, G., Charlot, S., and Lomeli-Núñez, L., 2019, *Monthly Notices of the Royal Astronomical Society*,

- 487, L61:  
"Detection of the self-regulation of star formation in galaxy discs"
12. Rosa González, D., Muriel, H., Mayya, Y.D., Aretxaga, I., Becerra González, J., Carramiñana, A., et al. 2019, Monthly Notices of the Royal Astronomical Society, 482, 5422:  
*New GTC spectroscopic data and a statistical study to better constrain the redshift of the BL Lac RGB J2243 + 203*
  13. **Martínez-Paredes, M.**, Aretxaga, I., González-Martín, O., Alonso-Herrero, A., Levenson, N.A., Ramos Almeida, C., and López-Rodríguez, E., 2019, The Astrophysical Journal, 871, 190:  
*Quantifying Star Formation Activity in the Inner 1 kpc of Local MIR Bright QSOs*
  14. Hansung B. Gim, Min S. Yun, Frazer N. Owen, Emmanuel Momjian, Neal A. Miller, Mauro Giavalisco, Grant Wilson, James D. Lowenthal, Itziar Aretxaga et al., 2019, ApJ, 875, 80:  
*Nature of Faint Radio Sources in GOODS-North and GOODS-South Fields - I. Spectral Index and Radio-FIR Correlation*
  15. Hatsukade, Bunyo; Kohno, Kotaro; Yamaguchi, Yuki; Umehata, Hideki; Ao, Yiping; Aretxaga, Itziar; Caputi, Karina I.; Dunlop, James S. et al. 2018, PASJ, in press:  
*ALMA twenty-six arcmin<sup>2</sup> survey of GOODS-S at one millimeter (ASAGAO): Source catalog and number counts*
  16. Longinotti, A. L.; Vega, O.; Krongold, Y.; Aretxaga, I.; Yun, M.; Chavushyan, V.; Feruglio, C.; Gómez-Ruiz, A. et al. 2018, ApJ, 967, L11:  
*Early Science with the Large Millimeter Telescope: An Energy-driven Wind Revealed by Massive Molecular and Fast X-Ray Outflows in the Seyfert Galaxy IRAS 17020+4544*
  17. Takekoshi, Tatsuya; Minamidani, Tetsuhiro; Komugi, Shinya; Kohno, Kotaro; Tosaki, Tomoka; Sorai, Kazuo; Muller, Erik; Mizuno, Norikazu; et al. 2018, ApJ, 867, 117:  
*The Dust-selected Molecular Clouds in the Northeast Region of the Small Magellanic Cloud*
  18. **Zeballos M.**, Aretxaga I., Hughes D.H., Humphrey A., Wilson G.W., Austermann J. et al., 2018, MNRAS, 479, 4577:  
*AzTEC 1.1 mm observations of high-z protocluster environments: SMG overdensities and misalignment between AGN jets and SMG distribution*
  19. Jin, S., Daddi, E., Liu, D., Smolcic, V., Schinnerer, E., Calabro, A., Gu, Q. et al., 2018, ApJ 864, 56:  
*"Super-deblended" Dust Emission in Galaxies. II. Far-IR to (Sub)millimeter Photometry and High-redshift Galaxy Candidates in the Full COSMOS Field"*
  20. Tadaki, K., Iono, D., Yun, M. S., Aretxaga, I., Hatsukade, B., Hughes, D. H. et al., 2018, Nature, 560, 613:  
*The gravitationally unstable gas disk of a starburst galaxy 12 billion years ago*
  21. **Zavala, J. A.**, Aretxaga, I., Dunlop, J. S., Michalowski, M. J., Hughes, D. H., Bourne, N., et al., 2018, MNRAS 475, 5585:  
*The SCUBA-2 Cosmology Legacy Survey: The EGS deep field - II. Morphological transformation and multiwavelength properties of faint submillimetre galaxies*
  22. Gobat, R., Daddi, E., Magdis, G., Bournaud, F., Sargent, M., Martig, M. et al. 2018, Nature Astronomy, 2, 239:  
*The unexpectedly large dust and gas content of quiescent galaxies at  $z > 1.4$*
  23. **Rodríguez-Montoya, I.**, Sánchez-Arguelles, D., Aretxaga, I., Bertone, E., Chávez-Dagostino, M., Hughes, D. H., et al. 2018, ApJS, 235, 12:  
*Multiple-component Decomposition from Millimeter Single-channel Data*
  24. **Zavala, J. A.**, Montaña, A., Hughes, D. H., Yun, M. S., Ivison, R. J., Valiante, E. et al., 2018, Nature Astronomy, 2, 56:  
*A dusty star-forming galaxy at  $z = 6$  revealed by strong gravitational lensing*
  25. Ueda, Y., Hatsukade, B., Kohno, K., Yamaguchi, Y., Tamura, Y., Umehata, H., et al., 2018, ApJ, 853, 24:  
*ALMA 26 arcmin<sup>2</sup> Survey of GOODS-S at One-millimeter (ASAGAO): X-Ray AGN Properties of Millimeter-selected Galaxies*
  26. Ikarashi, S., Caputi, K. I., Ohta, K., Ivison, R. J., Lagos, C. D. P., Bisigello, L. et al., 2017, ApJ 849, L36:  
*Very Compact Millimeter Sizes for Composite Star-forming/AGN Submillimeter Galaxies*
  27. Chanchaiworawit, K., Guzmán, R., Rodríguez Espinosa, J. M., Castro-Rodríguez, N., Salvador-Solé, E., Calvi, R. et al., 2017, MNRAS, 469, 2646:  
*Gran Telescopio Canarias observations of an overdense region of Lyman  $\alpha$  emitters at  $z = 6.5$*
  28. Webb, T. M. A., Lowenthal, J., Yun, M., Noble, A. G., Muzzin, A., Wilson, G. et al., 2017, ApJ 844, L17:  
*Detection of a Substantial Molecular Gas Reservoir in a Brightest Cluster Galaxy at  $z = 1.7$*
  29. Roberts-Borsani, G. W., Jiménez-Donaire, M. J., Daprà, M., Alatalo, K., Aretxaga, I., Álvarez-Márquez, J. et al., 2017, ApJ 844, 110:

- Multiwavelength Characterization of an ACT-selected, Lensed Dusty Star-forming Galaxy at  $z = 2.64$*
30. Michalowski, M. J., Dunlop, J. S., Koprowski, M. P., Cirasuolo, M., Geach, J. E., Bowler, R. A. A. et al., 2017, MNRAS 469, 492:  
*The SCUBA-2 Cosmology Legacy Survey: the nature of bright submm galaxies from 2 deg<sup>2</sup> of 850um imaging*
  31. Lee, M. M., Tanaka, I., Kawabe, R., Kohno, K., Kodama, T., Kajisawa, M. et al., 2017, ApJ 842, 55:  
*A Radio-to-mm Census of Star-forming Galaxies in Protocluster 4C23.56 at  $z = 2.5$ : Gas Mass and Its Fraction Revealed with ALMA*
  32. González-Martín, O., Masegosa, J., Hernán-Caballero, A., Márquez, I., Ramos Almeida, C., Alonso-Herrero, A., Aretxaga, I. et al., 2017, ApJ 841, 37:  
*Hints on the Gradual Resizing of the Torus in AGNs through Decomposition of Spitzer/IRS Spectra*
  33. Pope, A., Montaña, A., Battisti, A., Limousin, M., Marchesini, D., Wilson, G. W. et al., 2017, ApJ 838, 137:  
*Early Science with the Large Millimeter Telescope: Detection of Dust Emission in Multiple Images of a Normal Galaxy at  $z > 4$  Lensed by a Frontier Fields Cluster*
  34. **Martínez-Paredes M.**, Aretxaga I., Alonso-Herrero A., González-Martín O., López-Rodríguez E., Ramos Almeida C. et al., 2017, MNRAS, 468, 2:  
*The dusty tori of nearby QSOs as constrained by high-resolution mid-IR observations*
  35. Ikarashi, S., Ivison, R. J., Caputi, K. I., Nakanishi, K., Lagos, C. D. P., Ashby, M. L. N. et al. 2017, ApJ, 835, 286:  
*Extremely Red Submillimeter Galaxies: New  $z \sim 4-6$  Candidates Discovered using ALMA and Jansky VLA*
  36. Dunlop J.S., McLure, R. J., Biggs, A. D., Geach, J. E., Michalowski, M. J., Ivison, R. J. et al., 2017, MNRAS, 466, 861:  
*The SCUBA-2 Cosmology Legacy Survey: galaxies in the deep 850 um survey, and the star-forming 'main sequence'*
  37. Rosa-González, D., Coutiño de León, S., Mayya, Y. D., Carramiñana, A., Aretxaga, I., Becerra González, J. et al. 2017, MNRAS 466, 540:  
*On the redshifts of the BL Lac 3FGL J0909.0+2310 and its close companion*
  38. Geach J.E., Dunlop, J. S., Halpern, M., Smail, I., van der Werf, P., Alexander, D. M. et al., 2017, MNRAS, 465, 1789:  
*The SCUBA-2 Cosmology Legacy Survey: 850um maps, catalogues and number counts*
  39. **Zavala, J. A.**, Aretxaga, I., Geach, J. E., Hughes, D. H., Birkinshaw, M., Chapin, E. et al., 2017, MNRAS 464, 3369:  
*The SCUBA-2 Cosmology Legacy Survey: the EGS deep field - I. Deep number counts and the redshift distribution of the recovered cosmic infrared background at 450 and 850um*
  40. Takekoshi, T., Minamidani, T., Komugi, S., Kohno, K., Tosaki, T., Sorai, K. et al., 2017, ApJ 835, 55:  
*The 1.1 mm Continuum Survey of the Small Magellanic Cloud: Physical Properties and Evolution of the Dust-selected Clouds*
  41. Alonso-Herrero, A. et al. 2016, MNRAS 463, 2405:  
*The complex evolutionary paths of local infrared bright galaxies: a high-angular resolution mid-infrared view*
  42. Wang, W.-H. et al. 2016, ApJ 833, 195:  
*The SXDF-ALMA 2-arcmin<sup>2</sup> Deep Survey: Stacking Rest-frame Near-infrared Selected Objects*
  43. Iono, D., Yun, M. S., Aretxaga, I. et al., 2016, ApJ 829, L10:  
*Clumpy and Extended Starbursts in the Brightest Unlensed Submillimeter Galaxies*
  44. Terlevich R., et al., 2016, AA, 592, L7:  
*Direct measurement of lensing amplification in Abell S1063 using a strongly lensed high redshift HII Galaxy*
  45. Yamaguchi Y. et al., 2016, PASJ, in press (arXiv:1607.02331): :  
*SXDF-ALMA 2 Arcmin<sup>2</sup> Deep Survey: Resolving and Characterizing the Infrared Extragalactic Background Light Down to 0.5 mJy*
  46. Harrington K.C. et al., 2016, MNRAS, 458, 4383:  
*Early Science with the Large Millimeter Telescope: Observations of Extremely Luminous High-z Sources Identified by Planck*
  47. Wall W.F. et al., 2016, MNRAS, 459, 1440:  
*Continuum Observations of M51 and M83 at 1.1 mm with AzTEC*
  48. Koprowski, M.P., Dunlop J.S. et al., 2016, MNRAS, 459, 1440:  
*The SCUBA-2 Cosmology Legacy Survey: galaxies in the deep 850-micron survey, and the star-forming 'main sequence'*

49. Hatsukade B. et al., 2016, PASJ, 68, 36:  
*SXDF-ALMA 2 arcmin<sup>2</sup> Deep Survey: 1.1-mm Number Counts*
50. Chen Ch-Ch., Smail I., Ivison R.J. et al., 2016, ApJ, 820, 82:  
*The SCUBA-2 Cosmology Legacy Survey: Multi-wavelength counterparts to 10<sup>3</sup> submillimeter galaxies in the UKIDSS-UDS field*
51. Alonso-Herrero A., Esquej P., Roche P.F. et al. 2016, MNRAS, 455, 563:  
*A mid-infrared spectroscopic atlas of local active galactic nuclei on sub-arcsecond resolution using GTC/CanariCam*
52. [Martinez-Paredes M.](#), Alonso-Herrero A., Aretxaga I. et al. 2015, MNRAS, 454, 3577:  
*A deep look at the nuclear region of UGC 5101 through high angular resolution mid-IR data with GTC/CanariCam*
53. Yun, M.S., Aretxaga I., Gurwell M. A., et al. 2015, MNRAS, 454, 3485:  
*Early Science with the Large Millimeter Telescope: CO and [C II] Emission in the z = 4.3 AzTEC J095942.9+022938 (COSMOS AzTEC-1)*
54. [Zavala J.A.](#), Michalowski M.J., Aretxaga I. et al. 2015, MNRAS, 453, L88:  
*Early science with the Large Millimeter Telescope: dust constraints in a z = 9.6 galaxy*
55. Tadaki K., Kohno K., Kodama, T. et al. 2015, ApJL, 811, 3:  
*SXDF-ALMA 1.5 arcmin<sup>2</sup> Deep Survey: A Compact Dusty Star-forming Galaxy at z = 2.5*
56. Ikarashi S., Ivison R.J., Caputi K.I., Aretxaga I., Dunlop J.S. et al, ApJ, 810, 133:  
*Compact Starbursts in z=3-6 Submillimeter Galaxies Revealed by ALMA*
57. Tamura Y., Kawabe R., Shimajiri Y. et al. 2015, 808, 121:  
*Extremely Bright Submillimeter Galaxies beyond the Lupus-I Star-forming Region*
58. [Zavala J.A.](#), Yun M.S. Aretxaga I. et al. 2015, MNRAS, 452, 1140:  
*Early Science with the Large Millimeter Telescope: observations of dust continuum and CO emission lines of cluster-lensed submillimetre galaxies at z=2.0-4.7*
59. Simpson J.M. et al. 2015, ApJ, 807, 128:  
*The SCUBA-2 Cosmology Legacy Survey: ALMA Resolves the Bright-end of the Sub-millimeter Number Counts*
60. [Humphrey A.](#) et al. 2015, MNRAS, 447, 3322:  
*Witnessing the transformation of a quasar host galaxy at z = 1.6*
61. Kirkpatrick A. et al. 2014, ApJ, 796, 135:  
*Early Science with the Large Millimeter Telescope: Exploring the Effect of AGN Activity on the Relationships Between Molecular Gas, Dust, and Star Formation*
62. Ramos-Almeida C. et al. 2014, MNRAS, 445, 1130:  
*A mid-infrared view of the inner parsecs of the Seyfert galaxy Mrk 1066 using CanariCam/GTC*
63. Alonso-Herrero, A. et al., 2014, MNRAS, 443, 2766:  
*Nuclear 11.3  $\mu$ m PAH emission in local active galactic nuclei*
64. [Zavala J.](#), Aretxaga I., Hughes D.H., 2014, MNRAS, 443, 2384:  
*The redshift distribution of submillimetre galaxies at different wavelengths*
65. Umehata H. et al., 2014, MNRAS, 440, 3462:  
*AzTEC/ASTE 1.1-mm survey of SSA22: Counterpart identification and photometric redshift survey of submillimetre galaxies*
66. Merlo M. et al., 2014, ApJ, 788, 6:  
*Subaru Spectroscopy and Spectral Modeling of Cygnus A*
67. Esquej P. et al., 2014, ApJ, 780, 86:  
*Nuclear Star Formation Activity and Black Hole Accretion in Nearby Seyfert Galaxies*
68. Alonso-Herrero A. et al., 2013, ApJ, 779, 14:  
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## Review and invited papers in proceedings:

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2. Aretxaga I. in the proceedings of IAU Symposium 349 "Under One Sky: The IAU Centenary Symposium", eds. D. Valls-Gabaud, J. Hearnshaw & C. Sterken:  
*The future of the International Schools for Young Astronomers*
3. Aretxaga I., invited talk in "Massive Young Star Clusters Near and Far: From the Milky Way to Re-ionization", 2014, Academia Mexicana de Ciencias, in press:  
*Bright Submillimeter Galaxies: Evidence for Maximal Starbursts*
4. Aretxaga I., Hughes D.H. 2009, invited talk in "XII Reunión Regional Latinoamericana de la UAI" RevMexAA (SC), 35, 182:  
*Wide extragalactic (sub-)millimeter surveys with SCUBA and AzTEC*
5. Aretxaga I., Hughes D.H. & Dunlop J.S., 2007, invited talk in "z-Machines to ALMA: (sub)millimeter Spectroscopy of Galaxies" Baker A. et al. eds, ASP Conf. Ser., 375, 140:  
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*Redshift determination Algorithms for Broadband Spectroscopic Data*
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*A photometric view of the redshift distribution of dust-enshrouded galaxies*
8. Hughes D.H., Aretxaga I., Wagg J., Olmi L., Chapin E.L. (2004), in "Astrophysics in Antarctica from Concordia Station, Dome C", eds. A.M. Moly, M. Giard, EAS publication series, EDP Sciences., 14, 75:  
*Resolving the FIR-submillimetre extragalactic background from Dome C, Antarctica.*
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*Understanding the History of Obscured Star Formation in the High-z with Coordinated GTC and LMT Surveys*
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11. Aretxaga I. (2003) invited discussion in "Star Formation through Time", eds. Pérez E. et al., ASP Conf. Ser, 297, 405  
*AGN Variability: the Case for Supernovae*
12. Aretxaga I. (1999) invited talk in the 193 IAU Symp. on "Wolf-Rayet Phenomena in Massive Stars and Starburst Galaxies". eds. van der Hucht et al., ASP, p 716  
*When SN explode in a Starburst: Transitions among AGN types*
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*Continuum and Line Variability in Nuclear Starbursts*

## Contribution papers in proceedings:

1. Martínez-Paredes, M & Aretxaga, I., 2021 IAU Symposium "Galaxy Evolution and Feedback across Different Environments". Proceedings of the International Astronomical Union, Volume 359, pp. 352-354: *Modelling the silicate emission features in type 1 AGNs: Dusty torus and disk+outflow models*
2. Wilson Grant W. et al., 2020, Proceedings of the SPIE, Volume 11453, id. 1145302 20 pp: *The TolTEC camera: an overview of the instrument and in-lab testing results*
3. Hughes D.H. et al., 2020, Proceedings of the SPIE, Volume 11445, id. 1144522 22 pp: *The Large Millimeter Telescope (LMT) Alfonso Serrano: current status and telescope performance*
4. Hatsukade, B., Kohno, K., Yamaguchi, Y., Umehata, H., Ao, Y., Aretxaga, I., Caputi, K. I., Dunlop, J. S., Egami, E., Espada, D., Fujimoto, S., Hayatsu, N., Hughes, D. H., Ikarashi, S., Iono, D., Ivison, R. J., Kawabe, R., Kodama, T., Lee, M., Matsuda, Y., Nakanishi, K., Ohta, K., Ouchi, M., Rujopakarn, W., Suzuki, T., Tamura, Y., Ueda, Y., Wang, T., Wang, W.-H., Wilson, G. W., Yoshimura, Y., Yun, M. S., Asagao Team, Uncovering Early Galaxy Evolution in the ALMA and JWST Era. Proceedings of the International Astronomical Union, Volume 352, pp. 239-240: "ALMA twenty-six arcmin<sup>2</sup> survey of GOODS-S at one millimeter (ASAGAO)"
5. Ramírez E., Aretxaga I., Tadhuner, C., López-Rodríguez E., Packham, C., 2017, *Frontiers in Astronomy and Space Sciences*, Volume 4, id.52: *Direct HST dust lane detection in powerful narrow-line radio galaxies*
6. Rosa-González, D., Coutiño de León, S., Mayya, Y. D., Carramiñana, A., Aretxaga, I., Becerra González, J. et al. in the proceedings of XV Latin American Regional IAU Meeting Cartagena 2016 (Eds. Mario Armando Higuera Garzán & Santiago Vargas Domínguez, RMxAC, 49, 136: *Redshift of the Extreme BL Lac 3FGL J0909.0+2310*
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9. Kohno K., Yamaguchi Y., Tamura Y. et al., 2016, in the proceedings of IAU Symposium 319, "Galaxies at High Redshift and Their Evolution over Cosmic Time", eds. S. Kaviraj & H. Ferguson, p.92: *SXDF-UDS-CANDELS-ALMA 1.5 arcmin<sup>2</sup> deep survey*
10. Zavala J.A., Aretxaga I., Hughes D.H. in Massive Young Star Clusters Near and Far: From the Milky Way to Reionization. 2013 Guillermo Haro Conference, Eds. Y. D. Mayya, D. Rosa González and E. Terlevich. INAOE & AMC, June 2014. ISBN: 978-607-8379-01-9, pp.259-260 *The Redshift Distribution of Submillimeter Galaxies at Different Wavelengths*
11. Aguilar E., Aretxaga I., Hughes D.H. in Massive Young Star Clusters Near and Far: From the Milky Way to Reionization. 2013 Guillermo Haro Conference, Eds. Y. D. Mayya, D. Rosa González and E. Terlevich. INAOE & AMC, June 2014. ISBN: 978-607-8379-01-9, pp.257-258 *Identification of High z Star Forming Galaxies Through Submillimeter Dropouts*
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14. Aretxaga et al. (18 coauthors) in "Galaxy Evolution: Infrared to Millimeter Wavelength Perspective", 2011, ASPC, 446, 89: *Plausible boosting of millimeter-galaxies in the COSMOS field by intervening large-scale structure*
15. Zeballos M., Hughes D.H., Aretxaga I., Wilson G.W., 2011, in "XIII Latin American Regional IAU Meeting" *RevMexAA (SC)*, 40, 108: *Studying the properties of massive galaxies in protoclusters using millimeter-wavelength observations.*
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17. Hatsukade B. et al. 2010, in "Deciphering the ancient universe with gamma-ray bursts", AIP Conference Proceedings, Volume 1279, pp. 324-326 (2010), 35, 182: *AzTEC/ASTE 1.1 mm Deep Surveys: Number Counts and Clustering of Millimeter-bright Galaxies*

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4. 2019/12/30 La cosmovisión clásica grecorromana en "La República" de Cicerón:  
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5. 2019/12/25 ¿Cómo (no) reconocemos las galaxias más masivas y distantes del Universo (on arXiv.1910.03512 Greenslade et al. 2019, MNRAS) <https://twitter.com/ItziMex/status/1209923291512811521>
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