

Curriculum Vitae – Jesús Zavala Franco

Faculty of Physical Sciences, University of Iceland, Dunhagi 5, 107 Reykjavík, Iceland
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Nationality: Icelandic and Mexican

Professional Appointments

- 09/20 - present **Lead coordinator** of the [MSc Programme in Theoretical Physics](#) in collaboration with Nordita
- 07/21 **Prófessor (full professorship)**, [Department of Physics](#), University of Iceland
50% research 50% teaching
- 06/16 – 06/21 **Dósent (Associate Professor; tenure-track)**, Dept. of Physics, University of Iceland
**broadly equivalent to a Docentship in Sweden*
- 11/13 – 06/16 **Marie Curie Fellow** (03/14 – 06/16) **Independent DARK Fellow** (11/13 – 03/14)
[DARK Cosmology Centre](#), Niels Bohr Institute, University of Copenhagen, Denmark
- 10/10 – 11/13 **Joint Postdoctoral Fellow** (10/10 – 11/13)
Canadian Institute for Theoretical Astrophysics **National Fellow** (10/10 – 11/12)
[Perimeter Institute for Theoretical Physics](#)
[Department of Physics and Astronomy](#), University of Waterloo
- 09/07 – 10/10 **Joint Postdoctoral Researcher**
MPA/SHAO Joint Center for Astrophysical Cosmology
[Max Planck Institute for Astrophysics](#) (09/08 – 10/10), Garching, Germany
[Shanghai Astronomical Observatory](#) (09/07 – 09/08), Shanghai, China

Education

- 09/24 – present [Swedish Diploma](#), 60 ECTS, University of Iceland
- 06/05 – 08/07 **Ph.D., Physics** (Awarded: 10/01/2008)
[Nuclear Sciences Institute](#) (ICN), National Autonomous University of Mexico (UNAM)
Advisor: Prof. Darío Núñez Zúñiga
- 08/03 – 06/05 **M.Sc., Physics** (Total average grade: 9.8 out of 10); ICN, UNAM
- 08/97 – 06/03 **B.Sc., Physics** (Total average grade: 9.5 out of 10, graduated with honours)
Faculty of Sciences, UNAM
Advisor: Prof. Vladimir Avila Reese, Astronomy Institute, UNAM

Publications

76 papers published or submitted in international peer-reviewed journals
~5200 citations as of 12/24 (~60% as first and second author); hirsch index h=38.
Links to list of articles in [NASA ADS](#) and in [INSPIRE](#)

Awards, Honors and Grants

- 2021 [Buchalter Cosmology Prize \(3rd prize\)](#)
- 2020 – 2023 **Project Grant, Icelandic Research Fund: ~45 million ISK (~€300,000)**
- 2017 – 2021 [Grant of Excellence, Icelandic Research Fund: ~100 million ISK \(~€750,000\)](#)
- 2016 – 2020 Member of the Nordic Research Committee (Gravitation and Cosmology) for Nordita
- 2014 – 2016 **Marie Curie Incoming International Fellowship, European Union (€231,000)**
- 2013 – 2016 DARK Independent Fellowship, Danish National Research Foundation
- 2010 – 2012 **CITA National Fellowship**, Canadian Institute for Theoretical Astrophysics

2009	Elected as a member of the Mexican National Researchers System (level I)
2007 – 2008	Chinese Academy of Sciences R. Fellowship for International Young Researchers
2006 – 2007	European Union LENAC/ALFA project assistance grant (~€8,000 total): ICC, Durham, England (03/07 – 04/07), MPA, Garching, Germany (02/06 – 06/06)
2003 – 2007	Graduate student scholarship (~ €26,200), Mexican Government (CONACyT)
2003 – 2007	Complementary graduate student scholarships (~ €4,500), DGEP and PAEP, UNAM

Teaching and mentoring experience

Summary:

(I) Teaching: ~9 years teaching as Faculty (~1 course per semester)

(II) Teaching development and innovation: core organizer of a new Master Programme in Theoretical Physics, 1 course in pedagogy, 1 course designed

(III) Mentoring (2 Postdocs, Students: 3 PhD, 2 MSc, 8 BSc, 4 summer students)

Teaching	*sabbatical semesters: Spring 2020 and Spring 2023
Spring 2022-2025	Undergraduate level course: Physics 2 (Electromagnetism), U. of Iceland
Fall 2021-2024	Undergrad level course: Classical Mechanics , U. of Iceland
Fall 2019, 2020	Graduate level course: Selected Topics in Modern Astrophysics , U. of Iceland
Spring 2017-2021	Undergrad level course: Spacetime Physics , U. of Iceland
Fall 2017-2020	Undergrad level course: General Physics , U. of Iceland
Spring 2017-2022	Undergrad level course: Astronomical obs., data reduction and analysis , U. of Iceland
02/15 – 04/15	Graduate level course: Classic astrophysical papers, University of Copenhagen
March 2014	Invited lecturer in the “gravitational dynamics and galaxy formation” MSc course Dark Cosmology Centre, University of Copenhagen, Denmark
09/12 – 12/12	Lecturer of the Master level course: Advanced Topics in Astrophysics (Dark Matter) Department of Physics and Astronomy, U. of Waterloo, Canada
08/06 – 12/06	Undergrad level course: Elementary algebra, sets and number theory Mexico Autonomous Institute of Technology (ITAM), Mexico
01/05 – 06/05	Undergraduate course: Classical Mechanics, Faculty of Sciences, UNAM, Mexico

Teaching development and innovation

2020-present	Lead coordinator of the new MSc Programme in Physics in collaboration with the Nordic Institute for Theoretical Physics (Nordita), pilot phase began in the Fall 2021
2018-2020	Core member of the committee to renovate the MSc Programme at the Faculty of Physical Sciences
Fall 2019	Course design: Selected Topics in Modern Astrophysics , 10 ECTS, graduate level
Fall 2016	Pedagogy course: Introduction to teaching studies at the university level , 10 ECTS

Supervision of Postdocs

11/17 – 11/22	Mark Lovell (PhD, Durham University)
11/17 – 10/19	Chaichalit Srisawat (PhD, University of Sussex)

Supervision of PhD students

10/20 – 06/24	Tamari Meshveliani (MSc, University of Innsbruck); graduated 18.06.2024
10/17 – 07/21	Sebastian Bohr (MSc, RWTH Aachen University); graduated 07.07.2021
09/17 – 08/21	Jan Burger (MSc, RWTH Aachen University); graduated 20.08.2021

Supervision of MSc students

05/24 – present	Loftur B. Ingvarsson, University of Iceland
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04/14 – 08/15 Thejs E. Brinckmann, University of Copenhagen

Supervision of BSc students

Spring 2021 Annika Willer (co-supervision with Mark Lovell); TU Dresden, Germany

Spring 2020 Arna María Ormsdóttir (grad in Spring 2020)

Spring/Fall 2020 Sigurður Bjartmar Magnússon

2019 Una Kamilla Steinsen (grad in Spring 2020)

2019 Rúnar Unnsteinsson (grad in Spring 2020)

2018-2019 Bryndís María Ragnarsdóttir (grad in Spring 2019)

2018-2019 Gunnlaugur Helgi Stefansson (grad in Spring 2019)

2017 Dagur S. Úlfarsson (grad in Spring 2018)

01/14 – 06/14 Jose M. Chimeno, Dark Cosmology Centre, University of Copenhagen

Supervision of Summer students

08/19 – 10/19 J. I. Reynoso C., PhD student, U. of Guanajuato, Mexico

06/17 – 08/17 Camille Collinet, MSc student, U. of Bordeaux, France

06/16 – 09/16 Eric Moseley, BSc student (SURF Program), Caltech, US

05/11 – 08/11 Co-supervisor: Stephen Ro, BSc student, U. of Waterloo, Canada

Thesis oponent and thesis evaluation committee

2019 PhD Thesis committee, Kasper Elm Heintz, University of Iceland

13/09/13 BSc. Thesis Opponent, Aldo Rodriguez Puebla, UNAM, Mexico City, Mexico

Seminars, Colloquia and Conference talks

Since 2009 I have given over 70 talks. The following is a list of invited selected contributions (the slides for some of them can be found in [this link](#)).

Selected Conference and Workshop talks (invited)

02/25 Dynamical Tracers of the Nature of Dark Matter, Cosmic Whispers COST Action

05/22 GW constraints on dark compact objects (virtual), Penn State U, State College, USA

09/21 The Unbearable Lightness of the Universe (virtual), CEICO, Prague

06/21 **Review Lectures**, ISAPP (virtual) Summer School, University of Madrid

08/19 The nature of Dark Matter and Large Scale Structure, University of Cyprus

09/18 **Plenary Talk**, 15th Postdam Thinkshop, AIP, Potsdam

10/17 COSPA meeting, ULB, Brussels, Belgium

08/17 SIDM Workshop, Niels Bohr Institute, Copenhagen Denmark

11/16 **Review Lectures**, Workshop on Dark Matter, Physics Institute, UNAM, Mexico

09/16 **Plenary talk**, TeV Particle Astrophysics 2016, CERN, Switzerland

08/16 CERN TH Institute, The Big Bang and the little bangs - Non-equilibrium phenomena in cosmology and in heavy-ion collisions, CERN, Switzerland

07/16 12th International Workshop Dark Side of the Universe, University of Bergen, Norway

11/15 **Plenary talk**, XI Workshop of the DGFM-SMF (1st Century of GR celebration), Guanajuato, Mexico

09/14 **Review Lecture**, Dark Matter Numerical Simulations, IPhT CEA/Saclay, France

08/14 Interplay of Particle and Astroparticle Physics Workshop, QMUL, London, UK

07/14 DM Symposium, European Week of Astronomy and Space Science (EWASS) Geneva, Switzerland

02/14 11th Symposium on Sources and Detection of Dark Matter and Dark Energy in the Universe, UCLA, Los Angeles, California

08/13 Self-interacting dark matter and challenges to LCDM cosmology, Harvard, USA

07/13 Dwarf Galaxies Workshop, Copenhagen, Denmark
 06/13 Cosmic-Rays and Photons from DM Annihilation: Theoretical Issues, Mainz, Germany
 06/12 CIAS Meudon 2012, CIAS Observatoire de Paris, Meudon, France
 05/12 DM Signatures in the Gamma Ray Sky Workshop, Texas Cosmology Center, USA
 11/09 LAUNCH 09: Neutrinos and Beyond, Heidelberg, Germany

Selected seminars & colloquia (invited)

02/23 Astrophysics seminar, University of Tokyo and IPMU, Tokyo
 11/22 Astrophysics Colloquium, University of Vienna, Austria
 10/21 Seminar (virtual), Physics Department, Sharif University, Iran
 01/18 Seminar, Perimeter Institute for Theoretical Physics, Waterloo, Canada
 03/17 Seminar, GRAPPA, University of Amsterdam, The Netherlands
 01/17 Seminar, TTK, RWTH Aachen University, Germany
 10/15 Colloquium, Royal Observatory, Edinburgh, UK
 06/15 Colloquium, Oskar Klein Centre, Stockholm, Sweden
 11/14 Seminar, Department of Physics, University of Oslo, Norway
 09/14 Seminar, CP³ Origins, Odense, Denmark
 04/14 Institute Colloquium, Mitchell Institute, Texas A&M University, USA
 02/14 Seminar, KIPAC, Stanford University, USA
 02/14 Colloquium, Department of Physics, UCSC, Santa Cruz, USA
 02/14 Seminar, Leiden Observatory, The Netherlands
 02/13 Institute seminar, Center for Cosmology and AstroParticle Physics, Columbus, USA
 02/13 Seminar, NORDITA, Stockholm, Sweden
 01/13 Seminar, Dark Cosmology Centre, Copenhagen, Denmark
 06/12 Seminar, Institute for Computational Cosmology, Durham, UK
 02/12 Colloquium, Physics Department, Queen's University, Kingston, Canada
 11/11 Joint Harvard/MIT/Tufts Cosmology Colloquium,
 Harvard-Smithsonian Center for Astrophysics (CfA), Cambridge, USA
 01/09 Colloquium, Max Planck Institute for Astrophysics, Garching, Germany

Miscellaneous

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- Referee for the journals: Physics of the Dark Universe, Nature Astronomy, Physics Reports, Physical Review Letters, Monthly Notices of the Royal Astronomical Society, Physical Review D, The Astronomical Journal and the Astrophysical Journal (**a total of 45 articles reviewed**)
 - Have served as a referee for proposals submitted to the following institutions: Royal Society Fellowships (2023); European Research Council (ERC Starting Grant; 2021), Canada Research Chairs Program (2020); Swiss National Supercomputing Centre (CSCS; 2016), Swedish National Space Board (SNSB; 2015), Sorbonne Universities (2014)
 - Member of the [Nordic Research Committee \(Gravitation and Cosmology\)](#) for Nordita to review postdoctoral applications (2016–2020; average ~120 proposals submitted per year).
 - Organizer of the workshop “[Challenges in theoretical physics education in Nordic countries](#)” (03/23)
 - Main organizer of the workshop “[Competing Structure Formation Models](#)”, U. of Iceland (10/19)
 - Local organizer of the workshop “Subhalo lensing challenges”, Reykjavik, Iceland (06/18)
 - Main organizer of the international workshop “Multi-scale ambient energy deposition from Supernovae”, Dark Cosmology Centre, Copenhagen, Denmark (02/16)
 - Co-organizer of the international workshop “Unravelling Dark Matter”, Perimeter Institute for Theoretical Physics, Waterloo, Canada (11/11)
 - Member of the European Astronomical Society
 - Languages: Spanish (native), English (proficient), Swedish (intermediate), Icelandic (novice)