

Curriculum Vitae — Yashar D. Hezaveh

Contact Information Department of Physics Phone: +1 438 939 3765
1375 Avenue Thérèse-Lavoie-Roux E-mail: hezaveh@astro.umontreal.ca
Montréal, QC H2V 0B3, Canada www.astro.umontreal.ca/~hezaveh

Employment **University of Montreal**, Montreal, Canada
Department of Physics
Assistant Professor
Flatiron Institute, New York, NY
Center for Computation Astrophysics
Flatiron Research Fellow (2018 - 2019)
Stanford University, Stanford, CA
Kavli Institute for Particle Astrophysics and Cosmology
NASA/STScI Hubble Fellow, (2015 - 2018)
Postdoctoral Research Fellow, (2013 - 2015)

Education **McGill University**, Montreal, QC, Canada
Ph.D. Physics - August 2013
Thesis Topic: Strongly Lensed Sources in mm-Wave Surveys
University of Victoria, Victoria, BC, Canada
Combined Honours in Physics and Astronomy, May 2008
Thesis Topic: Dark Matter Halo Profiles in Numerical Simulations

Research Interests **Dark Matter:** Astrophysical constraints on the particle nature of dark matter.
Gravitational Lensing: Strong lensing of high-redshift starburst galaxies.
Machine Learning: Application of machine learning methods to astrophysics.

Awards and Honours

- Hubble Fellowship - NASA - 2015 - (360,000 USD). Held at Stanford University.
- "Top 10 Discoveries of the year", by *Québec Science* magazine.
- McGill University Bravo - 2013
- Centre for Research in Astrophysics of Quebec Best Presentation Award (\$100), 78 participants
- Canadian Astronomical Society Best Presentation Award (\$200), 226 participants, "for outstanding demonstration of knowledge and determination"
- Doctoral Scholarship, FRQNT, 2012 (\$26,668.00)
- International Training Scholarship, FRQNT, 2011 (\$12,500.00). Held at Caltech

Selected
Press Release
and
Media
Coverage

- "AI Analyzes Gravitational Lenses 10 Million Times Faster"* SLAC, Stanford Press Release, 2017
- "Neural networks meet space "* Symmetry Magazine
Print and Online Article, 2017
- "AI Revolutionizes Astrophysics With Fastest Analysis Ever "* Forbes Magazine
Online Article, 2017
- "AI Analyzes Images 10 Million Times Faster "* MIT Technology Review
Online Article, 2017
- "The hunt for invisible dwarf galaxies"* BBC Earth
Online Article, 2016
- "Dwarf Dark Galaxy Hidden in ALMA Image"* NRAO/Stanford/ALMA
Press Release, 2016
- "Hiding in the light "* MSNBC, Rachel Maddow Show
Week in Geek online article, 2016
- "Dark Dwarf Galaxy Discovered"* Sky & Telescope
Printed Magazine & Online Article, 2016
- "Astronomers discover dark matter galaxy"* CBSNEWS
Online Article, 2016
- "Newly Discovered Galaxy Is 4 Billion Light Years From Earth"* abcNEWS
Online Article, 2016
- "Dwarf dark galaxy hidden in ALMA gravitational lens image"* Astronomy Magazine
Online Article, 2016
- "ALMA Rewrites History of Universe's Stellar Baby Boom"* ALMA, ESO, NRAO, 2013
- "New Telescope Reveals Early Star Formation"* Quirks and Quarks
Canadian Broadcasting Corporation, Radio Interview, 2013
- "Baby-boom stellaire"* *Les Années Lumières*
Radio Canada, Radio Interview, 2013
- "Distant Star Baby Boom Captured by Huge New Telescope"* CBC News
Online Article, 2013
- "... les premiers moments de l'Univers"* Le Devoir
Newspaper and Online Article, 2013
- "Stellar baby boom"* Max-Planck Gesellschaft Press Release, 2013
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Invited Talks

Cosmic Controversies, KICP

Chicago, IL - Oct. 2019 - Invited talk

McMaster University, Department of Physics & Astronomy

Hamilton, ON - Sept. 2019 - Invited colloquium

Queens University, Department of Physics

Kingston, ON - Sept. 2019 - Invited seminar

Canadian Astronomical Society Meeting

Montreal, QC - Jun. 2019 - Invited talk

New York University, Department of Physics

New York, NY - Apr. 2019 - Invited seminar

NASA Ames Research Center, SOFIA Science Center

Mountain View, CA - April. 2019 - Invited colloquium - Cancelled due to security

American Physical Society Meeting

Denver, CO - Apr. 2019 - Invited talk – declined

KITP, At the Crossroad of Physics and Machine Learning

Santa Barbara, CA - Feb. 2019 - Invited talk

American Astronomical Society, ALMA Special Session

Seattle, WA - Jan. 2019 - Invited talk

NeurIPS 2018, Bayesian Deep Learning

Montreal, QC, Canada - Dec. 2018 - Invited talk and panelist

Harvard University, Department of Physics

Cambridge, MA - Nov. 2018 - Invited seminar

Yale University, Department of Astronomy

New Haven, CT - Nov. 2018 - Invited colloquium

National Radio Astronomy Observatory

Charlottesville, VA - May 2018 - Invited colloquium

Texas A&M University

College Station, TX - May 2018 - Invited seminar

American Physical Society Meeting

Columbus, OH - Apr. 2018 - Invited talk

University of California Santa Barbara

Santa Barbara, CA - Apr. 2018 - Invited seminar

Connecting The Dots, University of Washington

Seattle, WA - Mar. 2018 - Invited plenary talk

University of Hawaii, Institute for Astronomy

Honolulu, HI - Mar. 2018 - Astrophysics colloquium

University of Hawaii, Department of Physics

Honolulu, HI - Mar. 2018 - Physics colloquium

University of California Santa Cruz

Santa Cruz, CA - Feb. 2018 - Astrophysics colloquium

University of Pittsburgh

Pittsburgh, PA - Feb. 2018 - Astrophysics colloquium

The Ohio State University

Columbus, OH - Nov. 2017 - CCAPP seminar

ALMA Long Baseline Workshop - NAOJ

Kyoto, Japan - Oct. 2017 - Invited talk

University of British Columbia

Vancouver, Canada - Sept. 2017 - Astrophysics colloquium

NRC Herzberg Astrophysics Center

Victoria, Canada - Sept. 2017 - Astrophysics seminar

AI Seminar Series, SLAC

Menlo Park, CA - Sept. 2017 - Invited seminar

University of California, Berkeley

Berkeley, CA - Apr. 2017 - Cosmology seminar

The Carnegie Observatories

Pasadena, CA - Mar. 2016 - Astrophysics colloquium

University of Arizona - Steward Observatory

Tucson, AZ - Feb 2016 - Astrophysics colloquium

University of California, Santa Cruz

Santa Cruz, CA - Feb. 2016 - Cosmology seminar

Astrophysics of Dark Matter

Sesto, Italy - Feb. 2016 - Invited talk

National Radio Science Meeting

Boulder, CO - Jan. 2016 - Invited talk

University of California, Davis

Davis, CA - Jan. 2016 - Cosmology seminar

University of Pennsylvania

Philadelphia, PA - Apr. 2015 - Astrophysics seminar

Rutgers University

New Brunswick, NJ - Apr. 2015 - Astrophysics colloquium

Galaxies and Cosmology in Light of Strong Lensing, IPMU

Tokyo, Japan - Nov. 2014 - Invited talk

Kavli Institute for Cosmological Physics at the University of Chicago

Chicago, IL - Apr. 2014 - Astrophysics seminar

Institute for Advanced Studies

Princeton, NJ - Feb. 2014 - Astrophysics seminar

University of California, Santa Cruz

Santa Cruz, CA - Feb. 2014 - Cosmology seminar

Galaxy Formation under the Magnifying Glass of Gravitational Lensing

Courmayeur, Italy - Jun. 2013 - Invited talk

Dalhousie University

Halifax, Canada - Apr. 2013 - Physics colloquium

The Royal Observatory

Edinburgh, UK - Nov. 2012 - Astrophysics seminar

Institute for Computational Cosmology, Durham University

Durham, UK - Nov. 2012 - Cosmology seminar

DAMTP, University of Cambridge

Cambridge, UK - Nov. 2012 - Cosmology journal club talk

Kavli Institute for Cosmology, University of Cambridge

Cambridge, UK - Nov. 2012 - Galaxy seminar

California Institute of Technology

Pasadena, CA - Feb. 2012 - Obscos seminar

Institute of Astronomy, University of Cambridge

Cambridge, UK - Nov. 2011 - Astrophysics seminar

Conferences,
Workshops,
and other talks

Invited lecturere at ASTROSOMA Cosmology school

Moscow, Russia - Jul. 2019 - Summer school

Halo Detection through Strong Lensing, University of Iceland

Reykjavic, Iceland - Jun. 2018 - Workshop

Small-scale structure of cold dark matter program, KITP

Santa Barbara, CA - Apr. 2018 - Seminar

Accelerating the Search for Dark Matter with Machine Learning, Lorentz Center

Leiden, The Netherlands - Jan. 2018

The origin of galaxies, stars, and planets in the era of ALMA, Caltech

Pasadena, CA - Nov. 2017 - Contributed talk

Galaxy-Halo Connection Program, KITP

Santa Barbara, CA - Apr. 2017 - Extended visit

Half a Decade of ALMA: Cosmic Dawns Transformed

Palms Spring, CA - Sep. 2016 - Contributed talk

Galaxy Flows - Rencontres du Vietnam

Quy Nhon, Vietnam - Jul. 2016 - Contributed talk

American Astronomical Society Meeting

Seattle, WA - Jan. 2015 - Contributed talk

European Southern Observatory, SPT-SMG Collaboration Meeting

Garching, Germany - Jul. 2014 - Contributed talk

Kavli Institute for Particle Astrophysics and Cosmology, Stanford University

Stanford, CA - Feb. 2014 - Tuesday tea talk

Canadian Astronomical Society (CASCA)

Quebec, Canada - Jun. 2014 - Contributed talk

American Astronomical Society, Probes of Dark Matter on Galaxy Scales

Monterey, CA - Jul. 2013 - Contributed talk

South Pole Telescope Meeting, University of Chicago

Chicago, IL - Jul. 2013 - Contributed talk

Canadian Astronomical Society (CASCA)

Vancouver, Canada - May 2013 - Contributed talk

South Pole Telescope SMG Meeting, Caltech

Pasadena, CA - Aug. 2012 - Contributed talk

The 13th Synthesis Imaging Workshop, NRAO

Socorro, NM - Jun. 2012

SnowPac: Gravitational Lensing in the Age of Survey Science, University of Utah

Snowbird, UT - Mar. 2012 - Contributed talk

First Light and Faintest Dwarfs: Extreme Probes of the Cold Dark Matter Paradigm

Santa Barbara, CA - Mar. 2012

Caltech CASA Radio Analysis Workshop

Pasadena, CA - Jan. 2012

South Pole Telescope Meeting, University of Chicago

Chicago, IL - Jul. 2011 - Contributed talk

Hands-on Strong Gravitational Lensing Workshop - Excellence Cluster Universe

Munich, Germany - Jun. 2011 - Contributed talk

Canadian Astronomical Society Conference, Saint Mary's University

Halifax, Canada - May 2010 - Contributed talk

DUEL Cosmology and Gravitational Lensing Conference, Institut d'Astrophysique

Paris, France - Sep. 2009

Canadian Astronomical Society Conference, University of Toronto

Toronto, Canada - May 2009 - Poster presentation

Canadian Undergraduate Physics Conference, Simon Fraser University

Vancouver, Canada - Oct. 2007 - Contributed talk

Canadian Undergraduate Physics Conference, University of New Brunswick

Fredericton, Canada - Oct. 2006 - Contributed talk

Public Talks

Benjamin Dean Astronomy Lecture

Morrison Planetarium - California Academy of Sciences
San Francisco, CA - Aug. 2016

Other Public Lectures

- California Academy of Sciences (Dark Matter Day) - San Francisco, CA - Oct. 2017
- San Francisco Amateur Astronomy Presidio Lecture - San Francisco, CA - Aug. 2017
- San Jose Astronomy Association - San Jose, CA - Oct. 2016
- Astronomy on Tap - Palo Alto, CA - Apr. 2016
- McGill Astro Night - Montreal, QC - Apr. 2013

Service

Referee

- The Astrophysical Journal
- The Astrophysical Journal Letters
- The Astrophysical Journal Supplement Series
- Monthly Notices of the Royal Astronomical Society
- IEEE Access
- Astronomy and Computing

Reviewer

- NASA Earth and Space Science Student Fellowship
- Canadian Time Allocation Committee (James Clerk Maxwell Telescope)
- Canadian Time Allocation Committee (Gemini)