

# Iair Arcavi

(pronounced “ya-eer”)

## Curriculum Vitae

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December 14, 2020

- PERSONAL INFORMATION**     *Born:* March 24, 1982, Israel.  
*Address:* School of Physics and Astronomy  
Tel Aviv University,  
Tel Aviv, 6997801, Israel  
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*Languages:* Hebrew, English, Spanish.
- RESEARCH INTERESTS**     Core collapse supernovae and their massive-star progenitors; Tidal disruptions of stars by super-massive black holes; Electromagnetic counterparts of gravitational wave sources; Asteroseismology of massive stars; Transient surveys, robotic observations and real-time rapid telescope triggering; Astronomical big-data management.
- POSITIONS**     *October 2018 - Current:* Senior Lecturer, Tel Aviv University, Israel.
- September 2016 - August 2018:* NASA Einstein Postdoctoral Fellow, University of California, Santa Barbara.
- January 2014 - August 2016:* Postdoctoral Fellow, Las Cumbres Observatory Global Telescope & Kavli Institute for Theoretical Physics, University of California, Santa Barbara.
- September - December 2013:* Visiting General Member, Kavli Institute of Theoretical Physics, University of California, Santa Barbara.
- August - December 2013:* Postdoctoral Fellow, Weizmann Institute of Science, Rehovot, Israel.

## EDUCATION

**Weizmann Institute of Science**, Rehovot, Israel

Ph.D. in Physics, 2013

Thesis title: The Core Collapse Supernova Population:  
Revealing the Different Ways Through Which Massive  
Stars End Their Lives

Supervisor: Prof. Avishay Gal-Yam

**Tel Aviv University**, Tel Aviv, Israel

B.Sc. in Physics and Mathematics, Summa Cum Laude, 2007

## HONORS AND AWARDS

Nathan Rosen Prize, Israel Physical Society, 2020.

Excellence in Teaching Award, Tel Aviv University, 2019.

Azrieli Global Scholarship, Canadian Institute for Advanced Research, 2019.

Alon Fellowship, Israel Council for Higher Education, 2018.

Einstein Postdoctoral Fellowship, NASA, 2016.

Harvey L. Karp Discovery Award, UC Santa Barbara, 2015.

Dr. Moshe Gilboa Ph.D. Excellence Scholarship, Wolf Foundation, 2012.

Dean's prize for M.Sc. students, Weizmann Institute of Science, 2011.

Dean's honor list, Faculty of Exact Sciences, Tel Aviv University, 2007.

Dean's honor list, Faculty of Exact Sciences, Tel Aviv University, 2005.

The Chaim Langzem Excellence Scholarship, Tel Aviv University, 2005.

## OBSERVING EXPERIENCE

30 nights with the 1 m telescope at the Wise Observatory, Israel.

20 nights with the 5 m Hale Telescope at the Palomar Observatory, California, USA.

11 nights with the 3.5 m New Technology Telescope at La Silla Observatory, Chile.

6 nights with the 10 m Keck Telescopes at the Mauna Kea Observatory, Hawaii, USA.

3 nights with the 4 m Mayall Telescope at the Kitt Peak National Observatory, Arizona, USA.

2 nights with the 4.2 m William Herschel Telescope at the Roque de los Muchachos Observatory, La Palma, Spain.

PI of accepted proposals for observations with the *Hubble Space Telescope*:

- Cycle 21: Determining the Progenitor of SN2011dh as a Test of Supernova Shock Cooling Models (1 orbit)
- Cycle 24: What is Enhancing the Tidal Disruption Rate of Stars in Post-Starburst Galaxies? (25 orbits)
- Cycle 25: What Type of Star Made the One-of-a-kind Supernova iPTF14hls? (1 orbit)

PI of accepted proposal for combined observations with *Swift* and the JVLA:

- Cycle 11: A Window to Quiescent Massive Black Holes: Swift Followup of Tidal Disruption Flares
- Cycle 13: Tidal Disruption Events - A Window to Quiescent Super-Massive Black Holes and Accretion Physics

PI of accepted proposals for observations with the Las Cumbres Observatory network:

- 2014A: Asteroseismology of Massive Stars - Testing the Network's Continuous Observation Capabilities
- 2014B: Towards the First Sample of Tidal Disruption Light Curves and Spectra
- 2015A: LCOGT Optical Monitoring of Tidal Disruption Events in Conjunction with Swift and the JVLA
- 2015B: LCOGT Classification and Followup of Tidal Disruption Events in Conjunction with Swift and the JVLA
- 2016A – 2017AB: Classification and Followup of Tidal Disruption Events
- 2016A – 2017AB: Searching for Optical Counterparts to Gravitational Waves
- 2018A: Nearby Galaxy Reference Images for Gravitational Wave, Young Supernova and Nuclear Transient Followup
- 2018A – 2020A: Mapping the Diversity and Emission Mechanisms of Transients in Galaxy Centers
- 2018B – 2020B: Discovery and Follow-up of Optical Counterparts to Gravitational-Wave Events (Key Project)

PI of accepted proposal for observations with Gemini:

- 2019B: Mapping the Diversity and Emission Mechanisms of SMBH-Related Transients

PI of accepted proposal for observations with the Liverpool Telescope:

- 2021A: Mapping the Diversity and Emission Mechanisms of Transients in Galaxy Centers (OPTICON time)

PI of accepted DDT proposal for observations with the JVLA:

- What is Powering SN 2011dh at Late Times? A VLA Investigation

Responsible for the Palomar Transient Factory core collapse supernova followup effort.

Chair of the TDE working group for PESSTO, BlackGEM and ULTRASAT.

Deputy chair of TDE working group for SoXS.

Chair of the “Extreme Supernovae” working group for SoXS.

## GRANTS

Harvey L. Karp Discovery Award, 2015: \$48,000

*Swift*-GI-1114220, 2015: \$39,972

Einstein Fellowship Research Award, 2016: \$103,683

*Hubble Space Telescope* Observing Grant, 2017: \$114,282

*Swift*-GI-1316192, 2017: \$39,981

LSSTC Grant Award 2017-UG09, 2017: \$6,455

Einstein Fellowship Research Award, 2017: \$102,616

*Hubble Space Telescope* Observing Grant, 2017: \$10,960

Alon Fellowship, 2018-2021: ~1,000,000 NIS (~\$270,000)

Israel Science Foundation Personal Grant, 2018: 278,000 NIS (~\$76,000)

United States - Israel Binational Science Foundation, 2019-2023: \$162,800  
*with D. A. Howell*

Canadian Institute for Advanced Research Azrieli Global Scholarship, 2019-2020:  
\$100,000 CAD (~\$75,000)

Tel Aviv University Vice President Research Encouragement Grant, 2019: 30,000  
NIS (~\$8,500)

Israel Science Foundation Center of Excellence Grant, 2019-2023: 8,167,080 NIS  
(~\$2,200,000)  
*with E. Waxman, A. Gal-Yam, E. Ofek, D. Kushnir, E. Behar*

European Research Council Starting Grant, 2020-2025: 1,998,625 Eur (~\$2,188,045)

Pazi Foundation, 2021-2025: 2,526,000 NIS (~\$750,000)  
*with A. Gilkis*

## TEACHING EXPERIENCE

*Lecturer* of the course Introduction to Astrophysics for non-science majors, Tel  
Aviv University, 2019-.

Average student evaluation scores: 97.6% (2019).

*Lecturer* of the course Physics B (Electricity and Magnetism) for Life Sciences

students, Tel Aviv University, 2019-.  
Average student evaluation scores: 97.6% (2019).

*Lecturer* of the course Physics A (Classical Mechanics) for Life Sciences students, Tel Aviv University, 2019-.

Average student evaluation scores: 96.8% (2019), 97.9% (2020).

*Visiting lecturer* for undergraduate astronomy courses at UC Santa Barbara and the Santa Barbara City College, 2015-2018.

*Lecturer* of the course Introduction to Astrophysics, Interdisciplinary Center (IDC), Herzlia, 2011-2013.

Average student evaluation scores: 93.8% (2011), 96% (2012), 97.2% (2013).

*Teaching Assistant* in the Rothschild program for teachers (Introductions to Astrophysics, Electromagnetism) and in a graduate course (Introduction to Astrophysics), Weizmann Institute of Science, 2010-2013.

*Teaching Assistant* in the undergraduate courses Physics 1 & 2 and Calculus 1 & 2, Faculty of Agriculture, Hebrew University, 2008-2013.

*Mentoring* of high-school, undergraduate and graduate students as part of the Dr. Bessie F. Lawrence International Summer Science Institute, the Amos De Shalit Summer School and the course Experimental Projects, Weizmann Institute of Science, 2010-2012.

*Visiting lecturer* to high school students, “Young @ Science”, Weizmann Institute of Science, 2010-2013.

*Visiting lecturer* at teacher courses for the Science Teaching Dept. at the Weizmann Institute of Science, the Davidson Institute of Science Education and the Talpiot Academic College for Education, 2005-2010.

ACTIVE  
PARTICIPATION  
IN SCIENTIFIC  
MEETINGS

Year	Meeting	Activity
2020	The CogX Global Leadership Summit and Festival of AI & Breakthrough Technology Virtual	Invited Talk
2020	[Canceled due to COVID-19] Illuminating Gravitational Waves: Electromagnetic Counterparts to Neutron Star Mergers Rehovot, Israel	Organizer
2020	Tidal Disruptions in Kyoto: Confronting Theory With Observations Kyoto, Japan	Invited Review Talk SOC Member
2019	Gaia Alerts Workshop	Invited Talk

Catania, Italy

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2019	Gravitational Wave Physics & Astronomy Workshop	SOC Member
	Tokyo, Japan	
2019	Black Holes and Neutron Stars with Gravitational Waves	Invited Review Talk
	Kyoto, Japan	
2019	The Extragalactic Explosive Universe	Invited Review Talk
	Garching, Germany	
2019	Astrophysics in the LIGO/Virgo Era	Accepted
	Aspen, CO, USA	Participation
2019	BlackGEM Science Meeting	Talk
	Nijmegen, The Netherlands	
2019	Enabling Multi-Messenger Astrophysics in the Big Data Era	Invited Review Talk
	Baltimore, MD, USA	
2019	The Deaths and Afterlives of Stars	Invited Review Talk
	Baltimore, MD, USA	
2019	21st Century Software and Data Analysis Tools for Physics and Astronomy	Initiator, Organizer
	Tel Aviv, Israel	
2019	Radio Astronomy - A Time Domain Perspective	Invited Talk
	Jerusalem, Israel	
2019	Astronomical Time Series 2019	Invited Talk
	Heidelberg, Germany	
2018	Gravitational Wave Physics & Astronomy Workshop	SOC Member
	College Park, MD, USA	
2018	Massive Stars and Supernovae	Talk
	Bariloche, Argentina	

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2018	Using Tidal Disruption Events to Study Super-Massive Black Holes Bern, Switzerland	Convener
2018	Adventures in Astrophysics - A Symposium honoring Alex Filippenko's 60th Birthday Aptos, CA, USA	Invited Talk
2018	Transients in New Surveys: the Undiscovered Country Leiden, The Netherlands	Invited Talk
2018	Unsolved Problems in Astrophysics and Cosmology Budapest, Hungary	Invited Talk
2018	SciFoo Mountain View, CA, USA	Invited Participation
2018	Shocking Supernovae Stockholm, Sweden	Invited Talk
2018	ISSI Team Meeting: Using Tidal Disruption Events to Study Super-Massive Black Holes Bern, Switzerland	Convener
2018	LIGO-EM Town Hall Boston, MA, USA	Talk
2018	The Transient Universe Singapore	Invited Talks
2018	231st AAS Meeting Washington, DC, USA	Talk
2017	GW170817: The First Double Neutron Star Merger Santa Barbara, CA, USA	Invited Talk
2017	IAU Symposium 338 Baton Rouge, LA, USA	Talk
2017	Einstein Symposium	Talk

	Boston, MA, USA		
2017	TDE17: Piercing the Sphere of Influence Cambridge, UK	Invited Talk	
2017	Ringberg Supernova Workshop Tegernsee, Germany	Talk	
2017	European Week of Astronomy and Space Science Prague, Czech Republic	Invited Review Talk	
2017	ISSI Team Meeting: Using Tidal Disruption Events to Study Super-Massive Black Holes Bern, Switzerland	Invited Talk	
2017	Generation-GW: Diving into Gravitational Waves St. Thomas, US Virgin Islands	Invited Talk	
2017	Phenomena, Physics, and Puzzles Of Massive Stars and their Explosive Outcomes Santa Barbara, CA, USA	Invited Talks	
2016	ISSI Team Meeting: Using Tidal Disruption Events to Study Super-Massive Black Holes Bern, Switzerland	Invited Talk	
2016	Einstein Symposium Boston, MA, USA	Talk	
2016	MIAPP Workshop: Supernovae - The Outliers Munich, Germany	Invited Review Talk	
2016	Supernovae Through the Ages Easter Island, Chile	Talk	
2016	European Week of Astronomy and Space Science Athens, Greece	Symposium Chair Talk	Co-
2016	228th AAS Meeting San Diego, CA, USA	Poster	

2016	Use of Small Telescopes in the Giant Era Chianti, Italy	Invited Talk
2016	LSST Transient and Variable Science Workshop Chicago, IL, USA	Talk
2016	227th AAS Meeting Kissimmee, FL, USA	Talk
2015	AMON Workshop Penn State, USA	Invited Talk
2015	TDE School & Workshop Jerusalem, Israel	Initiator SOC Member Talks
2015	Big Data in Astronomy Workshop Tel Aviv, Israel	Invited Talk
2015	Gaia Transients Workshop Cambridge, UK	Talk
2015	iPTF Summer School Pasadena, CA, USA	Invited Talk
2015	PESSTO Meeting Paris, France	Talks
2015	Hotwiring the Transient Universe IV Santa Barbara, CA, USA	Talks
2015	225th AAS Meeting Seattle, WA, USA	Talk
2014	60th Meeting of the Israeli Physical Society Be'er Sheva, Israel	Talk
2014	I-Core Transients' Unsolved Mysteries Workshop Eilat, Israel, 2014	Invited Talk
2014	iPTF Summer School	Invited Talks

	Pasadena, CA, USA	
2014	iPTF Science Workshop Stockholm, Sweden	Talk
2013	Hotwiring the Transient Universe III Santa Fe, NM, USA	Talk
2013	iPTF Science Workshop Santa Barbara, CA, USA	Talk
2013	Supernovae and Gamma-Ray Bursts Kyoto, Japan	Talk
2013	iPTF Technical Workshop Pasadena, CA, USA	Invited talk
2013	221st AAS Meeting Long Beach, CA, USA	Thesis Talk
2012	58th Meeting of the Israeli Physical Society Jerusalem, Israel	Talk
2012	PTF Workshop Santa Barbara, CA, USA	Talk
2012	Gamma Ray Bursts in the Era of Rapid Follow-up Liverpool, UK	Invited talk
2012	Fireworks Oxford, UK	Talk
2012	IAU Symposium 279 Nikko, Japan	Talk
2011	IAU Symposium 285 Oxford, UK	Poster
2011	PTF Workshop Santa Barbara, CA, USA	Talk
2011	Fireworks	Invited talk

	Pasadena, CA, USA	
2011	56th Meeting of the Israeli Physical Society Tel Aviv, Israel	Poster
2011	The Cosmic Enigma London, UK	Poster
2011	PTF Workshop Santa Barbara, CA, USA	Talk
2010	Progenitors and Environments of Stellar Explosions Paris, France	Invited talk Poster
2009	214th AAS Meeting Pasadena, CA, USA	Poster

INVITED  
SEMINARS AND  
COLLOQUIA

University of Turku, Finland, Astrophysics Seminar, Nov. 2020  
 Institute of Astronomy, KU Leuven, Belgium, Colloquium, Nov. 2020  
 Hebrew University of Jerusalem, Israel, High-Energy Astrophysics Seminar, May 2020  
 University of Warsaw, Poland, Astronomy Seminar, Jun. 2019  
 Bar-Ilan University, Israel, Physics Colloquium, May 2019  
 Albert Einstein Institute, Potsdam, Germany, Astrophysical and Cosmological Relativity Seminar, Feb. 2019  
 University of Colorado, Boulder, APS Colloquium, Nov. 2017  
 NOAO & Steward Observatory Joint Colloquium, May 2017  
 UC Berkeley, TAC Seminar, Feb. 2017  
 UC Davis, Cosmology Seminar, Oct. 2016  
 Tel Aviv University, Physics Colloquium, Nov. 2015  
 Georgia Tech, CRA Seminar, Oct. 2015  
 Hebrew University of Jerusalem, Astrophysics Seminar, Dec. 2014  
 UC Santa Barbara, Astrophysics Seminar, Mar. 2014  
 Ohio State University, Center for Cosmology and AstroParticle Physics Seminar,

Oct. 2013

Stockholm University, Oskar Klein Center for Cosmoparticle Physics Colloquium,  
Aug. 2013

San Diego State University, Astrophysics Colloquium, Jul. 2013

Weizmann Institute of Science, Annual Physics Students Colloquium, Jun. 2013

Tel Aviv University, Astrophysics Seminar, Feb. 2013

Technion, Israel Institute of Technology, Astrophysics Seminar, Nov. 2012

American Museum of Natural History, Astrophysics Seminar, Nov. 2012

#### SERVICE

Co-Editor for the International Space Science Institute book on Tidal Disruption Events (to be published by Springer).

Referee for ApJ, MNRAS, A&A, PASJ, Nature, Nature Astronomy.

Review work for NASA panels (*HST* DDT, NPP, NESSF, ADAP).

Review work for the Israeli Ministry of Science, Technology and Space (Israel Science Foundation, Israel Space Agency).

Review work for the NOAO, NAOC, LCOGT and Liverpool Telescope time allocation committees.

Head of the TDE Subgroup of the Transients and Variable Stars Science Collaboration for LSST (2016-2019).

Chair of the colloquium committee, School of Physics and Astronomy, Tel Aviv University, 2019.

Chair of the astrophysics seminar committee, School of Physics and Astronomy, Tel Aviv University, 2020-2021.

Member of the ad-hoc committee for technical means for online teaching, Faculty of Exact Sciences, Tel Aviv University, 2020.

Member of the Executive Committee of the Israel Physical Society (IPS) Division of Astronomy, Planetary and Space Sciences (DAPSS), 2019-.

#### OUTREACH ACTIVITIES

Founder, organizer and host at Astronomy on Tap Tel Aviv, 2019-.

Guest at the “Little Big Science” podcast, 2020.

Speaker at “Pausa”, Tel Aviv University, 2019.

Speaker at “Women Scientists of the Future”, Tel Aviv University, 2018-.

Speaker and panelist at the San Diego Comic Fest, 2018.

Founder, organizer, host and speaker at Astronomy on Tap Santa Barbara, speaker at the Santa Barbara City College Astronomy Club, Cafe KITP, the Santa Barbara Astronomical Unit, 2014-2018.

Speaker at the Israeli Astronomical Association, the Davidson Institute of Science Education, the Givatayim Rotary Club, Science on Tap Tel Aviv and others, 2011-2013.

Writing for the Israeli popular science magazine “Galileo”, 2011-2013.

Astronomical field trips, tours of the Wise Observatory and lectures as part of the “Astronomy for All” activity at the Davidson Institute of Science Education and as part of Weizmann Student Council events, 2010-2013.

Guidance at Wise Observatory open days, 2010-2012.

Bi/Weekly translations of the Astronomy Picture of the Day (APOD) into Hebrew, 2010-2011.

OTHER  
ACTIVITIES

Chairman of the Student Council, Weizmann Institute of Science, 2012.

Vice-Chairman of the Student Council, Weizmann Institute of Science, 2011.