

YONIT HOCHBERG

CURRICULUM VITAE

September 2022

Racah Institute of Physics,
Hebrew University of Jerusalem
Associate Professor
Theoretical Particle Physics
yonit.hochberg@mail.huji.ac.il
+972-52-8640818

Personal Data

Female.
Married plus 2 (Ages 3 and 5).
Born February 11, 1982 in Ohio, USA.
Citizen of Israel and USA.
Native speaker of English and Hebrew.

Webpage: hujihep.com

I am a theoretical particle physicist whose research focuses on novel approaches to longstanding puzzles in fundamental physics. While my research applies this philosophy to all the open questions in particle physics, such as the hierarchy between the electroweak and gravity scales, my primary focus is on developing new theories of the particle identity of dark matter, along with avant-garde experimental ideas for its detection. My proposed methods for the latter include the use of bulk superconductors, two-dimensional materials such as graphene, Dirac materials, carbon-based materials such as diamond and silicone-carbide, and superconducting nanowires.

Education

- 2008 - 2013 **Ph.D.**
Physics department, Weizmann Institute of Science, Israel
Thesis: *Probing New Physics Beyond the Standard Model: Supersymmetry, Flavor and the LHC*
Thesis advisors: Prof. Micha Berkooz and Prof. Yossi Nir
- 2005 - 2008 **M.Sc.**
Physics department, Weizmann Institute of Science, Israel
Thesis: *Modification of Gaugino and Higgsino Masses by Higher-Dimensional Operators in Anomaly Mediation*
Thesis advisors: Prof. Micha Berkooz and Prof. Yossi Nir
- 2001 - 2005 **B.Sc.**
Electrical Engineering department, Technion—Israel Institute of Technology, *summa cum laude*

Appointments

- 2022 - **Associate Professor**
Racah Institute of Physics, Hebrew University of Jerusalem, Israel
- 2020 - **Elected Member**
Israel Young Academy of Science and Humanities
- 2018 - **Collaboration Member**
[PTOLEMY](#) collaboration
- 2017 - 2022 **Assistant Professor**
Racah Institute of Physics, Hebrew University of Jerusalem, Israel
- 2016 - 2017 **LHC Theory Initiative Fellow**
Physics Department, Cornell University, Ithaca, NY, USA
- 2013 - 2016 **Postdoctoral Fellow**
Berkeley Center for Theoretical Physics, University of California, Berkeley and
Lawrence Berkeley National Laboratory, USA

Honors and Awards

2022	Groundbreaking Scientist Commendation, NAAMAT Organization
2021	Jacob Bekenstein Prize, Israel Physics Society
2020	Israel Young Academy of Science and Humanities, Elected Member
2020	Krill Prize, Wolf Foundation
2019	Offered 5-year position as Scientific Staff at CERN (declined for family reasons)
2017 - 2020	Azrieli Foundation Faculty Fellowship
2016 - 2018	LHC Theory Initiative Fellowship
2016	Rising Stars in Physics, MIT
2014	Block Prize, Aspen Center for Physics
2013 - 2014	Israel National Postdoctoral Award for Advancing Women in Science
2013 - 2014	Rothschild Fellowship, Yad Hanadiv Foundation
2013	Chorafas Foundation Prize
2013	Pappalardo Fellowship, MIT (declined)
2011	Wolf Foundation Fellowship for Outstanding Ph.D. Students
2008	M.Sc. Excellence Award, Weizmann Institute of Science
2001 - 2005	Dean's Honors & President's Honors, Technion—Israel Institute of Technology
2001 - 2005	Foundation for Jerusalem Technion Students Fellowships
2004 - 2005	Israel Ministry of Science and Technology Fellowship for the Advancement of Women in Science and Technology
2004	Bank Hapoalim Fellowship for Excellence

Supervision of Graduate Students and Postdoctoral Fellows

2017 -	6 Postdoctoral Fellows 3 are Zuckerman Fellows Racah Institute of Physics, Hebrew University.
	5 M.Sc. students 3 in Exceptional Masters Program, 1 in Talpiyot army service Racah Institute of Physics, Hebrew University.
	7 undergraduate students All in Amirim or Talpiyot Honor Programs Racah Institute of Physics, Hebrew University.
	Mentoring of an additional 6 Ph.D. students from: UC Berkeley Stanford University UC Santa Cruz Tel Aviv University Weizmann Institute of Science.

Institutional Responsibilities

2022 -	Committee Member Gender Equality Committee, Faculty of Natural Sciences and Mathematics, Hebrew University of Jerusalem, Israel
2020 -	Coordinator of Gender Equality Activities Racah Institute of Physics, Hebrew University of Jerusalem, Israel
2020 -	M.Sc. Committee Member 2 students, Racah Institute of Physics, Hebrew University of Jerusalem, Israel
2019 -	Organizer of the Physics Colloquium Racah Institute of Physics, Hebrew University of Jerusalem, Israel
2018 -	Committee Member Planning committee, Racah Institute of Physics, Hebrew University of Jerusalem, Israel
2017 -	Organizer of Joint Particle Physics Seminar In collaboration with Weizmann Institute of Science, Tel Aviv University, Technion, Ben Gurion University and Hebrew University of Jerusalem

Commissions of Trust

- 2022 - **Committee Member**
National Committee of High Energies, Israel Academy of Science & Ministry of Science, Israel
- 2022 - **Committee Chair**
Gender Equality in Academia, Israel Young Academy of Science
- 2021 - **Founding Member**
Particle and Nuclear Physics Division, Israel Physics Society
- 2021 - **Founding Member**
Division for Diversity, Israel Physics Society
- 2020 - **Founding Organizer**
Israel Physics Colloquium, in collaboration with all Israeli Physics Departments
- 2020 - **Member of Selection Committees**
PAZY Foundation
Azrieli Foundation
Israel Science Foundation
- 2020 - **Advisory Board**
[INSPIRES](#), the premier information system in particle physics and allied fields
- 2018 - **Member of Ph.D. Committees**
4 students, Weizmann Institute of Science, Israel
1 student, Stony Brook University, New York, USA
- 2013 - **Reviewer**
Grants: Israel Science Foundation
European Research Council
Austrian Science Fund
Publications: Physics Review Letters
Physics Review D
Journal of High Energy Physics
American Institute of Physics Advances
Particle Data Group

Organization of Scientific Meetings

* = online due to COVID-19

- 2022 **Organizer**
Workshop, “*EXCESS 2022*”, Joint Theory/Experiment*
- 2021 **Scientific Advisory Committee**
Workshop, “*Quantum Leaps in Light Dark Matter*”, Caltech, USA
- 2020 **Organizer**
Meeting, “*See and Be Seen: Exact Sciences and Engineering*”, The Israel Young Academy*
- 2020 **Convener**
Conference, “*ICHEP 2020*”, Prague, Czech Republic*
- 2019 **Co-Director**
School, “*New Ideas for Old Puzzles in Particle Physics*”, the 37th Advanced School in Physics, Israel Institute for Advanced Studies, Hebrew University of Jerusalem, Israel
- 2019 **Scientific Advisory Committee**
Workshop, “*CYGNUS 2019*”, 7th workshop on directional dark matter searches, Rome, Italy
- 2019 **Scientific Advisory Committee**
Workshop, “*New Directions in the Search for Light Dark Matter Particles*”, Fermilab and Chicago, USA
- 2018 **Organizer**
School, “*Recent Progress in Quantum Field/String Theory*”, the 36th Advanced School in Physics, Israel Institute for Advanced Studies, Hebrew University of Jerusalem, Israel

- 2017 **Organizer**
Workshop, “*BSM in direct, indirect and tabletop experiments*”, SRitp workshop, Weizmann Institute of Science, Rehovot, Israel
- 2016 **Convener**
Conference, “*LHCP 2016*”, Lund, Sweden

Awarded Research Grants

- 2022 - 2027 **PI European Research Council (ERC)**
Starting Grant, *Light Dark Matter: New Directions for Theory and Detection*, 1,500,000 Euro total.
- 2022 - 2026 **PI Israel Science Foundation (ISF)**
The Dark Side of the Universe, 918,000 NIS total.
- 2019 - 2023 **PI Binational Science Foundation (BSF)**
Multifaceted Probes of the Dark Universe, 261,673 USD total (4 PIs).
- 2017 - 2021 **PI Israel Science Foundation (ISF)**
From Theory to Experiment: Probing New Physics Beyond the Standard Lore, 1,000,000 NIS total.
- 2017 - 2021 **PI The I-CORE Program of the Planning & Budgeting Committee (ISF)**
Phenomenology of Particle Physics, 750,000 NIS total.
- 2017 - 2020 **PI Azrieli Foundation**
Dark Matter Off the Beaten Path, 210,000 USD total.
- 2017 - 2019 **PI Binational Science Foundation (BSF)**
Start-Up Program, *Dark Sectors*, 75,000 USD total.
- 2017 - 2018 **PI German-Israel Foundation (GIF)**
Startup Program, *Probing Hidden Sectors at the LHCb experiment*, 15,000 Euros total.

Outreach

- 2022 Talk with female middle school students, *Metzuyanot La'Mada* Program, Hebrew University, Jerusalem
- 2022 Talk with female highschool students, Schwartz/Reismann Science Education Center, Rehovot
- 2021 Talk to Gifted Middle Schoolers, *Ofek* School for the Gifted, Jerusalem
- 2021 - [Madan Ba'Reshet](#) online meetings with students in schools across Israel, Davidson Institute Program
- 2021 Talk with female high school students in Jerusalem to encourage learning physics, Ministry of Education Program
- 2021 Public talk, *Be'Shaarei Ha'Academia*, Israel Academy of Sciences and Humanities
- 2020 Seminar to excellent high school students, *Alpha* Program
- 2019 Seminar at *Amirim* Excellence Program across the Natural Sciences
- 2019 Seminar to all physics high school students of Jerusalem
- 2018 Seminar to religious female high school physics students
- 2018 - Mass public outreach via several online videos about dark matter
- 2018 Seminar to high school physics students in *Teacher-Researcher* Program at Hebrew University
- 2016 *Supersymmetry Bet* Panel, Danish TV
- 2016 - Often interviewed for popular media in context of dark matter, in Israel and abroad; including local radio, Haaretz newspaper, Symmetry Magazine, IFL Science, Science Magazine News, Newsweek and more
- 2013 Science for the Masses, Comic Festival, Israel

Selected Talks

In addition to ~45 seminars given at universities such as MIT, Harvard, Princeton, SLAC, UC Berkeley, Cambridge, Oxford, NYU, Michigan, IFT Madrid, DESY, Sorbonne and more:
(* = online due to COVID-19)

Spring 2023 *New Directions for Light Dark Matter, Colloquium, MIT, USA*

Nov. 2022 *Light and ultra-light dark matter physics, Invited Lecture Series, CERN-JINR European School of HEP, Israel*

Aug. 2022 *DM beyond WIMP, Invited Lecture Series, Cargese Summer School, France*

June 2022 *Dark Matter, Invited Lecture Series, TASI Summer School, USA*

Mar. 2022 *New Directions for Light Dark Matter, Colloquium, Yale University, USA**

Feb. 2022 *New Directions for Light Dark Matter, Colloquium, Gran Sasso National Laboratory, INFN, Italy**

Feb. 2022 *From strongly coupled theories to quantum sensors: New directions for dark matter, Colloquium, KIT Karlsruhe, Germany**

Jan. 2022 *New Technologies for Light Dark Matter, Workshop, Searching for New Physics with Quantum Technologies, ETH Zurich, Switzerland**

Jan. 2022 *Dark Matter, Invited Lecture Series, Galileo Galilei Institute School of Fundamental Interactions, Florence, Italy*

Nov. 2021 *WIMPs and sub-GeV Dark Matter, Symposium, New Physics from the Sky, Galileo Galilei Institute, Florence, Italy*

Oct. 2021 *Light Dark Matter, Young Scientists Forum, World Laureates Association, China**

Sep. 2021 *Panelist, Quantum Sensors For Fundamental Physics School, UK**

Aug. 2021 *SIMP dark matter, Invited Lecture Series, Les Houches Summer School, France*

June 2021 *Quantum Technologies for New Physics, Plenary talk, Conference, Planck 2021, UK**

June 2021 *Non-WIMP Dark Matter, Invited Lecture Series, ICTP Summer School, Italy**

May 2021 *New Directions in Direct Detection of Dark Matter, Overview Talk, EuCAPT Inaugural Symposium**

June 2021 *New Techniques on Light Dark Matter Detection, Plenary Talk, Workshop, Invisibles21**

May 2021 *Dark Matter, Invited Lecture Series, Invisibles21 European School**

Apr. 2021 *New Directions for Light Dark Matter, Colloquium, Caltech, California, USA**

Mar. 2021 *New Directions for Light Dark Matter, Colloquium, DESY, Germany**

Sep. 2020 *Recent ideas for dark matter detection, DESY Theory Forum, Germany**

Sep. 2019 *Sub-GeV Dark Matter, Plenary talk, Conference, COSMO19, Aachen, Germany*

Aug. 2019 *Beyond the Standard Model Theories, Plenary Talk, Conference, Lepton Photon 2019, Toronto, Canada*

July 2018 *New ideas for light dark matter, Workshop, Physics at the LHC and Beyond, CERN, Geneva, Switzerland*

June 2018 *New Directions in Dark Matter Detection, Colloquium, Technion—Israel Institute of Technology, Israel*

Apr. 2018 *Direct searches for light dark matter, Workshop, Dark Matter at the Dawn of Discovery?, Heidelberg, Germany*

Jan. 2018 *The Dark Side, Israel Joint Theory Seminar 50 year celebration, Weizmann Institute, Israel*

Aug. 2017 *New ways to search for light dark matter, Workshop, Developing New Tools for Dark Matter Searches, Aspen, Colorado, USA*

Jun. 2017 *Dark Spectroscopy, Workshop, The TeV Scale: A Threshold to New Physics?, MITP, Mainz, Germany*

Dec. 2016 *Superconducting detectors for superlight dark matter, Workshop, sub-eV, LBNL, Berkeley, California, USA*

Nov. 2016 *New Directions for Light Dark Matter Detection, LNS Colloquium, MIT, Boston, USA*

Oct. 2016 *Light Dark Matter, Workshop, Rising Stars in Physics, MIT, Boston, USA*

Aug. 2016 *A Light Dark Side, Workshop, Current Themes in High Energy Physics and Cosmology, Niels Bohr Institute, Copenhagen, Denmark*

Mar. 2016 *Superconducting detectors for super light dark matter, Berkeley week at IPMU, Institute for Physics and Mathematics of the Universe, Japan*

Mar. 2016	<i>Superconducting detectors for super light dark matter</i> , Bay Area Particle Theory Meeting, San Francisco, California, USA
Oct. 2015	<i>Superconducting detectors for super light dark matter</i> , Conference, <i>Gearing up for LHC13</i> , Galileo Galilei Institute, Florence, Italy
Aug. 2015	<i>Superconducting detectors for super light dark matter</i> , Workshop, <i>New Directions to Shed Light on Dark Matter</i> , Aspen, Colorado, USA
Dec. 2014	<i>The SIMP(lest) Miracle</i> , meeting of the I-CORE center <i>The Quantum Universe</i> , Jerusalem, Israel
Sep. 2014	<i>The SIMP(lest) Miracle</i> , Workshop, <i>Physics from Run 2 of the LHC</i> , Jeju, Korea
Jun. 2014	<i>Two Higgs doublet model with minimal flavor violation</i> , Workshop, <i>Connecting Flavor Physics with Naturalness: from Theory to Experiment</i> , Aspen, Colorado, USA
Jan. 2014	<i>Higgs flavor physics</i> , Workshop, <i>Frontiers in Particle Physics: From Dark Matter to the LHC and Beyond</i> , Aspen, Colorado, USA
Apr. 2013	<i>The interplay of flavor and collider</i> , Joint High Energy Theory Seminar, Israel
Jul. 2012	<i>Interplay of flavor physics and collider physics</i> , 62 nd Lindau Nobel Laureate Meeting, Germany
Jun. 2012	<i>Charming new physics</i> , <i>Physics at the LHC (PLHC)</i> Conference, Vancouver, BC
Feb. 2012	<i>From top A_{FB} to charm ΔA_{CP}</i> , Workshop, <i>Top physics and electroweak symmetry breaking in the LHC era</i> , Seoul, Korea
May 2011	<i>Exploring scalar interpretations of A_{FB}</i> , T-mini Workshop, Weizmann Institute of Science, Israel
Dec. 2010	<i>Implications of the large dimuon CP asymmetry in $B_{d,s}$ decays on minimal flavor violation with low $\tan\beta$</i> , the 56th annual meeting of the Israel Physical Society
Oct. 2009	<i>Inverted Sparticle Hierarchies from Natural Particle Hierarchies</i> , the Weizmann High Energy Physics Scientific and Academic Advisory Committee meeting
Sep. 2009	<i>Inverted Sparticle Hierarchies from Natural Particle Hierarchies</i> , the ISF Center of Excellence meeting in String Theory, <i>A New Year of String Theory</i> , Workshop, Tel Aviv, Israel
Dec. 2008	<i>Splitting the Wino Multiplet by Higher-Dimensional Operators in Anomaly Mediation</i> , the 54th annual meeting of the Israel Physical Society

Schools, Workshops and Conferences

* = online due to COVID-19

Nov. 2022	Invited Lecturer @ School , <i>CERN-JINR European School of HEP</i> , Israel
Aug. 2022	Invited Lecturer @ School , <i>Cargese Summer School</i> , France
June 2022	Invited Lecturer @ School , <i>TASI Summer School</i> , USA
Jan. 2022	Invited Lecturer @ School , <i>Galileo Galilei Institute School of Fundamental Interactions</i> , Florence, Italy
Jan. 2022	Workshop, <i>Searching for New Physics with Quantum Technologies</i> , ETH Zurich, Switzerland*
Nov. 2021	Symposium, <i>New Physics from the Sky</i> , Galileo Galilei Institute, Florence, Italy
Oct. 2021	Conference, <i>Young Scientists Forum @ World Laureates Association</i> , China*
Sep. 2021	Conference, <i>Topics in Astroparticle and Underground Physics</i> , Valencia, Spain*
Aug. 2021	Invited Lecturer @ School , <i>Les Houches Summer School</i> , France
June 2021	Conference, <i>Planck 2021</i> , UK*
June 2021	Invited Lecturer @ School , <i>ICTP Summer School</i> , Italy*
June 2021	Symposium, <i>EuCAPT Inaugural Symposium</i> *
June 2021	Workshop, <i>Invisibles21</i> *
May 2021	Invited Lecturer @ School , <i>Invisibles21 European School</i> *
Feb. 2021	Conference, <i>Israel Physics Society</i> , Israel*
Aug. 2020	Convener , Conference, <i>ICHEP 2020</i> , Prague, Czech Republic*
Dec. 2019	Co-Director , School, <i>New Ideas for Old Puzzles in Particle Physics, the 37th Advanced School in Physics</i> , Israel Institute for Advanced Studies, Hebrew University, Israel

- Oct. 2019 Workshop, *Promoting gender equality in physics: Barriers and opportunities*, SRitp, Weizmann Institute, Israel
- Sep. 2019 Conference, *COSMO19*, Aachen, Germany
- Aug. 2019 Conference, *Lepton Photon 2019*, Toronto, Canada
- July 2018 Workshop, *Physics at the LHC and Beyond*, CERN, Geneva, Switzerland
- June 2018 Workshop, *The Future of BSM Physics*, MITP workshop in Capri, Italy
- Apr. 2018 Workshop, *Dark Matter at the Dawn of Discovery?*, Heidelberg, Germany
- Nov. 2017 **Organizer**, Workshop, *BSM in direct, indirect and tabletop experiments*, SRitp, Weizmann Institute, Israel
- Aug. 2017 Workshop, *Developing New Tools for Dark Matter Searches*, Aspen, Colorado, USA
- Dec. 2016 Workshop, *sub-eV*, LBNL, Berkeley, California, USA
- Oct. 2016 Workshop, *Rising Stars in Physics*, MIT, Boston, USA
- Aug. 2016 Workshop, *Current Themes in High Energy Physics and Cosmology*, Copenhagen, Denmark
- Jun. 2016 **Convener**, Conference, *Fourth Annual Large Hadron Collider Physics Conference (LHCP2016)*, Lund, Sweden
- Mar. 2016 Meeting, *Berkeley week at IPMU*, Institute for Physics and Mathematics of the Universe, Japan
- Oct. 2015 Conference, *Gearing up for LHC13*, Galileo Galilei Institute, Florence, Italy
- Oct. 2015 Workshop, *Gearing up for LHC13*, Galileo Galilei Institute, Florence, Italy
- Aug. 2015 Workshop, *New Directions to Shed Light on Dark Matter*, Aspen, Colorado, USA
- June 2015 Workshop, *Berkeley Workshop on Dark Matter Detection*, Berkeley, California, USA
- May 2015 Workshop, *Beyond WIMPs: From Theory to Detection*, Kibbutz Hagoshrim, Israel
- Sep. 2014 Workshop, *Physics from Run 2 of the LHC*, Jeju, Korea
- Jun 2014 Workshop, *Connecting Flavor Physics with Naturalness: from Theory to Experiment*, Aspen, Colorado, USA
- Jan. 2013 USA ATLAS Workshop, *LHC Searches*, Berkeley, California, USA
- Jan. 2013 Workshop, *Frontiers in Particle Physics: From Dark Matter to the LHC and Beyond*, Aspen, Colorado, USA
- Jul. 2012 62nd Lindau Nobel Laureate Meeting, Germany
- Jun. 2012 *Physics at the LHC (PLHC)* Conference, Vancouver, BC
- Feb. 2012 Workshop, *Top physics and electroweak symmetry breaking in the LHC era*, Seoul, Korea
- Dec. 2011 The 29th Jerusalem Winter School in Theoretical Physics, *Current Trends in Particle Physics and Cosmology*, Jerusalem, Israel
- Nov. 2011 Workshop, *Implications of LHCb measurements and future prospects*, CERN, Switzerland
- May 2011 *T-mini Workshop*, Rehovot, Israel
- May 2011 Workshop, *Electroweak Baryogenesis in the Era of the LHC*, Rehovot, Israel
- Jul. 2010 International Summer School, *Cargèse 2010: Physics at TeV Colliders – From Tevatron to LHC*, Cargèse, France
- Sep. 2009 String Theory Workshop, *A New Year of String Theory*, Tel Aviv, Israel
- Dec. 2008 The 26th Jerusalem Winter School in Theoretical Physics, *Particle Physics in the Age of the LHC*, Jerusalem, Israel
- Nov. 2008 International Conference on Particles and Nuclei, Eilat, Israel
- Jun. 2008 ESF School in High Energy Physics and Astrophysics, *Theory and Particle Physics: the LHC perspective and beyond*, Cargèse, France
- Apr. 2008 String Theory Workshop, *String Theory - From Theory to Experiment*, Jerusalem, Israel
- Apr. 2008 Einstein-Minerva Rapid School, pre-workshop, Rehovot, Israel
- Dec. 2006 Theoretical Physics School, *Physics at the LHC*, Rehovot and Haifa, Israel

Ongoing Experimental Collaborations

Superconducting Sensors	Karl Berggren (MIT) Ilya Chareav (MIT/Zurich) Sae-Woo Nam (NIST) Jiansong Gao (NIST) Val Zwiller (KTH, Sweden) Dirk Bouwmeester (Leiden/UC Santa Barbara) Laura Baudis (Zurich) Axel Linder (DESY)
Directional Superconductors	Noah Kurinsky (SLAC)
Carbon-Based & Ferroelectrics	Noah Kurinsky (SLAC) To-Chin Yu (Stanford) Sinead Griffin (LBNL) Katherine Inzani (Nottingham)
High-Energy Absorption	Belina von Krosigk (KIT)

Sample Media Coverage of Work

Newsweek, [“Move over WIMPs: New dark matter candidate can explain mysteries of the Universe”](#)
IFL Science, [“New Dark Matter Theory Says It’s A Type Of Particle We’ve Known About For 80 Years”](#)
Science Friday, [“Did Dark Matter Kill the Dinosaurs?”](#)
Livescience, [“Dark Pion Particles May Explain Universe’s Invisible Matter”](#)
Science Magazine News, [“Dark Matter: Out with the WIMPs, in with the SIMPs?”](#)
Physics World, [“Superconducting nanowires could shed light on dark matter”](#)
Discovery Magazine, [“What is Dark Matter Made Of? These Are the Top Candidates”](#)
Science News, [“Diamond detectors could aid the search for dark matter”](#)

LIST OF PUBLICATIONS

Total of 52 papers (8 published in and 3 submitted to *Phys. Rev. Lett.*; 5 chosen as APS Editor's Suggestion), 4800+ citations, [h-index 31](#). Citation counts are taken from [INSPIRE](#), the high energy physics standard digital library. In high energy phenomenology, all authors are equal contributors and are listed in alphabetical order. Exception below in interdisciplinary publications where author order is that of the other fields and I am lead PI. Please note that in our field, papers are typically not submitted to Nature or Science journals.

- [1] C. Csáki, A. Gomes, **Y. Hochberg**, E. Kuflik, K. Langhoff and H. Murayama, "Super-Resonant Dark Matter," [arXiv:2208.07882 [hep-ph]].
[Number of citations: 0]
- [2] A. Apponi *et al.* [PTOLEMY Collaboration], "Heisenberg's uncertainty principle in the PTOLEMY project: a theory update," [arXiv:2203.11228 [hep-ph]].
[Number of citations: 1]
- [3] P. Asadi, S. Bansal, A. Berlin, R. T. Co, D. Croon, Y. Cui, D. Curtin, F. Y. Cyr-Racine, H. Davoudiasl and L. D. Rose, *et al.* "Early-Universe Model Building," [arXiv:2203.06680 [hep-ph]], *Solicited Whitepaper for Snowmass 2022*, **Editor**.
[Number of citations: 6]
- [4] K. V. Berghaus, R. Essig, **Y. Hochberg**, Y. Shoji and M. Sholapurkar, "The Phonon Background from Gamma Rays in Sub-GeV Dark Matter Detectors," [arXiv:2112.09702 [hep-ph]] *Accepted for publication in Phys. Rev. D*. **Chosen as the APS Editor Suggestion**.
[Number of citations: 5]
- [5] R. Frumkin, **Y. Hochberg**, E. Kuflik and H. Murayama, "Thermal Dark Matter from Freezeout of Inverse Decays," [arXiv:2111.14857 [hep-ph]], *submitted to Phys. Rev. Lett.*
[Number of citations: 2]
- [6] **Y. Hochberg**, B. V. Lehmann, I. Charaev, J. Chiles, M. Colangelo, S. W. Nam and K. K. Berggren, "New Constraints on Dark Matter from Superconducting Nanowires," [arXiv:2110.01586 [hep-ph]], *submitted to Phys. Rev. Lett.*
[Number of citations: 9]
- [7] **Y. Hochberg**, B. von Krosigk, E. Kuflik and T. C. Yu, "The Impact of Dark Compton Scattering on Direct Dark Matter Absorption Searches," *Phys. Rev. Lett.* **128**, no.19, 191801 (2022) [arXiv:2109.08168 [hep-ex]].
[Number of citations: 2]
- [8] **Y. Hochberg**, E. D. Kramer, N. Kurinsky and B. V. Lehmann, "Directional Detection of Light Dark Matter in Superconductors," [arXiv:2109.04473 [hep-ph]], *submitted to Phys. Rev. Lett.*
[Number of citations: 10]
- [9] A. Apponi *et al.* [PTOLEMY Collaboration], "Implementation and optimization of the PTOLEMY transverse drift electromagnetic filter," *JINST* **17**, no.05, P05021 (2022) [arXiv:2108.10388 [physics.ins-det]].
[Number of citations: 1]
- [10] **Y. Hochberg**, Y. Kahn, N. Kurinsky, B. V. Lehmann, T. C. Yu and K. K. Berggren, "Determining Dark Matter-Electron Scattering Rates from the Dielectric Function," *Phys. Rev. Lett.* **127**, no.15, 151802 (2021) [arXiv:2101.08263 [hep-ph]].
[Number of citations: 28]

- [11] S. M. Griffin, **Y. Hochberg**, K. Inzani, N. Kurinsky, T. Lin and T. Chin, “Silicon carbide detectors for sub-GeV dark matter,” *Phys. Rev. D* **103**, no.7, 075002 (2021) [arXiv:2008.08560 [hep-ph]].
[Number of citations: 46]
- [12] I. M. Bloch, **Y. Hochberg**, E. Kuflik and T. Volansky, “Axion-like Relics: New Constraints from Old Comagnetometer Data,” *JHEP* **01**, 167 (2020) [arXiv:1907.03767 [hep-ph]].
[Number of citations: 26]
- [13] **Y. Hochberg**, I. Charaev, S. W. Nam, V. Verma, M. Colangelo and K. K. Berggren, “Detecting Sub-GeV Dark Matter with Superconducting Nanowires,” *Phys. Rev. Lett.* **123** (2019) no.15, 151802 [arXiv:1903.05101 [hep-ph]].
[Number of citations: 71]
- [14] M. G. Betti *et al.* [PTOLEMY Collaboration], “Neutrino physics with the PTOLEMY project: active neutrino properties and the light sterile case,” *JCAP* **1907** (2019) 047 [arXiv:1902.05508 [astro-ph.CO]].
[Number of citations: 96]
- [15] N. A. Kurinsky, T. C. Yu, **Y. Hochberg** and B. Cabrera, “Diamond Detectors for Direct Detection of Sub-GeV Dark Matter,” *Phys. Rev. D* **99** (2019) no.12, 123005 [arXiv:1901.07569 [hep-ex]]. **Chosen as the APS Editor’s Suggestion.**
[Number of citations: 77]
- [16] A. Dery, J. A. Dror, L. Stephenson Haskins, **Y. Hochberg** and E. Kuflik, “Dark Matter in Very Supersymmetric Dark Sectors,” *Phys. Rev. D* **99** (2019) no.9, 095023 [arXiv:1901.02018 [hep-ph]].
[Number of citations: 7]
- [17] M. G. Betti *et al.*, “A design for an electromagnetic filter for precision energy measurements at the tritium endpoint,” *Prog. Part. Nucl. Phys.* **106** (2019) 120 [arXiv:1810.06703 [astro-ph.IM]].
[Number of citations:11]
- [18] M. Geller, **Y. Hochberg** and E. Kuflik, “Inflating to the Weak Scale,” *Phys. Rev. Lett.* **122** (2019) no.19, 191802 [arXiv:1809.07338 [hep-ph]].
[Number of citations: 24]
- [19] E. Baracchini *et al.* [PTOLEMY Collaboration], “PTOLEMY: A Proposal for Thermal Relic Detection of Massive Neutrinos and Directional Detection of MeV Dark Matter,” arXiv:1808.01892 [physics.ins-det].
[Number of citations: 67]
- [20] **Y. Hochberg**, E. Kuflik, R. McGehee, H. Murayama and K. Schutz, “SIMPs through the axion portal,” *Phys. Rev. D* **98** (2018) no.11, 115031 [arXiv:1806.10139 [hep-ph]].
[Number of citations: 62]
- [21] D. Curtin *et al.*, “Long-Lived Particles at the Energy Frontier: The MATHUSLA Physics Case,” *Rept. Prog. Phys.* **82** (2019) no.11, 116201 [arXiv:1806.07396 [hep-ph]].
[Number of citations: 298]
- [22] **Y. Hochberg**, E. Kuflik and H. Murayama, “Twin SIMPs,” *Phys. Rev. D* **99** (2019) no.1, 015005 [arXiv:1805.09345 [hep-ph]].
[Number of citations: 48]
- [23] **Y. Hochberg et al.**, “Detection of sub-MeV Dark Matter with Three-Dimensional Dirac Materials,” *Phys. Rev. D* **97**, no. 1, 015004 (2018) [arXiv:1708.08929 [hep-ph]].
[Number of citations: 145]

- [24] M. Battaglieri *et al.*, “US Cosmic Visions: New Ideas in Dark Matter 2017: Community Report,” arXiv:1707.04591 [hep-ph].
[Number of citations: 571]
- [25] S. M. Choi, **Y. Hochberg**, E. Kuflik, H. M. Lee, Y. Mambrini, H. Murayama and M. Pierre, “Vector SIMP dark matter,” JHEP **1710**, 162 (2017) [arXiv:1707.01434 [hep-ph]].
[Number of citations: 59]
- [26] **Y. Hochberg**, E. Kuflik and H. Murayama, “Dark spectroscopy at lepton colliders,” Phys. Rev. D **97**, no. 5, 055030 (2018) [arXiv:1706.05008 [hep-ph]].
[Number of citations: 23]
- [27] J. Alexander *et al.*, “Dark Sectors 2016 Workshop: Community Report,” arXiv:1608.08632 [hep-ph].
[Number of citations: 508]
- [28] **Y. Hochberg**, T. Lin and K. M. Zurek, “Absorption of light dark matter in semiconductors,” Phys. Rev. D **95**, no. 2, 023013 (2017) [arXiv:1608.01994 [hep-ph]].
[Number of citations: 128]
- [29] **Y. Hochberg**, Y. Kahn, M. Lisanti, C. G. Tully and K. M. Zurek, “Directional detection of dark matter with two-dimensional targets,” Phys. Lett. B **772**, 239 (2017) [arXiv:1606.08849 [hep-ph]].
[Number of citations: 144]
- [30] **Y. Hochberg**, T. Lin and K. M. Zurek, “Detecting Ultralight Bosonic Dark Matter via Absorption in Superconductors,” Phys. Rev. D **94**, no. 1, 015019 (2016) [arXiv:1604.06800 [hep-ph]]. **Chosen as the APS Editor’s Suggestion.**
[Number of citations: 110]
- [31] **Y. Hochberg**, E. Kuflik and H. Murayama, “SIMP Spectroscopy,” JHEP **1605**, 090 (2016) [arXiv:1512.07917 [hep-ph]].
[Number of citations: 116]
- [32] **Y. Hochberg**, M. Pyle, Y. Zhao and K. M. Zurek, “Detecting Superlight Dark Matter with Fermi-Degenerate Materials,” JHEP **1608**, 057 (2016) [arXiv:1512.04533 [hep-ph]].
[Number of citations: 165]
- [33] **Y. Hochberg**, Y. Zhao and K. M. Zurek, “Superconducting Detectors for Superlight Dark Matter,” Phys. Rev. Lett. **116**, no. 1, 011301 (2016) [arXiv:1504.07237 [hep-ph]]. **Chosen as the APS Editor’s Suggestion and featured in [Physics](#).**
[Number of citations: 201]
- [34] **Y. Hochberg**, E. Kuflik, H. Murayama, T. Volansky and J. G. Wacker, “Model for Thermal Relic Dark Matter of Strongly Interacting Massive Particles,” Phys. Rev. Lett. **115**, no. 2, 021301 (2015) [arXiv:1411.3727 [hep-ph]].
[Number of citations: 271]
- [35] A. Falkowski, **Y. Hochberg** and J. T. Ruderman, “Displaced Vertices from X-ray Lines,” JHEP **1411**, 140 (2014) [arXiv:1409.2872 [hep-ph]].
[Number of citations: 25]
- [36] **Y. Hochberg**, E. Kuflik, T. Volansky and J. G. Wacker, “Mechanism for Thermal Relic Dark Matter of Strongly Interacting Massive Particles,” Phys. Rev. Lett. **113**, 171301 (2014) [arXiv:1402.5143 [hep-ph]]. **Chosen as the APS Editor’s Suggestion.**
[Number of citations: 448]
- [37] A. Dery, A. Efrati, G. Hiller, **Y. Hochberg** and Y. Nir, “Higgs couplings to fermions: 2HDM with MFV,” JHEP **1308**, 006 (2013) [arXiv:1304.6727 [hep-ph]].
[Number of citations: 45]

- [38] A. Efrati, D. Grossman and **Y. Hochberg**, “A tale of two Higgs,” *JHEP* **1309**, 118 (2013) [arXiv:1302.7215 [hep-ph]].
[Number of citations: 5]
- [39] A. Dery, A. Efrati, **Y. Hochberg** and Y. Nir, “What if $\text{BR}(h \rightarrow \mu\mu)/\text{BR}(h \rightarrow \tau\tau)$ does not equal m_μ^2/m_τ^2 ?” *JHEP* **1305**, 039 (2013) [arXiv:1302.3229 [hep-ph]].
[Number of citations: 60]
- [40] I. Bediaga *et al.* [LHCb Collaboration], “Implications of LHCb measurements and future prospects,” *Eur. Phys. Jour. C* **73** (2013) 2373 [arXiv:1208.3355].
[Number of citations: 332]
- [41] C. Delaunay, O. Gedalia, **Y. Hochberg** and Y. Soreq, “Predictions from Heavy New Physics Interpretation of the Top Forward-Backward Asymmetry,” *JHEP* **1212**, 053 (2012) [arXiv:1207.0740 [hep-ph]].
[Number of citations: 15]
- [42] G. Hiller, **Y. Hochberg** and Y. Nir, “Supersymmetric ΔA_{CP} ,” *Phys. Rev. D* **85**, 116008 (2012) [arXiv:1204.1046 [hep-ph]].
[Number of citations: 48]
- [43] **Y. Hochberg** and Y. Nir, “Relating direct CP violation in D decays and the forward-backward asymmetry in $t\bar{t}$ production,” *Phys. Rev. Lett.* **108**, 261601 (2012) [arXiv:1112.5268 [hep-ph]].
[Number of citations: 58]
- [44] K. Blum, **Y. Hochberg**, Y. Nir, “Scalar-mediated $t\bar{t}$ forward-backward asymmetry,” *JHEP* **1110**, 124 (2011). [arXiv:1107.4350 [hep-ph]].
[Number of citations: 56]
- [45] C. Delaunay, O. Gedalia, **Y. Hochberg**, G. Perez, Y. Soreq, “Implications of the CDF $t\bar{t}$ Forward-Backward Asymmetry for Hard Top Physics,” *JHEP* **1108**, 031 (2011). [arXiv:1103.2297 [hep-ph]].
[Number of citations: 74]
- [46] K. Blum, C. Delaunay, O. Gedalia, **Y. Hochberg**, S. J. Lee, Y. Nir, G. Perez, Y. Soreq, “Implications of the CDF $t\bar{t}$ Forward-Backward Asymmetry for Boosted Top Physics,” *Phys. Lett.* **B702**, 364-369 (2011). [arXiv:1102.3133 [hep-ph]].
[Number of citations: 56]
- [47] K. Blum, **Y. Hochberg** and Y. Nir, “Implications of large dimuon CP asymmetry in $B_{d,s}$ decays on minimal flavor violation with low $\tan\beta$,” *JHEP* **1009**, 035 (2010) [arXiv:1007.1872 [hep-ph]].
[Number of citations: 28]
- [48] G. Hiller, **Y. Hochberg** and Y. Nir, “Flavor in Supersymmetry: Anarchy versus Structure,” *JHEP* **1003**, 079 (2010) [arXiv:1001.1513 [hep-ph]].
[Number of citations: 11]
- [49] O. Aharony, L. Berdichevsky, M. Berkooz, **Y. Hochberg** and D. Robles-Llana, “Inverted Sparticle Hierarchies from Natural Particle Hierarchies,” *Phys. Rev. D* **81**, 085006 (2010) [arXiv:1001.0637 [hep-ph]].
[Number of citations: 27]
- [50] K. Blum, C. Delaunay and **Y. Hochberg**, “Vacuum (Meta)Stability Beyond the MSSM,” *Phys. Rev. D* **80**, 075004 (2009) [arXiv:0905.1701 [hep-ph]].
[Number of citations: 48]

- [51] G. Hiller, **Y. Hochberg** and Y. Nir, “Flavor Changing Processes in Supersymmetric Models with Hybrid Gauge- and Gravity-Mediation,” *JHEP* **0903**, 115 (2009) [arXiv:0812.0511 [hep-ph]].
[Number of citations: 40]
- [52] M. Berkooz and **Y. Hochberg**, “Splitting the Wino Multiplet by Higher-Dimensional Operators in Anomaly Mediation,” *Phys. Rev. D* **79**, 035008 (2009) [arXiv:0809.4832 [hep-ph]].
[Number of citations: 2]