Ameen Ismail

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Ithaca, NY 14850.

Webpage: `http://ameenismail.github.io`
INSPIRE: `http://inspirehep.net/authors/1797161`

Education

Cornell University, Ithaca, New York. Sept. 2018–present
Ph.D. in Physics *(ongoing)*.
Advisor: Csaba Csáki.

Carleton University, Ottawa, Ontario, Canada. June 2018
B.Sc. Honours with High Distinction, Biology and Physics,
Minor in Mathematics.
Undergraduate thesis advisor: Jeff Dawson.

Papers

The Forward Physics Facility at the High-Luminosity LHC
FPF collaboration paper; contribution to Snowmass 2021.
arXiv: 2203.05090 [hep-ex]

CKM substructure from the weak to the Planck scale
Y. Grossman, **A. Ismail**, J. T. Ruderman, and T.-H. Tsai.
accepted to JHEP; arXiv: 2201.10561 [hep-ph]

The Forward Physics Facility: Sites, Experiments, and Physics Potential
FPF collaboration paper.
Phys. Rept. **968**, 1-50 (2022);arXiv: 2109.10905 [hep-ph]

Crunching Dilaton, Hidden Naturalness
C. Csáki, R. T. D'Agnolo, M. Geller, and **A. Ismail**.
Phys. Rev. Lett. **126**, 091801 (2021); arXiv: 2007.14396 [hep-ph]

A benchmark for LHC searches for low-mass custodial fiveplet scalars in the Georgi-Machacek model
A. Ismail, B. Keeshan, H. E. Logan, and Y. Wu.
Phys. Rev. D **103**, 095010 (2021); arXiv: 2003.05536 [hep-ph]

Updated constraints on the Georgi-Machacek model from LHC Run 2
A. Ismail, H. E. Logan, and Y. Wu.
arXiv: 2003.02272 [hep-ph]

Conferences, schools, & talks

Holographic dilaton action: the a-term
Pheno 2022 parallel talk — May 2022

Applying for NSERC PGS D
Presentation for first-year graduate students — Sept. 2021

Crunching dilaton, hidden naturalness: a new approach to the hierarchy problem
2^{nd} Forward Physics Facility Meeting parallel talk — May 2021
Pheno 2021 parallel talk — May 2021
Carleton U. Particle Seminar — Sept. 2020
Cornell U. LEPP Theory Seminar — Sept. 2020

Updated constraints on the Georgi-Machacek model
Pheno 2020 parallel talk — Mar. 2020

Participant, Lectures on the Theory of Fundamental Interactions, Jan. 2020
Galileo Galilei Institute, Florence, Italy.

Awards & honours

Stirling A. Colgate Award (Cornell University)	2022
NSERC Postgraduate Scholarships—Doctoral	2021
NSERC Alexander Graham Bell Canada Graduate Scholarships (declined)	2021
Cornell Fellowship (Cornell University; awarded 2018, deferred)	2020
Presidential Life Science Fellowship (Cornell University)	2018
NSERC Canada Graduate Scholarships—Master's (declined)	2018
NSERC Undergraduate Student Research Award	2018
C.A.B. Betts Memorial Award in Physics (Carleton University)	2017
NSERC Undergraduate Student Research Award	2017
Trevor A. Harwood Memorial Award in Physics (Carleton University)	2016
NSERC Undergraduate Student Research Award	2016

Teaching

Grader, PHYS 6554: **General Relativity II**	Spring 2021
Grader, PHYS 7652: **Relativistic Quantum Field Theory II**	Spring 2020
Teaching assistant, PHYS 2217: **Physics II: Electricity and Magnetism**	Spring 2020
Teaching assistant, PHYS 1101: **General Physics I**	Fall 2019

Research positions

Particle Theory Group, Cornell University. Graduate student. Advisor: Csaba Csáki.	May 2019–present
Theoretical Particle Physics Group, Carleton University. Undergraduate researcher. Supervisor: Heather Logan.	May 2018–Aug. 2018
Insect Flight Group, Carleton University. Undergraduate thesis work. Supervisor: Jeff Dawson.	Sept. 2017–Apr. 2018
DEAP-3600 Collaboration, Carleton University. Undergraduate researcher. Supervisor: Kevin Graham.	May 2017–Aug. 2017

Other activities

Referee, *European Physical Journal C*.	2021–present
GMCALC: a calculator for the Georgi-Machacek model, v 1.5.0.	2021
Snowmass 2021 Letter of Interest: Forward Physics Facility.	2020
3D kinematic analysis of stationary flight in *Locusta migratoria*, undergraduate thesis.	2018
Science Blog: Shining a light on dark matter, popular article for the Charlatan.	2018
SPE calibration and other studies of the muon veto PMTs in DEAP-3600, internal report for the DEAP collaboration.	2017