

# Ameen Ismail

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INSPIRE: <http://inspirehep.net/authors/1797161>

## Education

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**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

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*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, & seminars

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Crunching dilaton, hidden naturalness: a new approach to the hierarchy problem	
2 <sup>nd</sup> 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, Galileo Galilei Institute, Florence, Italy.	Jan. 2020

## Awards & honours

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NSERC Postgraduate Scholarships—Doctoral	2021
NSERC Alexander Graham Bell Canada Graduate Scholarships (declined)	2021
Cornell Fellowship (Cornell University; awarded 2018, deferred)	2020–2021
Presidential Life Science Fellowship (Cornell University)	2018–2019
NSERC Canada Graduate Scholarships—Master’s (declined)	2018
NSERC Undergraduate Student Research Award	May 2018–Aug. 2018
C.A.B. Betts Memorial Award in Physics (Carleton University)	2017
NSERC Undergraduate Student Research Award	May 2017–Aug. 2017
Trevor A. Harwood Memorial Award in Physics (Carleton University)	2016
NSERC Undergraduate Student Research Award	May 2016–Aug. 2016

## Teaching

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

## Research positions

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**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 contributions

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GMCALC: a calculator for the Georgi-Machacek model.  
Contributing author, v. 1.5.0.

3D kinematic analysis of stationary flight in *Locusta migratoria*.  
Undergraduate thesis.

SPE calibration and other studies of the muon veto PMTs in DEAP-3600.  
Internal report for the DEAP-3600 collaboration.

*Science Blog*: Shining a light on dark matter.  
Popular article for the Charlatan.