

DANIEL GORDON ANG

Gabrielse Lab
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EDUCATION

Doctor of Philosophy in Physics Expected 2021
Harvard University, Cambridge, MA
Passed PhD qualifying examinations (January 2018).
Focus on precision measurements using atomic, molecular and optical physics techniques.
Dissertation committee: Gerald Gabrielse (main adviser), Ronald Walsworth, Roxanne Guenette.

Master of Arts in Physics May 2017
Harvard University, Cambridge, MA

Bachelor of Arts *summa cum laude* with Distinction May 2015
Amherst College, Amherst, MA
Majors: Mathematics, Music, Physics
Double senior honors theses in Music (*summa cum laude*) and Physics (*magna cum laude*)
Phi Beta Kappa, Sigma Xi

International Baccalaureate Diploma February 2011
Anglo-Chinese School (Independent), Singapore
43/45 points (97% percentile worldwide)
Music Extended Essay selected for official IBO publication *50 More Excellent Extended Essays*

PROFESSIONAL EXPERIENCE

Graduate Student Researcher September 2015-present
ACME Collaboration, Harvard University Physics Department, Cambridge, MA

Senior Honors Researcher May 2014-May 2015
Hunter Lab, Amherst College Physics Department, Amherst, MA

IT Supervisor/Specialist September 2011-May 2015
Amherst College IT Department, Amherst, MA

Visiting Undergraduate Fellow in Physics Summer 2013
ACME Collaboration, Harvard University Physics Department, Cambridge, MA

Summer Research Fellow June 2012-June 2013
Hunter Lab, Amherst College Physics Department, Amherst, MA

Physics Teaching Assistant and Grader January-December 2012
Amherst College Physics Department, Amherst, MA

PUBLICATIONS

Peer-reviewed:

1. The ACME Collaboration: V. Andreev, **D.G. Ang**, D. DeMille, J.M. Doyle, J. Haefner, N.R. Hutzler, Z. Lasner, C. Meisenhelder, B.R. O'Leary, C.D. Panda, A.D. West, E.P. West, X. Wu, "Improved limit on the electric dipole moment of the electron," *Nature* **562**, 355-360 (2018).

2. S.K. Peck, N. Lane, **D.G. Ang** and L.R. Hunter, "Using Tensor Light Shifts to Measure and Cancel a Cell's Quadrupolar Frequency Shift," *Physical Review A* **93**, 023426 (2016).
3. L.R. Hunter, **D.G. Ang**, "Using Geoelectrons to Search for Velocity-Dependent Spin-Spin Interactions," *Physical Review Letters* **112**, 091803 (2014).
4. L.R. Hunter, J. Gordon, S. Peck, **D. Ang** and J.-F. Lin, "Using the Earth as a polarized electron source to search for long-range spin-spin interactions," *Science* **339**, 928 (2013).

Other:

1. L.R. Hunter, S.K. Peck, **D. Ang**, D.K. Kim, D. Stein, D. Orbaker, A. Foss, M.T. Hummon, J.E. Gordon, J.-F. Lin, "Bounds on LLI Violation and Long-Range Spin-Spin Interactions using Hg, Cs, and the Earth," *CPT and Lorentz Symmetry - Proceedings of the Sixth Meeting*. Edited by Alan Kostelecky. World Scientific Publishing Co. Pte. Ltd., 2014, pp. 1-4
2. **D.G. Ang**, "Shape and Size Matter for Projectile Drag," *Journal of the Advanced Undergraduate Physics Laboratory Investigation: Vol. 1: Iss. 1, Article 2* (2013).

HONORS AND AWARDS

- Harvey Fellowship, Mustard Seed Foundation, \$48,000 (2019-2022)
- Rufus B. Kellogg Amherst Graduate Fellowship, \$90,000 (2015-2018)
- Joint Quantum Institute Graduate Fellowship, University of Maryland (declined)
- Stifler Prize in physics, Amherst College (2015)
- Sundquist Prize in music composition and performance, Amherst College (2015)
- Winner, Third Degree (National category) and Honorary Mention (International category), Golden Key Festival Piano Composition Competition, Vienna, Austria (2014)
- Finalist in ASCAP Morton Gould Young Composers' Awards (2014)
- Schupf Scholarship (2012-2015): \$25,000 for independent research and projects
- Bassett Prize in physics, Amherst College (2012)
- Amherst College International Student Scholarship (2011-2015)
- Singapore Ministry of Education School-Based Scholarship (2007-2010)

Media articles

- "When One—or Two—Isn't Enough: Triple Majors Balance Academics, Ambition and Time", Elaine Jeon, Amherst College News, July 2015.
- "One-Man Orchestra Composes His Own Path", Jingwen Zhang, Amherst *Student*, May 2015.
- "Playing Where Brahms Once Played", William Sweet, *Amherst* magazine, August 2014.

TECHNICAL SKILLS

- Software and programming experience (**bold** for extensive experience): Python, Java, MATLAB, **Mathematica**, COMSOL, R, **LabView**, SolidWorks, Ableton Live, **Sibelius**
- Experience in optics, diode lasers, vacuum systems, complex control systems, timing and data acquisition, large-scale data processing.

LANGUAGES

English, Indonesian (fluent), Malay (advanced).

ORGANIZATIONS

- American Physical Society (2011-present)
- Society of Physics Students (2011-2015)

EXTRACURRICULAR ACTIVITIES

- Musician, Trinity Cambridge Church Music Ministry (2018-present)
- Worship leader and member of leadership committee, Harvard Graduate Christian Fellowship (2017-present)
- Musician, Dudley World Music Ensemble (2015-present). Dudley Fellow and Music Director (2016-18).

- Participant and presenter, Harvard Philosophy of Science Club (2016-present). Main organizer (2018-present).
- Cellist, Park Street Church and Restore Christian Church Quincy (2015-18)
- Cellist, Mather Chamber Music Program (2015-16, 2017)

Undergraduate activities:

- Cellist, Five College Early Music Program (2015)
- Cellist, Amherst College Jazz Combo Program (2013-15)
- Cellist, Harvard-Radcliffe MIHNUET program (summer 2013)
- Cellist and pianist, First Baptist Church of Amherst (2011-15)
- Cellist, Buckley Boys String Quartet, Amherst College Chamber Music Program (2011-15)
- Principal Cellist, Amherst College Symphony Orchestra (2011-15)