

Cole D. Pruitt

NUCLEAR PHYSICIST · DOCUMENTARY FILMMAKER

Address: 1097 Westwind St #262, Livermore, CA 94550

☎ (+1) 573-239-4465 | ✉ cole@coledpruitt.com | 🏠 www.coledpruitt.com | 📱 [cdpruitt](#)

Education

Washington University in St Louis

St Louis, MO

PHD IN CHEMISTRY (MAY 2019)

2013-2019

Dissertation: “Isotopically-Resolved Neutron Cross Sections as Probe of the Nuclear Optical Potential”

Brown University

Providence, RI

BACHELOR OF SCIENCE WITH HONORS IN BIOPHYSICS (MAY 2011)

2007-2011

Honors Thesis: “Design and Implementation of a DNA-Sequencing Mass Spectrometer”

Work Experience

Design Physics Division, Lawrence Livermore National Laboratory

Livermore, CA

POSTDOCTORAL RESEARCHER (40 HRS/WK)

Dec. 2019 - Present

- Created first optical-potential uncertainty quantification framework; achieved 5x speed-up over previous state-of-the-art model.
- Drafted national security policymaking case study on electromagnetic pulse, a collaboration with the Center for Global Security Research (manuscript in preparation).
- Active Q Security Clearance

Moyo Pictures, LLC

St Louis, MO

FOUNDER AND MANAGER (UP TO 20 HRS/WK)

Mar. 2012 - Present

- Co-directed/produced THE SURROUNDING GAME, the first feature documentary on the Asian game of Go.
- Managed multi-year production schedule on location in China, Korea, Japan, and the US.
- Executed successful \$100,000+ crowdfunding campaign and film translation into 13 languages.
- Premiered at American Documentary Film Festival (2017); international release via Netflix, iTunes, Amazon Prime, Google Play (2018-2020).

Radiochemistry Group, Washington University in St Louis

St Louis, MO

STAFF SCIENTIST/GRADUATE RESEARCHER (40 HRS/WK)

Aug. 2013 - Nov. 2019

- Led campaign of neutron scattering measurements at Los Alamos and Triangle Universities Nuclear Lab, yielding multiple publications and 5x reduction in rare isotope costs (from >\$1M to \$200K-\$300K).
- Rewrote legacy nuclear optical potential library from scratch (>10,000 lines of code of C++/Python), leading to threefold speed-up and improved accuracy.
- Recognized for outstanding teaching in three advanced undergraduate courses in quantum chemistry, thermodynamics, and radiochemical techniques.

KopiNYC, LLC

New York, NY

MANAGER (60-100 HRS/WK)

Nov. 2012 - June 2013

- Managed construction, hiring, opening, and operation of specialty coffeeshop grossing more than \$500,000 annually.

Technical Skills

Media and Design \LaTeX , LibreOffice and Microsoft Office, matplotlib, gnuplot, GIMP, Inkscape
Software Development C++, Python, bash/shell scripting, git, CMake, Intel MKL integration, slurm, Linux
(code samples and projects available at <https://github.com/cdpruitt>)

Selected Public Outreach

“The 2018 Nuclear Posture Review”

St Louis, MO

WASHINGTON UNIVERSITY PHYSICS SEMINAR

Sep. 21, 2018

An overview of the United States’ nuclear arsenal, diplomacy, and stockpile stewardship per the 2018 Nuclear Posture Review.

Twitch Plays Go! Event

San Francisco, CA

ORGANIZER AND HOST

Apr. 28, 2018

An all-day livestream program on the game of Go, hosted on Twitch’s main channel, reaching over one million viewers.

UltraCondensed Science: “Where We Come From”

St Louis, MO

WRITER AND NARRATOR

Fall 2015

A short introduction to nuclear astrophysics and how the matter on Earth came to be. Illustrated by Jorge Cham, creator of PhD Comics.

Honors and Awards

SCIENTIFIC

- 2019 **Best Poster in Nuclear Chemistry**, Gordon Research Conference New London, NH
2016 **Department of Energy SCGSR Award**, DOE lab research fellowship Los Alamos, NM
2016 **Dean’s Award for Teaching Excellence, Honorable Mention**,
Washington University School of Arts and Sciences St Louis, MO
2015 **Department of Energy SCGSR Award**, DOE lab research fellowship Los Alamos, NM
2014 **Annual Outstanding Teaching Award**, Chemistry Department,
Washington University in St Louis St Louis, MO

COMMUNITY SERVICE AND FILM

- 2016 **Doroghazi Eagle Scout Award**, Great Rivers Council, Boy Scouts of
America Columbia, MO
2015 **World Wide Iwamoto Encouragement Award**, European Go Center Amsterdam, NED
2014 **AmDocs Film Pitch Award**, American Documentary Film Festival Palm Springs, CA
2003 **Eagle Scout**, Great Rivers Council Columbia, MO

Laurels for **THE SURROUNDING GAME**:



Recent Publications

Systematic Matter and Binding Energy Distributions from a Dispersive Optical Model Analysis

Phys. Rev. Lett. **125** (2020) 102501

C. D. Pruitt, R. J. Charity, L. G. Sobotka, M. C. Atkinson, W. H. Dickhoff

Isotopically resolved neutron total cross sections at intermediate energies

Phys. Rev. C **102** (2020) 034601

C. D. Pruitt et al.

Beta-delayed charged-particle spectroscopy using TexAT

Nucl. Instr. Meth. A **964** (2020) 163773

Bishop et al.

Invariant mass spectrum of ^{11}O

Phys. Rev. C **101** (2020) 044317

T. B. Webb et al.