Geoffrey George Gaswint *April 15, 1992*

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Software Experience

ARIANNA and Theory group at UCI   IRVINE, CALIFORNIA
Graduate Student Researcher   *Apr '17 – Dec '20*
- Simulation and analysis (python/c++) of both neutrino detectors and matter-antimatter asymmetry breaking
- Led science expeditions in Antarctica (in situ python)

Raytheon   TUCSON, ARIZONA
Systems Engineer   *Nov '15 – present*
- Performance simulation and analysis (python/c++)

CDMS and LUX   BERKELEY, CALIFORNIA
Undergraduate Researcher   *Nov '13 – July '15*
- Simulation and analysis (c++) of dark matter detectors
- analyzed CCD images (python)

Education

University of California, Irvine   IRVINE, CALIFORNIA
Doctorate and Masters in Physics   *2016 – Dec 2020*
   Focused on software techniques for particle physics

University of California, Berkeley   BERKELEY, CALIFORNIA
Bachelor of Arts in Physics, Bachelor of Arts in Mathematics   *2012 – Dec 2014*
   Focused on dark matter physics and quantum mechanics.

Grossmont College and San Diego Mesa College and Southwestern College   SAN DIEGO, CALIFORNIA
Associate of Arts in German   *2010 – 2012*

Publications

NuRadioReco: A reconstruction framework for radio neutrino detectors
   arXiv: 1903.07023
Probing the angular and polarization reconstruction of the ARIANNA detector at the South Pole
   arXiv: 2006.03027
White Paper: ARIANNA-200 high energy neutrino telescope
   arXiv: 2004.09841
Neutrino vertex reconstruction with in-ice radio detectors using surface reflections
   arXiv: 1909.02677
Targeting ultra-high energy neutrinos with the ARIANNA experiment
   arXiv: 1903.01609
Revisiting Electroweak Phase Transition with Varying Yukawa Coupling Constants
   arXiv: 1810.02522
Observation of classically 'forbidden' electromagnetic wave propagation
   arXiv: 1804.10430

Personal Projects

iOS and Android apps
   DodgerMan3000 (iOS, Android), MyBestFriend (iOS, Android), TapThis!/TapThat! (iOS, Android)

Skills

Advanced: Python • Java • React Native • ReactJS • LaTex • Physics • Math

Moderate: C++ • MatLab • Linux Systems

Natural languages: English (*Fluent*) • German (*Intermediate*)

Interests

Non-exhaustive: Programming (app development on iOS and Android), teaching, racquet ball, scuba diving, ukulele, and waltz dancing.

References

- Steven Barwick - Principal investigator at ARIANNA, UCI - (510) 486-7731

- Mu-Chun Chen - Principal investigator at Theoretical Particle Physics Collaboration, UCI - (510) 486-7731

- Greg Holmes - Team Manager at Raytheon - (520) 909-5831

- Nick Valverde - Systems Engineer at Raytheon - (520) 820-9391

- Kevin Lesko - Senior Physicist at LUX - (510) 486-7731

- Arran Phipps - Graduate Research Lead at CDMS - (650) 290-0769