



Anthony J. Gee

TECHNICAL
ADVISOR

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Anthony Gee started as a Technical Advisor at Haley Guiliano in 2019. Anthony received his Physics, B.S. in 2009 and his Physics, Ph.D. in 2018. During his undergraduate career, he studied and coded molecular dynamics simulations for the goal of studying vortex pinning in superconductors. In graduate school, Anthony transitioned to computational accelerator physics, where he simulated charged particle dynamics in particle accelerators. He completed his dissertation on developing innovative methods for the simulation of intense particle beams in present and planned U.S. accelerators. Anthony continues to study the latest technologies and software, including machine learning, A.I., and autonomous driving.

Related Practice Areas

- Patents
- Patent Preparation and Prosecution
- Competitive Landscape Analysis
- Due Diligence

Related Industries

- Computer Technology and Software
- Electronic Hardware
- Semiconductor Devices and Materials
- Biotechnology

Publications

- S. Abeyratne, A. Gee, and B. Erdelyi. "An adaptive fast multipole method in Cartesian basis, enabled by algorithmic differentiation." *Commun. Nonlinear Sci. Numer. Simulat.*, **72** (2019), pgs. 294-317.
- A. Gee, B. Erdelyi. "Implementing the Fast Multipole Boundary Element Method With High-Order Elements". Conf. Proc., NAPAC'16, Chicago, IL, USA. October 9 - 14, 2016.
- A. Gee, B. Erdelyi. "A Differential Algebraic Framework for the Fast Indirect Boundary Element Method". Conf. Proc., IPAC'16, Busan, South Korea. May 8 - 13, 2016.
- A. Gee, B. Erdelyi. "Smooth Fast Multipole Method for Space Charge Tracking: An Alternate to Particle-In-Cell". Conf. Proc., IPAC'15, Richmond, VA, USA. May 3 - 8, 2015.
- A. Gee, B. Erdelyi. "Space Charge Map Extraction and Analysis in a Differential Algebraic Framework". Conf. Proc., HB2014, East Lansing, MI, USA. November 10-14, 2014.

- A. Gee, B. Erdelyi. "Study and Comparison of the Method of Moments and the Single Level Fast Multipole Method for 2D Space Charge Tracking". Conf. Proc., NAPAC'13, Pasadena, CA, USA. Sept 29 - Oct. 4, 2013.
- A. Gee, Y-M. Shin. "Gain analysis of higher-order-mode amplification in a dielectric-implanted multi-beam traveling wave structure". *Phys. Plasmas* **20**, 7 (2013).

Education

- Ph.D., 2018, Physics, Northern Illinois University
- B.S., 2009, Physics, UC Davis