

Publications: (total 404)

Refereed Papers:

105) J. Wan, H. Alamprese, C. Ratcliff, J. Qiang, Y. Hao, “JuTrack: a Julia package for auto-differentiable accelerator modeling and particle tracking”, *Comp. Phys. Comm.* 309, 109497 (2025).

104) J. Qiang and M. Blaskiewicz, “Strong-strong simulations of combined beam-beam and wakefield effects in the Electron-Ion-Collider”, *Nuclear Instruments & Methods in Physics Research A* 1069, 169942, (2024).

103) J. Qiang, C. Mitchell, R. Lehe, A. Formenti, “Implementation of the Integrated Green’s Function Method for 3D Poisson’s Equation in a Large Aspect Ratio Computational Domain” Title. *Journal of Software Engineering and Applications*, 17, 17, 740-749 (2024).

102) R. Sandberg, R. Lehe, C. Mitchell, M. Garten, A. Myers, J. Qiang, J. Vay, A. Huebl, “Synthesizing Particle-In-Cell Simulations through Learning and GPU Computing for Hybrid Particle Accelerator Beamlines,” in *PASC '24: Proceedings of the Platform for Advanced Scientific Computing Conference*, p.1, 2024.

101) J. Qiang, “A parallel variable population multi-objective optimizer for accelerator beam dynamics optimization,” *Nuclear Instruments & Methods in Physics Research A* 1054, 168402 (2023).

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99) J. Qiang, “X-ray free electron laser linear accelerator without a laser heater,” *Nuclear Instruments & Methods in Physics Research A* 1048, 167968 (2023).

98) J. Qiang, “Simulation of space-charge effects using a quantum Schrodinger approach,” *Phys. Rev. Accel. Beams* 25, 034602 (2022).

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92) D. Xu, Y. Hao, Y. Luo and J. Qiang, “Synchrotron resonance of crab crossing scheme with large crossing angle and finite bunch length,” *Phys. Rev. Accel. Beams* 24, 041002 (2021).

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- 82) J. Qiang, "Long-term simulation of space-charge effects," *Nuclear Instruments & Methods in Physics Research A* **918**, p. 1 (2019).
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- 63) M. Venturini and J. Qiang, "Transverse space-charge induced microbunching instability in high-brightness electron bunches," *Phys. Rev. ST Accel. Beams* 18, 054401 (2015).
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- 286)Y. Hao, A. Blednykh, Y. Luo, D. Xu, J. Qiang, “Haissinski distribution of electron beam in Electron-Ion Collider and its impact on the hadron beam”, in Proc. IPAC24, MOPC85
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