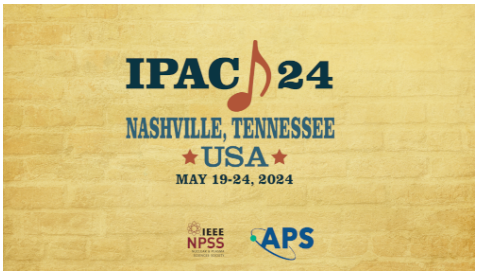

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Adjoint optimization of accelerator cavities

Monday, 20 May 2024 16:00 (2 hours)

A new, rapidly converging cavity optimization tool is presented that uses adjoint methods. The tool is able to work with any cavity solver that can output and input the results of cut-cell meshing of a cavity. Because it is an adjoint method, one needs only a single forward solve for each iteration in the process of convergence. One also needs a backward solve for each optimization target or constraint. Being a derivative based optimization, it converges rapidly. Results for cavity optimization will be shown.

Footnotes

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