

Session Program

19-23 Oct 2026

ICFA Beam Dynamics Mini Workshop on Modern Optimization of Dynamic Aperture

***Modern software and techniques for
nonlinear dynamics optimization and analysis
(Kevin Brown, Chair)***

Cornell University, Room 401 Physical Sciences

Thursday 22 October

13:00

Modern software and techniques for nonlinear dynamics optimization and analysis (Kevin Brown, Chair)

Session | **Location:** Cornell University, Room 401 Physical Sciences

13:00-13:30

Nonlinear dynamics optimization tools for nonlinear driving term integrals, incl. Elegant, OPA, etc.

13:30-14:00

Nonlinear dynamics with high-order maps and normal forms, e.g., MAD-NG, SciBmad, COSY, PTC with Bmad and MAD-X, SAD

Speaker

Etienne Forest

14:00-14:30

Code requirements for modern ML, NN, RL optimization of nonlinear dynamics

Speaker

Xiaobiao Huang

14:30-15:00

Coffee Break

15:00-15:30

Injection optimization in design and during operation with Badger

Speaker

Eiad Hamwi

15:30-16:00

Discussion time

16:00-16:30

DA/MA with agentic AI and BAX

Speaker

Steerenberg Noa

16:30-17:00

ML optimization of nonlinear dynamics in current and future accelerators

Speaker

Matthias Remta

17:00-17:30

Contributed Talk

17:30