

# Controlled multi-pulsing dynamics for superior harmonic mode-locking

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Despite the importance of multi-pulsing modelocking as a nonlinear phenomenon and a potential source of high repetition-rate ultrashort pulses, it remains poorly controlled. Guided by the slaving principle in a hierarchy of timescales, we achieved excellent control of a multi-pulsing oscillator, allowing reliable and stable harmonic modelocking with superior characteristics.

**Primary authors:** ŞURA, Aladin (UNAM, Institute of Materials Science and Nanotechnology, Bilkent University, Ankara, Turkey); İLDAY, Fatih Ömer (UNAM, Institute of Materials Science and Nanotechnology, Bilkent University, Ankara, Turkey)

**Presenter:** ŞURA, Aladin (UNAM, Institute of Materials Science and Nanotechnology, Bilkent University, Ankara, Turkey)

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