A family of fourth-order energy-preserving integrators
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In this talk, we propose a new family of fourth-order energy-preserving integrators with some degree of freedom. The integrators are constructed based on the so-called partitioned continuous stage Runge–Kutta methods. A simplified Newton-type iteration applied to the integrators is parallelizable by devising the choice of free parameters, which makes the integrators more efficient than other fourth-order energy-preserving integrators.