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NEURAL-ODE SURROGATES FOR FUEL DEGRADATION PROCESSES IN NUCLEAR WASTE REPOSITORY SIMULATIONS

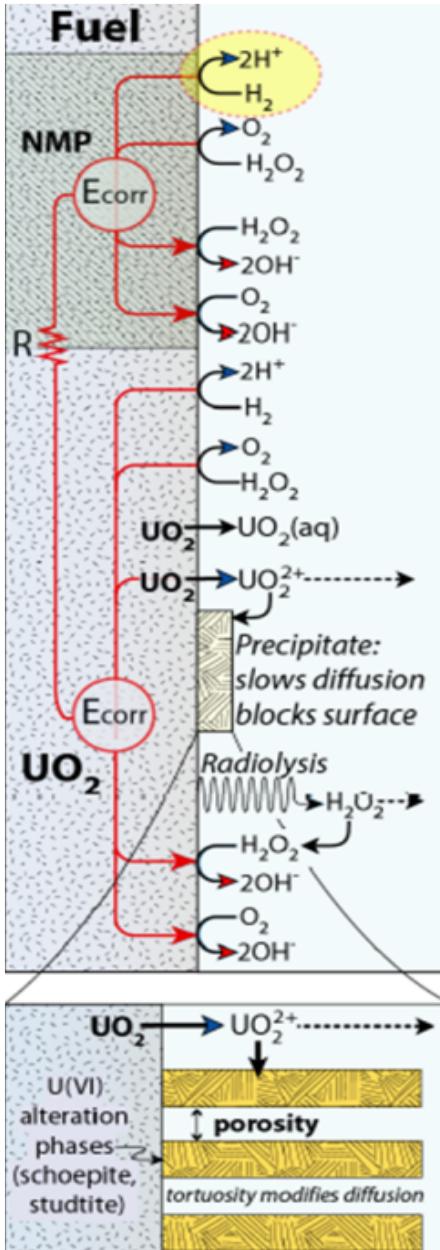
Caitlin Curry, Calvin Madsen, Bert Debusschere,
and Paul Mariner

Sci ML Workshop

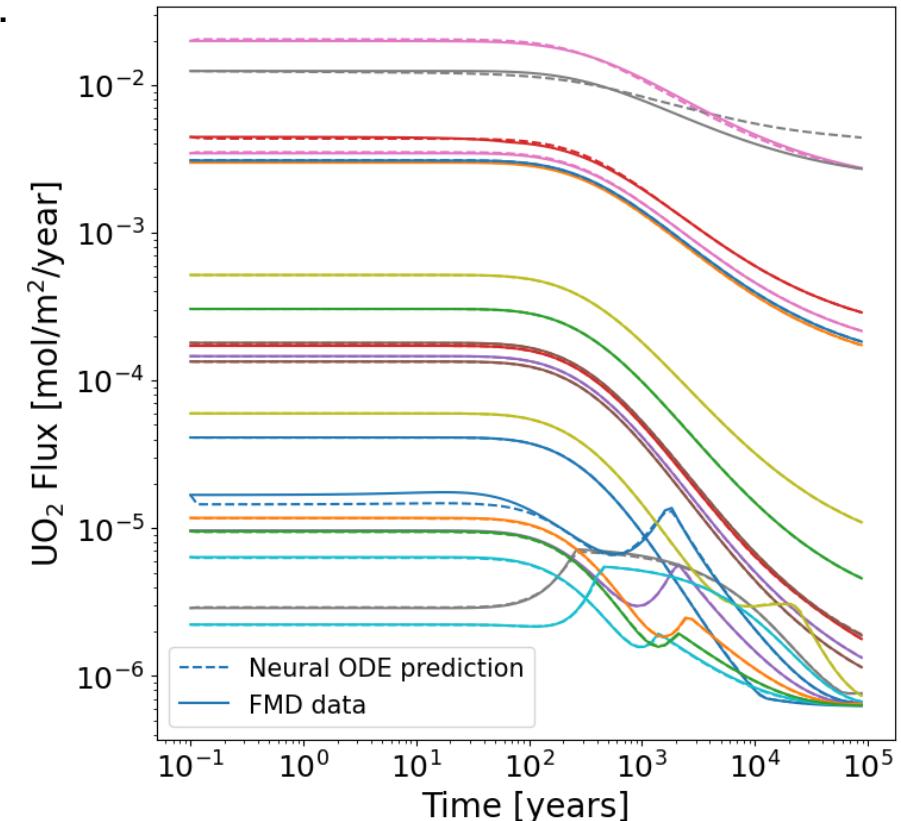
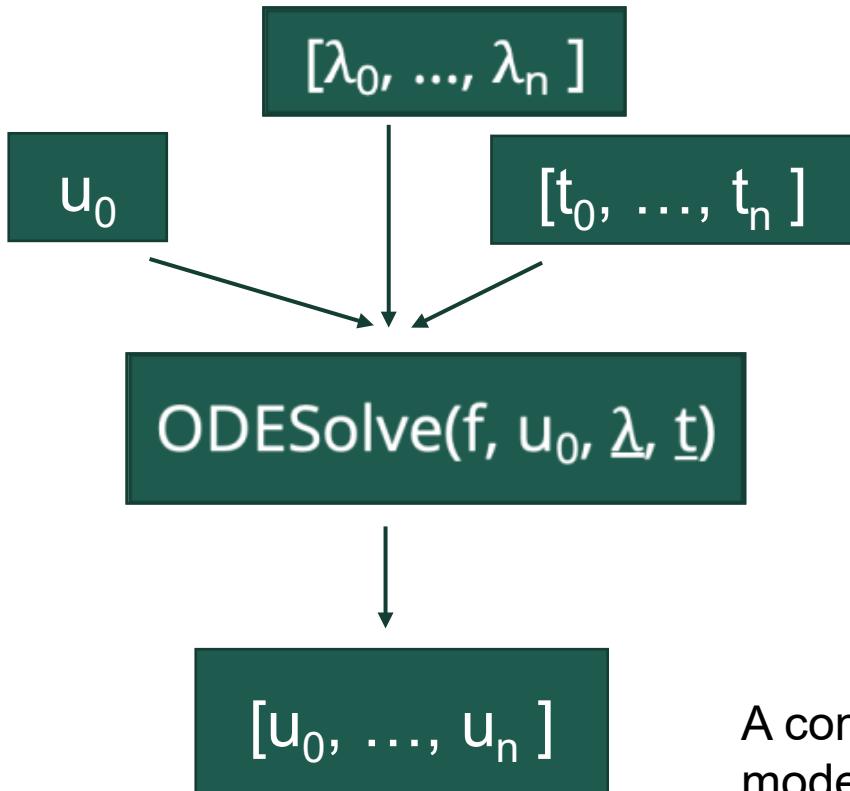
September 2024



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Assessment of subsurface nuclear waste repositories requires the simulation of uranium fuel degradation in thousands of waste packages over hundreds of thousands of years.



A comprehensive simulation using a detailed process model would be too computationally expensive, so we employ machine learning surrogates of neural ordinary differential equations.