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# Quantum Impurity Solvers: Recent Advances

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Quantum impurity problems first appeared in the treatment of magnetic atoms embedded in metals, and now act as auxiliary objects within the dynamical mean field theory of correlated materials. Among Prof. Lichtenstein's many notable contributions to our current understanding of the physics of materials are his seminal work in developing Monte Carlo techniques for simulating impurity models. Yet, in many regimes and for many observables, simulations of this type remain either infeasible or extremely expensive. Here, I will discuss prospects for addressing this challenge by combining Inchworm Monte Carlo techniques with some mathematical technologies that have recently drawn attention in physics, such as tensor train cross-interpolation and pole representations

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