

The Open Porous Media Initiative

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ABSTRACT: The principal objective of the Open Porous Media (OPM) initiative is to develop a simulation suite that is capable of modeling industrially and scientifically relevant flow and transport processes in porous media and bridge the gap between the different application areas of porous media modeling, including reservoir mechanics, CO₂ sequestration, biological systems, and product development of engineered media.

The OPM initiative will provide a long-lasting, efficient, and well-maintained open-source software for flow and transport in porous media built on modern software principles. The suite is released under the GNU General Public License (GPL). Our motivation is to provide a means to unite industry and public research on simulation of flow and transport in porous media. In this talk, we will provide an overview of the current activities in the OPM initiative. Special emphasis will be given to the demonstration of the synergies achieved by combining the strengths of individual open-source software components. Examples taken from the SPE comparative solution projects and CO₂ sequestration benchmarks illustrate the current capabilities of the simulation suite.

www.opm-project.org, www.dumux.org, www.dune-project.org