Sensitivity Analysis of Spatial Scale and Particle Density on Overland Flow Pattern Accuracy and Computational Demand

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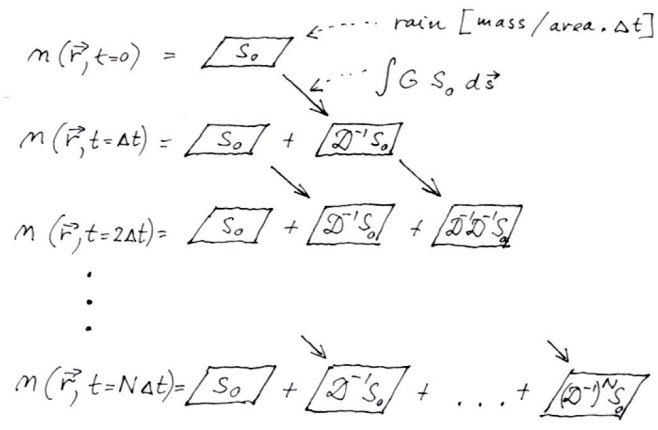
What is SIMWE?

SIMWE (SIMulation of Water Erosion Model) is a spatially distributed processes-based overland flow model that simulates water flow.

How does SIMWE work?

SIMWE uses **Green's function** to solve the **St. Venant system of equations** via a **Monte Carlo path sampling method**.



Why this method?

Water flows according to the shallow water bivariate **continuity equation** (mass conservation), incorporating **drift** and **diffusion**, which allows the **elevation model** to remain **unmodified** (e.g., no sink and fill processing).