The Recurring Rainfall Problem

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Abstract: Elliot Soloway’s Rainfall problem is a classic benchmark in computing education research, designed to study plan composition: how students decompose problems into tasks, solve them, and compose the solutions.

Over multiple decades, locations, and languages, students have done poorly at it. However, recent multi-institution studies of students using functional programming and How to Design Programs find very different outcomes.

What do these results tell us? This talk explores relationships between programming languages, program design, curricula, and how students perceive code structure.

The talk assumes no experience with plan composition, functional programming, or having been rained upon. Please come equipped with pen and paper, because the talk will require you to write programs.