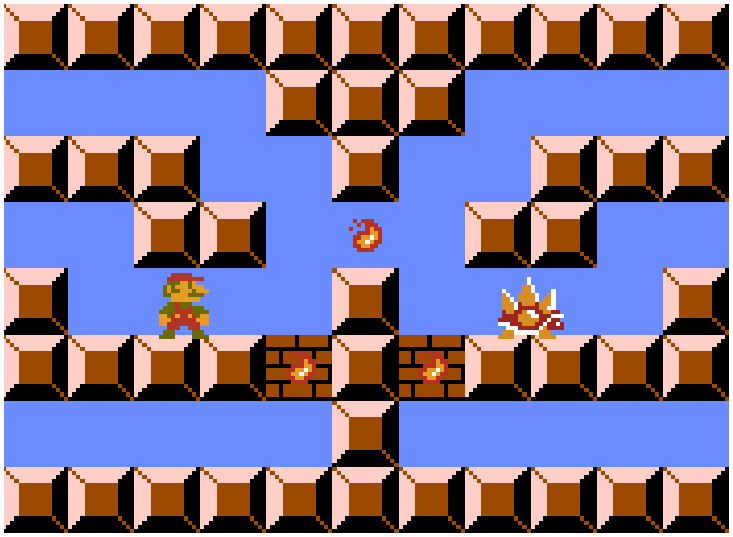
Algorithmic Lower Bounds: Fun with Hardness Proofs

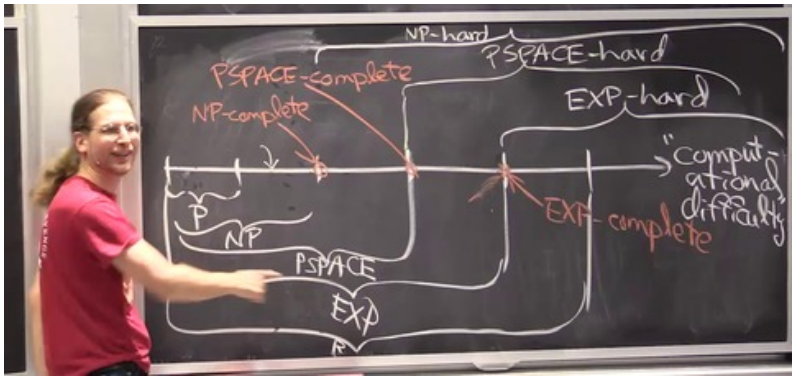
Super Mario Bros.



Door gadget for PSPACE-hardness

Minesweeper

OR gadget for NP-hardness



Hardness Made Easy*

Learn **when to give up** the search for efficient algorithms; see **connections** between computational problems; **solve puzzles** to prove theorems, solve **open problems,** and write papers.

Topics: NP, PSPACE, EXPTIME, EXPSPACE, approximation, fixed parameter, counting; games & puzzles, key problems, gadgets, and proof styles.

6.5440 (register for **6.S954**)
taught by Professor Erik Demaine
featuring *supercollaborative* problem solving

Mondays & Wednesdays 3:00-4:30pm
Room 32-082

https://courses.csail.mit.edu/6.5440/fall23/
sign up for our mailing list to join the class
AUS (CS Theory Track), AAGS (Theoretical CS Concentration)

Fall 2023

** Easiness not guaranteed. Side effects such as open problems and a heightened sense of complexity may occur. Ask your advisor if 6.5440 is right for you!*