Interactively Proving Mathematical Theorems

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Abstract. Although the acceptance of a mathematical truth will always depend on humans, nowadays finding researchers working together interactively with machines to produce formal proofs is no longer seen as an innovation but a requirement of modern mathematics (and mathematicians well-practice). This short-course will survey "proof theory" and "logical deduction" and, using the proof assistant PVS, participants (students and researchers at any level) will "put their hands in the dough" receiving a basic training to understand how to proof theorems using such powerful tools.