

Abstract Submitted
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Improving student reasoning about advanced electrostatics concepts RYAN HAZELTON, PAULA HERON, Univ of Washington — This poster describes student difficulties with advanced electrostatic concepts related to electric potential and describes the results of tutorials developed for *Tutorials in Introductory Physics*. After lecture instruction, the majority of students cannot correctly reason about advanced electrostatic concepts. Common incorrect reasoning patterns emerge in student responses about electric potential energy and electric potential difference, and about electric potential in conductors. We have developed tutorial worksheets that seek to address these incorrect reasoning patterns. Results from questions posed after the tutorials indicate that the tutorials are successful at improving student learning about these difficult and abstract ideas.

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