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> Abstract for an Invited Paper for the SES19 Meeting of the American Physical Society

Matter Interacts and Interactions Matter

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For more than twenty years, the textbook *Matter and Interactions* by Ruth Chabay and Bruce Sherwood has represented the promise and potential of a contemporary introductory physics course. Designed to emphasize fundamental principles, unification of thermal physics and mechanics, physical atomic models to explain macroscopic phenomena, and the utility of computational modeling, *Matter and Interactions* helps prepare early-career students to think like a physicist. Building on this foundation, the Department of Physics at High Point University introduces students to undergraduate research starting in the first year and incorporates computational modeling throughout the curriculum. This approach has a significant impact on recruitment, retention, and preparation of physics majors. I will describe *Matter and Interactions* and the foundation it provides for students throughout their academic careers.