Editorial: Focused Collection: Curriculum Development: Theory into DesignBenedikt W. Harrer,¹ Eleanor C. Sayre,² and Leslie Atkins Elliott³¹*Department of Physics, University at Buffalo 239 Fronczak Hall, Buffalo, New York 14260, USA*²*Department of Physics, Kansas State University, Manhattan, Kansas 66506, USA*³*Department of Curriculum, Instruction & Foundational Studies, Department of Physics, Boise State University, Boise, Idaho 83725, USA*

Though physics education researchers often develop curriculum as a central part of their research, the process of curriculum design is largely unreported in published research articles. This can give the appearance, at times, that curriculum is a *fait accompli* rather than the product of design choices guided by the pedagogical experiences, theoretical commitments, institutional settings, and research paradigms of *researchers*. This *Physical Review Physics Education Research* (PRPER) Focused Collection was curated to bring to light these design decisions and the factors that shape them. By making decisions about design explicit, we can better understand the contexts behind our research claims, hold curricula up to informed critique, and support new scholars as they undertake curriculum development.

The call for manuscripts was published on 5 June 2018 [1]. Response to our call for proposals was much stronger than expected: We received 69 proposals. Every proposal was reviewed by two editors; additionally, about two-thirds of the proposals were reviewed by an advisory board member. We invited the authors of 25 proposals to submit a full manuscript. These went through the standard PRPER review process. Twenty-two manuscripts were ultimately accepted for publication.

Our call for papers cast a wide net: We welcomed contributions from the full gamut of issues related to how theory informs and shapes curriculum development. Indeed, the papers in this collection show that the number and types of design decisions are vast, and that the ways in which those decisions are made exhibit great heterogeneity. In terms of scale or curricular grain size, some papers discuss multi-year upper-division curricula where others focus on a single question within a tutorial. Theoretical considerations come into play at various levels: Some authors report on how they systematically engage a well-developed theoretical framework throughout the process of design while others highlight how, in a retrospective comparison with others' work, they see the thumbprints of theory. Even the point in time at which theory informs decisions about curriculum design varies: One paper focuses on the challenges of engaging undergraduates in the initial stages of participatory design, and others consider how their developed curricula are adopted and adapted, even after the curriculum is seemingly "finished."

Yet, despite the heterogeneity apparent in this focused collection, not all aspects related to theory and curriculum development could be covered. For example, considerations of remote learning and flexibility in delivery, as well as gender and racial biases are topics that probably warrant a separate focused collection in the future.

We thank Charles Henderson and the PRPER editorial board for their feedback. Debbie Brodbar, Managing Editor, provided support and advice throughout the process, which was longer and more challenging than we could have anticipated. Our advisory board members for this Focused Collection (Paula Heron, Martin Hopf, Fred Goldberg, Michael C. Wittmann, and Dean Zollman) contributed considerably, particularly given the large number of submissions. We thank the authors for submitting proposals and manuscripts, as this Focused Collection would not exist without them. Lastly, to the reviewers whose service is invaluable and often hidden: thank you for your service and especially for the many extremely collegial and utterly constructive reviews we received!

[1] C. Henderson, Call for Papers Focused Collection of Physical Review Physics Education Research Curriculum

Development: Theory into Design. *Phys. Rev. Phys. Educ. Res.* **14**, 010003 (2018).