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Abstract for an Invited Paper
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James C. McGroddy Prize for New Materials Talk: A theorist's-eye view of multiferroics

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I will summarize the evolution of the field of multiferroics – that is materials that show multiple simultaneous ferroic orderings – since their “renaissance” in the late 1990s. In particular, I will illustrate how first-principles electronic structure calculations have contributed to progress in the field, and conversely, how fascinating questions in multiferroics have prompted the development of improved electronic structure methods. Finally I will share my ideas on the most exciting open problems and emerging directions in multiferroics and beyond.