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Abstract for an Invited Paper
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Fluid Dynamics Prize Lecture: Seeking simplicity in the flows of complex fluids

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Fluid mechanics is a discipline with rich phenomena, spanning a wide range of laminar and turbulent flows, instabilities, and applications in industry, nature, and biology and medicine. I will provide examples of our work highlighting (i) new features of classical instabilities triggered by changes in geometry, (ii) multiphase flows relevant to the design of liquid-infused substrates exhibiting effective slip, and, if there is a time, (iii) unexpected dynamics in flow at a T-junction.