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Nuclear reaction models and codes: Building bridges between nuclear structure and nuclear reaction communities

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The past couple of decades have seen tremendous advances in nuclear structure and reaction theory. Innovative theory frameworks for describing the nuclear many-body system, increasingly powerful computers, and opportunities for confronting theory predictions with data on unstable nuclei, have been driving the field. An important goal is to move from phenomenological ingredients in reaction calculations to predictive theories based on microscopic frameworks. I will discuss ongoing efforts aimed at integrating microscopic descriptions of nuclear structure into reaction predictions for medium-mass and heavy nuclei. I will highlight areas where Eric Bauge, a champion for building bridges, has made important contributions by encouraging and enabling collaborations between communities with complementary expertise.

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