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**O'Neill Kingston\*** (oneillk@iastate.edu) and **Jonas Hartwig**. *Crystal structure on Gelfand-Tsetlin-Zhelobenko patterns.*

In this talk, we begin by presenting the crystal structure of finite-dimensional irreducible representations of the Lie algebras  $\mathfrak{sl}_n$  in terms of Gelfand-Tsetlin patterns. We then define a crystal structure using the set of symplectic Zhelobenko patterns, parametrizing bases for finite-dimensional irreducible representations of  $\mathfrak{sp}_4$ . This is obtained by a bijection with Kashiwara-Nakashima tableaux and the symplectic jeu de taquin of Sheats and Lecouvey. We offer some conjectures on the generalization of this structure to rank  $n$ . (Received September 16, 2019)