1145-VC-2453 **Patrick DeBonis*** (pdebonis@unm.edu), **Siri Mellem**, **Thomas M Fiore** and **Emma Bidwell**. *The voiced Tonnetz and the $\mathcal{J}$-group, with illustrations in Schubert's B♭ major Sonata.* Preliminary report.

Motivated by Schubert's Piano Sonata in B♭ Major, D. 960, we expand knowledge of the $\mathcal{J}$ group developed by Fiore and Noll. In the spirit of David Lewin, we use the PLR-group to make both global and local maps of the sonata, following Richard Cohn. We use the Structure Theorem of Fiore-Noll to find $\mathcal{J}$ group operations that realize some of these musical motions while preserving voice ordering. As an enrichment of the neo-Riemannian *Tonnetz* we develop a voice leading *Tonnetz* for the $\mathcal{J}$ group as a simplicial set, rather than simplicial complex. As we explore the topological structure of our *Tonnetz*, we observe the elements of the extended $\mathcal{J}$ group that preserve Cohn's hexatonic set. Finally, we propose three new groups of singular (!) matrices that accomplish major to diminished triad movement, motivated by Schubert's use of diminished triads. Main results: The geometric realization of the voice leading *Tonnetz* is a 6-fold cover of the neo-Riemannian *Tonnetz* and there does not exist a matrix that sends diminished chords to major chords compatible with transposition. (Received September 25, 2018)