1162-30-67 **William Gryc**, **Loredana Lanzani**, **Jue Xiong*** (xiong.147@osu.edu) and **Yuan Zhang**.
Neumann boundary value problem for $\bar{\partial}$. Preliminary report.

Let Ω be a bounded domain with Lipschitz boundary in the complex plane. There are several ways to define the Hardy space associated to Ω. For example, we can define the Hardy space of interior functions denoted by $H^p(\Omega)$ and the Hardy space of boundary values denoted by $h^p(\partial\Omega)$. By considering the Dirichlet boundary value problem for $\bar{\partial}$, we can identify these two Hardy spaces. Correspondingly, we are interested in the Neumann boundary value problem for $\bar{\partial}$: what are the natural data space and solution space associtated to such PDEs? We will answer this question and show that our choice of the data space is optimal for the Neumann BVP. Furthermore, we obtain an integral representation for the solution with norm estimates. This is a joint work inspired by the SCV workshop the speaker attended at AIM. (Received August 22, 2020)