FMfl2023 Poster Session	
Name	Ryotoku Ota
Affiliation	Graduate School of Mathematics, Kyushu University, Japan
Poster title	**Computation of a zariski closure using Noether operators**
Abstract	We will give a set of generators of the ideal defining the zariski closure of the image of polynomial mappings. The standard method is based on the Gröbner basis computed by using elimination theory. However, if the number of generators of the Gröbner basis is too large, it may not be practical to find them. We will perform a primary decomposition of the ideals using prime ideals and Noether operators, and give the representation of the ideals. We also recover the Gröbner basis from the Noether opereators.
Short Bio	Ryotoku Ota is a second-year doctoral student in the Graduate School of Mathematics at Kyushu University. He is particularly interested in Gröbner bases and properties of algebraic varieties. In the future, he would like to study algebraic varieties using Noether operators and local cohomology.