1106-05-1690 **Suhyung An** (`hera1973@yonsei.ac.kr`), Yonsei University, Seoul, South Korea, **JiYoon Jung*** (`jjung@nims.re.kr`), National Institute for Mathematical Sciences, Daejeon, South Korea, and **Sangwook Kim** (`swkim.math@chonnam.ac.kr`), Chonnam National University, Gwangju, South Korea. *Face Structures of Lattice Path Matroid Polytopes.*

For two lattice paths P and Q from $(0,0)$ and (m,r) using east and north steps such that P is weakly below Q, a lattice path matroid $M(P,Q)$ is a transversal matroid whose bases can be identified with lattice paths from $(0,0)$ to (m,r) which lie in a region bounded by P and Q. The polytope whose vertices are the incidence vectors of the bases of $M(P,Q)$ is called a lattice path matroid polytope.

In this talk, we describe all the faces of a lattice path matroid polytope by restriction, contraction, and direct sum of lattice path matroid polytopes. We also find simple expression of the cd-index of a lattice path matroid polytope using cd-indices of lattice path matroid polytopes corresponding to border strips. (Received September 15, 2014)