



Seminar Title

“Order Series”

Speaker: Dr. Eric Dolores Cuenca (Yonsei University, Seoul, South Korea)



Date/Time: Monday October 24, 2022

4:00 PM - 5:00 PM

Abstract

To every poset X , Stanley considered the problem of counting the number $\Omega(X, n)$, $\Omega(X, n) \geq 0$ of strict and nonstrict order preserving maps from the poset X to the chain $\langle n \rangle = 1 < 2 < \dots < n$. He showed that these are given by polynomials in n . Consider the operad of posets, it contains a suboperad of series parallel posets that is generated by the chain $1 < 2$ and the disjoint union $1 \sqcup 1$. We introduce an algebra of series parallel posets whose objects are the generating functions $\Omega(X, 1) \otimes x + \Omega(X, 2) \otimes x^2 + \dots$. We will discuss how this family inherits the algebraic properties of posets.