SCHEDULE WEEK 8

All times are CDT

August 9 – August 13
http://math.uchicago.edu/ may/REU2021/EIGHTH.pdf

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THIS IS THE LAST WEEK
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SPECIAL TALKS:

TUESDAY and THURSDAY, 11:00: Daniil Rudenko
Title: Coxeter’s Forgotten Theorem and Scissors Congruence
Abstract: I will talk about a remarkable theorem of Coxeter relating orthoschemes
Speaker: higher-dimensional analogs of right triangles and configurations of points
on a line. Its planar version is the famous Pentagramma Mirificum of Gauss. At
the end I will explain some applications of these results to the theory of scissors
congruence.

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Otherwise, the week is entirely devoted to participant talks!

Monday:
11:00am: Michael barz. “The Moduli Space of Lattices and Seigel’s Mean Value
Theorem”
11:45am: John Hopper. “Who put this physics in my math: Probability Theory
of Ferromagnetic Phase Transition”
1:00pm: George Turer: “Closed Geodesics and Infinite-Dimensional Calculus”

Tuesday:
3:45pm: Keyer Thyme. “Markov’s Constructive Mathematics”
4:30pm Ryan Wandsnider. “Pseudo-Arc: The Ugliest Continuum You’ve Never
Seen”

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Wednesday:
11:00am: Andrey Shapiro. “The Averaging Approach to Frankl’s Conjecture”
1:00pm: Jacob Parish. “An introduction to Error-Correcting Codes”
1:30pm: John Naughton. “Introduction to Schubert Calculus”
2:30pm: Lucy Horowitz. “The Lorentz Group”
3:00pm: Rachel Kyu Yeon Lee. “Properties of the Lemnicate”
4:00pm: Ryan Tamura. “Elliptic Curves”

Thursday:
9:00am: Wilson Lee (in China). “Number Rigidity in Perturbed Lattices”
9:30am: Ruochuan Xu (in China). “Intersection of Brownian Paths in $\mathbb{R}^n$”
1:00pm: Chen Lin. “An Introduction to Minimal Surfaces in $\mathbb{R}^3$”
1:30pm: Judson Kuhrmann. “Gropes in 4-Manifolds”
2:30pm: Cindy Zhang. “Quadratic forms and the Hasse-Minkowski theorem”
3:00pm: Geoffrey Baring. “Representation theory and $U_q(sl(2))$”
4:00pm: Andrew Burke. “What is a Chow ring”

Friday:
9:00am: Gabrielle Li (in China). “A note on the Bockstein and Adams spectral sequences”
10:00am: Marc de Fontnouvelle. “Descriptive Complexity: a Logician’s Insight into the P vs. NP Problem”
1:00pm: Adam Zheleznyak. “Discrete Morse Theory and Finite Topological Spaces”
1:30pm: Elle Bower. “Cellular $E_k$ Algebras”
2:30pm: Ciprian Bonciocat. “Complex cobordism and formal group laws”
3:00pm: Joseph Hlavinka. “Motivic homotopy theory and cellular schemes”
4:00pm: Connor Lehmacher. “Most Homology Theories aren’t Cycles Modulo Boundaries”