



Monday, January 12th, 4:10 - 5:00 p.m.

Undergrad
Student
Volunteers:

In Surge 284

- TBA

“Summer Research / REU programs”

Dr. Kevin Costello, UC Riverside

How to find programs, how to apply, and what your experience might be like if you participate in one.

Snacks and drinks served!



Monday, January 26th, 4:10 - 5:00 p.m.

Undergrad
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Volunteers:

In Surge 284

- TBA

Viewing of "N is a Number"

This week in math club we'll be watching the film "N is a Number", which is a documentary in the life of Paul Erdos. Erdos was one of the most prolific and unusual mathematicians of the 20th century, and essentially spent the last few decades of his life as a nomad without a permanent home or job. Instead, he spent his life traveling between collaborators and visits: A week here, a week there, and over a thousand papers written by his 1996 death.

Snacks and drinks served!



Monday, February 2nd, 4:10 - 5:00 p.m.

In Surge 284

Undergrad
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Volunteers:

- TBA

“Randomization and the Probabilistic Method”

Mikahl Banwarth-Kuhn, UC Riverside

There are some problems for where it is very difficult computationally to find the exact answer. What can you do in this

situation? Randomize! Using some tools from probability theory, you

can show that a random solution "on average" provides a very fast, very easy solution that's at least a decent approximation to the (much

harder) exact solution. We'll be focusing on a specific example known as the Max-Cut problem.

Snacks and drinks served!



Monday, February 9th, 4:10 - 5:00 p.m.

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The Graduate School Check-List

Diego Hernandez, UC Riverside

This talk will be about the ins and out of applying to graduate school for a PhD in Mathematics. I'll cover a detailed timeline checklist ranging from researching graduate schools to after you submit your applications. I'll also give advice and insight on what it means to be a competitive candidate and how to write your personal statements. Finally, I'll cover logistics, requirements, and costs of graduate school applications complete with a list of resources I found when I applied.

Snacks and drinks served!



Monday, February 23rd, 4:10 - 5:00 p.m.

Undergrad
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In Surge 284

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Knotty maps: A graphical calculus for linear algebra

Jason Erbele, UC Riverside

String diagrams form a visually intuitive notation describing morphisms in a monoidal category. A braiding structure can be added to allow strings to cross over other strings, and a symmetry structure allows an "over" crossing to turn into an "under" crossing. In all three cases "buttons" can be attached where any number of strings can meet. With a special set of buttons, string diagrams can be used to describe any linear map between vector spaces over a fixed field. There is a set of equations between string diagrams that allow us go between any two string diagrams describing the same linear map.

Snacks and drinks served!



Monday, March 9th, 4:10 - 5:00 p.m.

Undergrad
Student
Volunteers:

- TBA

In Surge 284

An Introduction to Error Correcting Codes

Tim Cobler, UC Riverside

Ever wonder how a cd/dvd can still work even when it is scratched? Or how we can reliably communicate with the Mars Rover? Richard Hamming began the field of error correcting codes in order to solve the problem "If the computer can tell when an error has occurred, surely there is a way to tell where the error is so the computer can fix the error itself." This talk will give an introduction to the Hamming codes that were the first answer to this problem, focusing on the (7,4) Hamming Code and then giving an overview of some of the other types of codes in use today.

Snacks and drinks served!