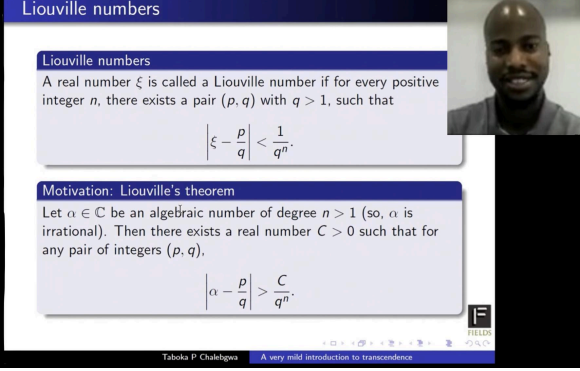
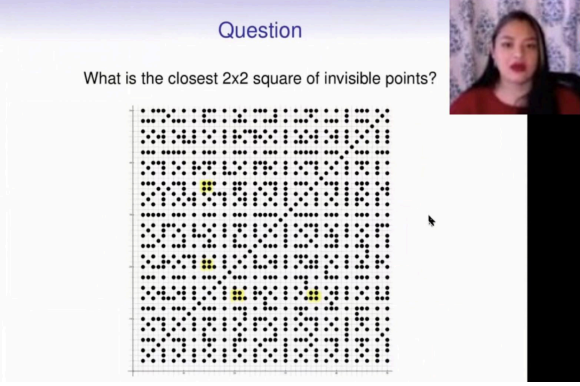
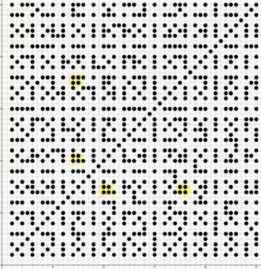


Inspiring Talks in Mathematics

<https://sites.google.com/view/inspiring-talks-in-mathematics/home>

In these talks the inspiring mathematicians tell us about themselves, then present topics in mathematics related to their research, and then they end with answers to questions students at Lehman College posed to them about their studies.

 <p>Liouville numbers</p> <p>Liouville numbers</p> <p>A real number ξ is called a Liouville number if for every positive integer n, there exists a pair (p, q) with $q > 1$, such that</p> $\left \xi - \frac{p}{q} \right < \frac{1}{q^n}.$ <p>Motivation: Liouville's theorem</p> <p>Let $\alpha \in \mathbb{C}$ be an algebraic number of degree $n > 1$ (so, α is irrational). Then there exists a real number $C > 0$ such that for any pair of integers (p, q),</p> $\left \alpha - \frac{p}{q} \right > \frac{C}{q^n}.$ <p>Taboka P Chalegbwa A very mild introduction to transcendence</p>	<p><u>Dr. Taboka P Chalegbwa</u></p> <p>(from Botswana to the Fields Institute)</p> <p><u>A (very) mild introduction to Transcendence</u></p> <p>(speaking to Analysis Students at Lehman College) (video is linked above at the title)</p>
 <p>Question</p> <p>What is the closest 2x2 square of invisible points?</p> 	<p><u>Dr. Pamela Harris</u></p> <p>(a <u>dreamer</u> who immigrated from Mexico as a child)</p> <p><u>Invisible Lattice Points</u></p> <p>(a talk on Number Theory at U Montana) (video is linked above at the title)</p>



Jacobi's Eigenvalue Algorithm. An undergrad talk for Lehman College. ▼

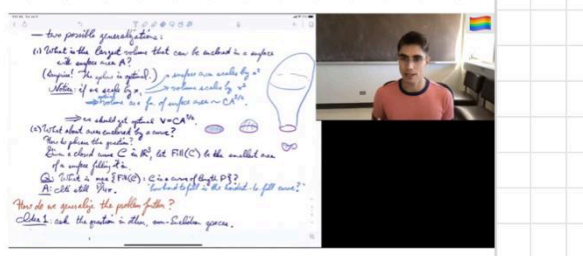
[Dr. John Urschel](#)

(New Yorker to MIT Mathematician)

[Jacobi's Eigenvalue Algorithm](#)

(speaking to Linear Algebra Students at Lehman College)

(video is linked above at the title)



[Dr. Fedya Manin](#)

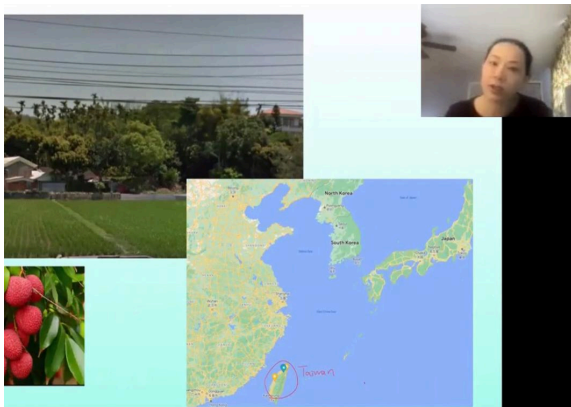
(from Russia to California our Pride Month Speaker)

[Stretching Soap Bubbles over Random Knots](#)

(speaking to students at Lehman College)

(prerequisite: Vector Calc and Linear Algebra)

(video is linked above at the title)



[Dr. Kuei-Nian Lin](#)

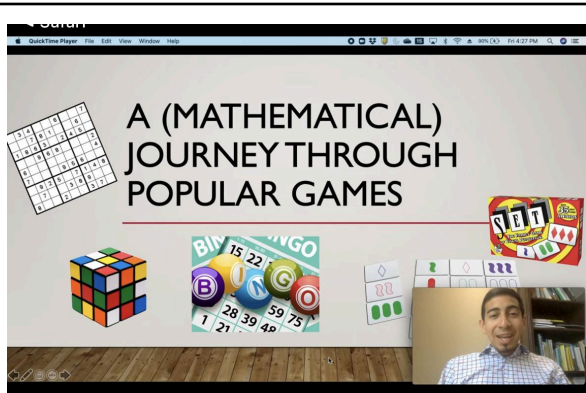
(from a rice farm on a tropical island)

[Blow Up Chemical Networks](#)

(speaking to students at Lehman College)

(prerequisite: Vector Calculus)

(video is linked above at the title)



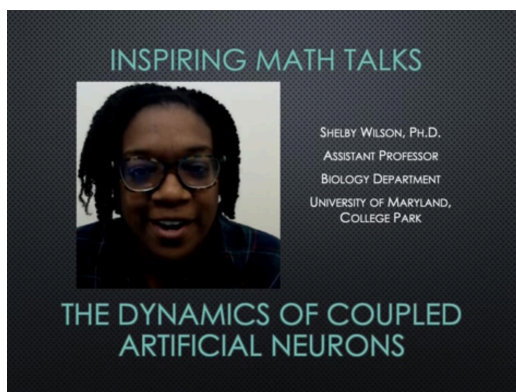
[Dr. Alexander Diaz Lopez](#)

(from Puerto Rico)

[A \(Mathematical\) Journey through Popular Games](#)

(speaking to Linear Algebra Students)

(video is linked above at the title)



[Dr. Shelby Wilson](#)

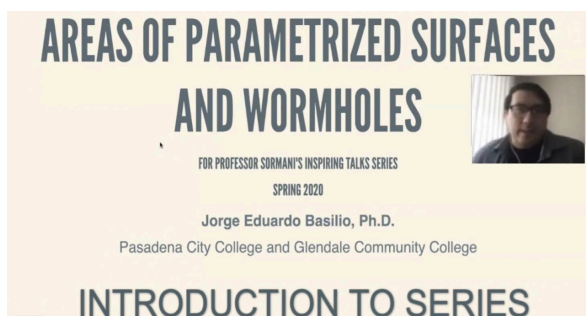
(granddaughter of Dr. Eta Falconer)

[The Dynamics of Coupled Neurons](#)

A talk on Mathematical Biology

(talk sponsored by Virginia Tech)

(video is linked above at the title)



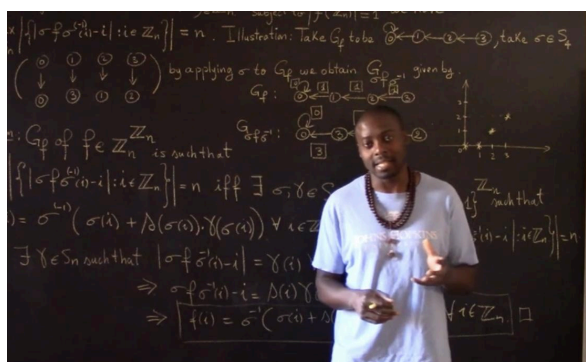
[Dr. Jorge Basilio](#)

(from Los Angeles)

[Areas of Surfaces and Wormholes](#)

(speaking to students at Lehman College)

(prerequisite: Vector Calc and Linear Algebra)



[Dr. Edinah Gnang](#)

[The Kotzig-Ringal-Rosa Conjecture](#)

(a talk on Graph Theory for Lehman Math Majors)

(video is linked above at the title)

The Statistics Behind
Driving While Black

Omayra Ortega, PhD MPH
Sonoma State University
M*A*T*H Colloquium
4/29/20

[Dr. Omayra Ortega](#)

[*The Statistics behind Driving while Black*](#)

(speaking to students at Swarthmore)
(video is linked above at the title)

Inspiring Talk Series - Bayesian Inference

BAYESIAN PARAMETER ESTIMATION
FOR PROFESSOR SORMANI'S INSPIRING TALK
SERIES, SPRING 2020

Dennis Ipke, Ph.D.
Michigan State University

[Dr. Dennis Ipke](#)

[*Bayesian Statistics*](#)

(speaking to advanced statistics students at Lehman College)
(video is linked above at the title)

Minimum Crossing Number

Definition
The *minimum crossing number* is defined as the number of crossings of the minimal diagram of a knot i.e. the smallest number of crossing over all knot diagrams of that knot type.

0 3 4 5 5

[Dr. Candice Price](#)

[*Unraveling Biochemical Mysteries: Knot Theory applied to Biochemistry*](#)

(speaking to students at USD)
(video is linked above at the title)

Climate's Always Changing
JUAN M. RESTREPO

*Department of Mathematics,
Department of Statistics,
& Physics of Oceans & Atmosphere*

Oregon State University

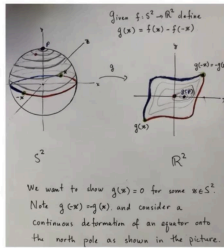
[Dr. Juan M Restrepo](#)

[*Mathematics of Climate Change*](#)

(speaking to the City College Math Club)
(video is linked above at the title)

Proof of theorem 2

Theorem 2: For any continuous function $f : S^2 \rightarrow \mathbb{R}^2$ there exists some $x \in S^2$ such that $f(-x) = f(x)$.



Dr. Manuel Luis Rivera

The Borsuk-Ulam Theorem

(speaking to students at Lehman College)

(video is linked above at the title)

Introduction: What is a matroid?
Problem: Defining equations for matroid varieties
Paradigm shift: Matroids as point configurations
Tool: Grassmann-Cayley algebra

Q: Which collections of 3 columns form a basis for the column space of A?

$$A = \begin{pmatrix} -1 & 1 & 2 & 3 & 4 \\ -1 & 1 & 2 & 0 & -2 \\ 1 & 1 & 1 & 1 & 1 \end{pmatrix}$$



Dr. Ashley Wheeler

Defining Equations for Matroid Theory

(speaking to Lehman College Students)

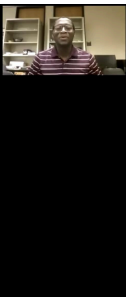
(the video is linked above)

Parking Functions and some interesting generalizations

Ayomikun Adeniran, Ph.D

Virtual Inspiring Talks in Mathematics

May 18, 2020



Dr. Ayo Adeniran

(from Nigeria)

Parking Functions and Some Interesting Generalizations

(speaking to Combinatorics students at Williams)

(video is linked above at the title)

A Mathematical, Statistical, and Computational Modeling Approach to Obesity and Diabetes Research

A talk for mathematics and computer science students



**By Dr. Anarina Murillo
of Brown University**

**Monday October 14
7:30-8:30 pm
Gillet Hall Room 305**

Dr. Anarina Murillo

Mathematical, Computational Modelling, and Statistical Approach to Diabetes Research

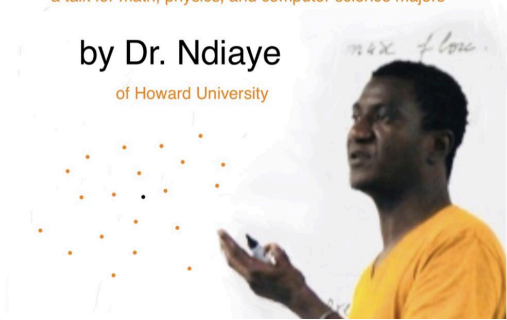
(live talk at Lehman College, no video)

Barycenters

a talk for math, physics, and computer science majors

by Dr. Ndiaye

of Howard University



[Dr. Cheikh Birahim Ndiaye](#)

[Finding Minima and Barycenters](#)

(live talk at Lehman College, no video)

Other great talks:



[Dr. Raquel Perales](#)

[De la Geometria Riemanniana](#)
[\(en espanol\)](#)

(presented to students in Mexico City)

[Efrain Vega's Youtube channel](#)



[Mohammed Omar's Youtube Channel](#)

[with Math GRE Prep](#)