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CMC3–South: Fall Conference Program

Saturday, October 12, 2019

“Managing a Wave of Change”



Register Online at
www.cmc3s.org

Coastline College, 1515 Monrovia Ave Newport Beach, CA 92663

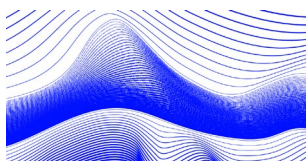
8:00 am – 9:20 am

Registration and Buffet Breakfast by CAFE 538

Welcome Remarks: Fred Feldon, Coastline College

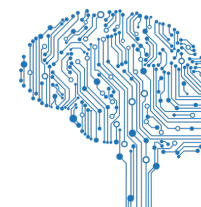
Location: First Floor Alcove

Keynote – Teaching Students to Swim in a Sea of Data



Dr. Robert Gould

University of California, Los Angeles



A non-calculus statistics class can serve many roles. It prepares students for upper division studies in their major, provides basic workplace skills, and helps students navigate through a complicated pre-college math pathway. Ideally, it inspires students to study STEM or at the very least relieves anxiety about STEM subjects. Focusing on these many roles can obscure an important truth: data literacy is an essential skill, and the statistics course is the best way for students to acquire and practice this skill. In this talk we'll discuss why data literacy is so important, and explain a few techniques that can help students become data scientists.

Dr. Gould is the Vice-Chair of Undergraduate Studies and Director of Center for Teaching of Statistics at UCLA's Department of Statistics. He is the founder of DataFest competitions and the co-author of the textbook *Introductory Statistics: Exploring the World Through Data*. He also co-authored the Chars A. Dana Center document "Mathematics Foundations for Success in Introductory Statistics" which many community colleges are using to formulate the co-requisite component for Intro Stats, and co-led the Summit on Data Sciences at Two Year Colleges.

Location: Room 117

12:30 pm to 1:30 pm

9:30 am to 10:20 am

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|--------------------|--|--|---|---|
| Title | Optimizing the Potentials of Young-Adult Brain Through Logic Behind Mathematical Formulas | The Role of Paradoxes in the Evolution of Mathematics. | OER and Teaching Statistics | Teaching metacognition and self-regulation in post-AB 705 Math Classrooms |
| Presenter | Tina K. Givrad California State University Los Angeles | Heydar Zahedani California State University San Marcos | Chau Tran Coastline Community College | Juan Zaragoza Fullerton College |
| Description | Our students are at the age that their brain is developing. We can use the logic behind mathematical formula and help them build new connections in their brain and optimize their brain's potentials. | “The mistakes and unresolved difficulties of the past in mathematics have always been the opportunities of its future”. E. Bell (1945) Examples of paradoxes that deal with numbers, logarithms, functions, continuity, tangents, infinite series, sets, and curves will be presented. | This presentation will discuss how using an OER and software in statistics courses can improve retention and success rates. While students have access to OER textbooks prior to the start of the course, software programs such as GeoGebra, Desmos, estat, etc., provide visual tools which can help students develop a deeper understanding of the material. | With the passage of the AB 705 Bill there has been a push to redesign math courses and entire programs to make students feel that they're part of a learning community that is inclusive and supportive and where they become independent learners that drive and own their learning experience. During this presentation we'll discuss some assignments and teaching strategies that promote post-AB 705 math classrooms. You will learn best practices to convince students that productive struggle is the best way to learn mathematics and you will also learn some strategies for integrating metacognition and self-regulation in your course design. |
| Location | Room 229 | Room 230 | Room 234 | Room 236 |

Break: Meet and Greet with an Ocean View

Location: Second Floor Green Area

10:20 am to 11:00 am

11:00 am to 11:50 pm

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|--------------------|--|---|---|--|--|
| Title | FTC Extravaganza! | Mathematics & Television | Using an affordable, user-friendly, textbook-agnostic homework system to reach every student. | Tips and Tricks for Trigonometry | Creating a more Student Centered Classroom in the Era of AB705 |
| Presenter | Albert Natian Los Angeles Valley College | Michael Behrens California State University Los Angeles | Shivram Venkatasubramaniam Edfinity Natalie Denny Portland Community College | Phan Yamada California State University Los Angeles | Frank Gonzalez Sumaya McCleave Saddleback College |
| Description | The latest rumor from the underworld of undergraduate mathematics is that FTC --- Fundamental Theorem of Calculus --- is underappreciated and underutilized. There is no better time to address this fundamental shortcoming than now. Here we apply FTC to a few intriguing integral equations and witness the ensuing drama! | An overview of some of the mathematics behind NTSC television, composite video, and CRT screens, with some further discussion of applications in computer graphics programming as well as examples for lower-division math courses. | We present case studies showcasing educators who developed low-cost online homework using Edfinity, an open, WeBWorK-compatible homework system supported by the NSF. Using Edfinity, educators assembled 'textbook-agnostic' homework with peer-reviewed problems mapped to publisher and OER textbooks, thereby 'unbundling' expensive textbook/homework bundles, lowering student costs, and dramatically increasing access. | In this presentation, attendees will see some tips and tricks to teach Trigonometry including trig values for special angles, unit circle, Trig formulas, ambiguous cases in solving triangles and more. | Learn how to create a more dynamic student-centered classroom in the era of AB 705. We'll also discuss how to engage faculty to create a stronger learning community in your department. |
| Location | Room 229 | Room 230 | Room 234 | Room 235 | Room 236 |

12:00 pm to 1:30 pm

Catered Lunch Provided by CAFE 538

Sandwiches and Wraps

Location: First Floor Alcove

12:30 pm to 1:30 pm

Keynote Presentation

Teaching Students to Swim in a Sea of Data

Dr. Robert Gould – University of California, Los Angeles

A non-calculus statistics class can serve many roles. It prepares students for upper division studies in their major, provides basic workplace skills, and helps students navigate through a complicated pre-college math pathway. Ideally, it inspires students to study STEM or at the very least relieves anxiety about STEM subjects. Focusing on these many roles can obscure an important truth: data literacy is an essential skill, and the statistics course is the best way for students to acquire and practice this skill. In this talk we'll discuss why data literacy is so important, and explain a few techniques that can help students become data scientists.

Location: Room 117

1:40 pm to 2:30 pm

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|--------------------|---|---|---|--|
| Title | Variably Coefficiented Equations | Pro-Category of Towers and Motivic Cohomology | n Ways to Cheat on Proctorio, n=3 | Hands on Activities in a Statistics Support Class |
| Presenter | Albert Natian Los Angeles Valley College | Coleman Dobson California State University Los Angeles | Hao-Nhien Vu Coastline College | Amit Mishal Santa Ana College |
| Description | The inculcated bias in all of us is that a coefficient is a fixed parameter in an equation while the unknown is the variable (often having that infamous mark "x"). Well, no longer! Here we explore some commonplace equations in brand new garb. Warning: Don't let the innocent look fool you! | We examine the infinity-topoi characterization of moduli stratification and a cohomology theory for schemes. We then consider the benefits of working in motives and in infinity stacks on higher categorical sites, and present an application to tensor networks in n-stackification. | Proctorio markets itself as an online test proctoring tool, but it turns out it is very easy to cheat on Proctorio especially for a Math test, where it is normal for students to look away from the screen and use scratch paper. I will present three ways to cheat when using Proctorio. | Activities presented will include Stats Jeopardy, Percentiles and Boxplots using student data gathered from activities such as Kahoot, Probability using card tricks and dice, etc. Participants will also be encouraged to share hands on activities they enjoy using in Stats classes. |
| Location | Room 229 | Room 230 | Room 234 | Room 236 |

2:40 pm to 2:50 pm**Wrap Up****Location: First Floor Alcove***Special thanks to Coastline College's faculty and staff for the setup and logistic of this Mini-Conference.*