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IP1

Transforming Mathematics Instruction Through the Use of Data Science

The integration of data science and artificial intelligence (AI) into mathematics instruction represents a transformative shift in instructional approaches, expanding the range of opportunities for students to engage in STEM. We will examine methodologies for integrating emerging technologies across mathematics curricula, while also addressing the challenges and critical factors involved in developing interdisciplinary educational frameworks.

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IP2

Creating a Welcoming, Collaborative Learning Environment in Undergraduate Research Programs

This talk delves into the significance of two critical components in the success of the MSRI-UP 2019 and 2021 programs: Orientation and Conflict Resolution. For Part 1, we will spend time on Day 0, where establishing an effective framework for students to comprehend program objectives, expectations, and the importance of talking about how we collaborate. We will go through an opening activity used during orientation at the 2021 MSRI-UP co-created with Prof. Pamela E. Harris which involves guiding questions, open discussions, and contributions from participants that led to a community agreement, which was inspired by the work of Federico Ardila. It is an activity that can also be readily adapted for use in the classroom to create a lasting welcoming and collaborative space for students. In Part 2, we will discuss our approach in addressing issues that often arise during collaborative endeavors, such as interpersonal disputes, academic challenges, and divergent viewpoints. By promoting open communication, empathy, and mutual respect, our approach to conflict resolutions helped create a safe space for collaboration and a supportive community for our aspiring mathematicians.

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IP3

MetaMath: A Quantitative Justice Project to Enhance EDI in the Mathematical Sciences

Quantitative justice can be defined as "the application of techniques, tools and topics from the quantitative sciences (e.g., mathematics, applied mathematics, data science, computer science, etc.) in subject domains that are derived from and/or typically associated with the social sciences (e.g., political science, law, economics, sociology, history etc.) with the explicit goal of promoting social justice. In this talk I will present some examples of MetaMath, which is a quantitative justice project that uses "mathematics" (broadly conceived) to analyze "Mathematics" (the community of people, institutions, and organizations associated with the subject). MetaMath builds upon and models itself after the "Science of Science" (also known as SciSci), an interdisciplinary field that uses scientific tools and methods to analyze the doing of science itself. The goal is to introduce the audience to these ideas and to encourage and invite interested attendees to join and participate in the MetaMath group.

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IP4

Presentation and Closing Remarks: Supporting Graduate Students to Make Changes to the System from Within

While more professional organizations and societies are calling for active learning to be implemented within introductory college mathematics courses, a growing body of literature is documenting the ways in which active learning can be harmful to students, especially those holding marginalized identities. This literature does not discount the potential benefits of active learning within introductory mathematics courses, but instead calls for more nuance and critique in their implementation. Graduate students are frequently assigned to teach introductory math courses, and their teaching professional development varies widely based on their department. In this talk, I will discuss the pivotal role that graduate students can take to support a more critical approach to active learning that attends to the identities of students and power issues that arise in the midst of interactive pedagogies. I will also situate this discussion with the realities the graduate students face in their liminal roles, and push against a narrative that looks to graduate students as the next generation who can fix all of the problems we currently have within our introductory mathematics programs.

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JP1

Joint Plenary Speaker with SIAM Annual Meeting AN24: Signals of a Critical Transition in Inclusive STEM Education

In the last few years, we have experienced several external shocks to our educational system, such as COVID-19 and renewed critical conversations about racism in higher education. How is the mathematics community responding? I will highlight a few efforts across the math institutes and in classrooms to confront inequity and rehumanize mathematics education. I will also explore how complex systems theory and computational approaches can be used to understand how our educational system is changing. In a recent study, we conducted a computational text analysis of educational journal articles in postsecondary biology education to understand how attention to topics in social justice, equity, diversity and inclusion have evolved over time. We found a rapid shift in attention to inclusive teaching occurs between 2018 and 2019, marked by an increase in section length, increased use of inclusive teaching keywords, and an increase in complexity of ideas in the semantic network. Some effect is associated with structured authoring resources and support. However, this alone is not enough to explain the observed shift, suggesting that many other structures, conversations, and investments are already providing the fertile ground that is advancing educational equity in STEM education.

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CP1

Quantifying the Competitive Advantage of Students with Linear Algebra Background in Ordinary Differential Equations (ODE)

In most of the universities in the USA, linear algebra is not a prerequisite for ODE. However, there are numerous linear algebra concepts in this course that are presented as facts since an explanation will require basic knowledge in linear algebra. In my experience, students familiar with linear algebra concepts perform better in some ODE topics while students who do not possess that knowledge struggle to understand such material. The goal of this project is to quantify such effects. Currently there is no evidence of any project that has tried to capture this effect. I would like to propose a three-phase project. The focus of this presentation is phase 1. Phase 1: Quantify the competitive advantage using data gathered from class worksheets Phase 2: Gather qualitative data on the competitive advantage using interviews Phase 3: If enough evidence suggests that there is a significant advantage, then come up with solutions to bridge the gap. First, this project can help to identify the severity of the competitive advantage if such an advantage exists. We want our classrooms and materials to be equitable. If one group of students are focused in understanding the linear algebra concepts plus the ODE concepts while the others enjoy the fruits of their previous knowledge, this might not be equitable. This project can also serve as evidence to reform the course to ensure every student is set up for success when they take this course.

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CP1

Implementing a Pedagogy Reading Course for Graduate Students

The purpose of this talk is to explain the implementation of a pedagogy reading course for graduate students in a mathematics PhD program. The goal was to train graduate students in mathematical pedagogy and prepare them to become better educators. The format of the course was as follows: every week the group of 8 students and an instructor completed a chosen reading, and then met for two hours to discuss the reading. We used a flipped learning format, with students taking turns leading each meeting. Over the course of the 10 week quarter, we covered topics including: foundational texts on teaching and learning in STEM, cheating, memory, inclusivity in the classroom, and both active and flipped learning. The reading course also included a panel with current graduate students who had recently taught their own course. Overall, participants found the course improved the way they thought about teaching, and have applied specific takeaways to TAing and teaching summer courses. The course first ran in Spring 2023, and a similar course will run in Spring 2024. I have the long-term goal of institutionalizing such a course to give graduate students more tools to become more effective educators.

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CP1

Revision of Sociocultural Model for Stem Programs

Many students who declare a STEM major transfer out to non-STEM majors or dropout from college altogether due to a variety of reasons including financial strain and lack of community. Colleges and universities seek ways to prevent talented and initially motivated STEM students from leaving their STEM majors. Seeking to address this, we submitted, and were awarded, NSF Scholarships for STEM students (S-STEM). We utilized this award with the goal of retention of students, especially students from disadvantaged and/or underrepresented backgrounds, by building community through the sociocultural perspective. This perspective has been the force behind pedagogical shifts in the college classroom such as peer-assisted, collaborative, and active learning. The sociocultural perspective is a novel way to consider learning communities and informal learning environments that allow students to focus on their work outside of class, to be mentored by faculty and build relationships with peers in regular meetings, and to generate presentations from their collaborative work. Using the work modeled from MIT, we provided large scale problems in STEM learning communities that have justifiable mathematical solutions but that cannot be solved by mathematics alone. This work has had a positive impact on the retention of mathematics and science majors. We will share retention data, types of problems presented and solved, and what students had to say about these experiences.

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CP1

Using An Online Dynamic Geometry Curriculum to Gain Insights into Preservice Elementary Teachers Learning of the Properties of Quadrilaterals

Research has found that many K-8 teachers are lacking the deep mathematical understanding necessary to adequately teach mathematics to their students in a meaningful way. Consequently, teacher educators must help preservice teachers use accessible research-based curricula that better prepares K-8 preservice teachers (PTs) to conceptually understand the mathematics they are teaching. One such curriculum, iDGi, is an online, individualized, interactive Dynamic Geometry learning system that was created to develop K-8 students conceptual learning of geometry topics through a series of learning-progression-based sequenced instructional modules. In this study, we extend iDGi use to PTs to investigate how it affects their learning about prototypical defining properties of quadrilaterals. These properties express in formal geometric terms the most visually salient spatial characteristics that students use in identifying different types of quadrilaterals and the interrelationships between quadrilaterals. To assess learning in iDGi, 541 PTs in multiple classes took the same online multiple-choice test to check their understanding before using iDGi (pre-test) and after (post-test). One sample and two sample matched pairs t-tests showed that the increase in scores that we observed was consistently very statistically significant (i.e., iDGi was beneficial); and these results do not seem to depend on instructor, quarter, or method of instruction (i.e., Zoom or in-person instruc-

tion).

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CP2

A General Framework for Incorporating Ethical Reasoning into Mathematical Modeling

Ethical reasoning is an essential component of applying mathematical modeling in solving real-life problems. Our mathematical answers exist in a context of a larger system and have implications on the lives of others, the planet, and future generations. However, mathematical modeling instruction often treats the mathematical work as if it exists in a vacuum devoid of context and omits careful consideration of stakeholders, validity of and bias in data, complete assumptions made, and limitations of the analysis. In this talk, we present a general framework that can be used to modify any mathematical modeling problem or project in a way to help students focus on the missing ethical reasoning perspective in the problem/project. Our framework is generalized in the sense that it can be applied to any course containing mathematical modeling and at any level. The framework provides flexibility to instructors in terms of the types and level of questions that can be asked, as well as the quantity. In addition to describing the general template, we will demonstrate the use of the framework on a specific example to clarify how it is applied. We will also include results on the implementation of this framework in calculus courses.

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CP2

A Case Study on Municipal Solid Waste Management Problem under Uncertain Environment

This paper investigates a case study of municipal solid waste management to minimize the cost of waste transportation, cost of waste treatment and maximize the revenue generated from various treatment facilities with real life parameters represented as uncertain numbers. The model includes the knowledge and agreement as well as difference in judgements of all the experts involved. To deal with the conflicting nature of different objectives, a nonlinear membership function for each objective is introduced and an approach is developed that gives the optimistic and pessimistic view of the decision-maker in optimizing the proposed model. Finally, to demonstrate the practicality of the proposed approach, a case study is solved, and the obtained results are analyzed and discussed.

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CP2

Utilizing Classroom-Based Modeling Techniques to Forecast Endemic-Epidemic Dynamics: A Study of Infectious Disease Outbreak Transitions in Selected Countries

This study leverages classroom-based modeling techniques to develop a robust method for predicting transitions between endemic and epidemic phases of infectious diseases, using the COVID-19 outbreak as a primary example. We introduce indicators derived from daily reported cases to detect these transitions, emphasizing their relevance to understanding disease dynamics. Through the application of principal component analysis (PCA), we demonstrate the synthesis of these indicators into a single predictive score, facilitating early epidemic detection. By incorporating this forecasting strategy into educational settings, we enhance student engagement and learning outcomes while contributing to real-world public health challenges. Our research underscores the value of modeling inside and outside the classroom in addressing complex epidemiological phenomena.

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CP2

Undergraduate Mathematics Students Question and Critique Society Through Mathematical Modeling

Mathematics can be used as a tool to question and critique society and, in doing so, give us more information about the world around us and how it operates. This, however, is not a common perspective that is conveyed to students during their undergraduate mathematics coursework. In two mathematical modeling courses, students investigated social and environmental injustices to learn more about — and critique — the world around them. These students, for their final project, had the ability to choose a situation, pose a problem, and investigate this problem. This session presents results that help illuminate our understanding of how undergraduate mathematics students question and critique society via mathematical modeling tasks.

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CP3

Integrating Generative AI into Applied Data Science Undergraduates Research with Business, Industry and Government: Enhancing Learning, Collaboration, and Ethical Awareness

As the landscape of education evolves, the integration of Artificial Intelligence (AI) presents transformative opportunities. This presentation explores the transformative impact of integrating Generative Artificial Intelligence (AI) into educational and research settings, at the Embry-Riddle Aeronautical University (ERAU) Research Experiences for Undergraduates (REU) site: Research Projects in Data-Enabled Industrial Mathematics, over the past two years. It also covers our experience within undergraduate research projects in Applied Data Science, focusing on collaborations with business, industry, and government sectors Highlighting practical examples, the talk showcases the benefits of employing Generative AI as an innovative resource to enhance educational outcomes, foster collaborative learning environments, helping with coding tasks, assisting in report writing, and aiding in structuring research publications. Furthermore, it addresses the ethical considerations of incorporating AI into mathematics education, offering insights into how educators and institutions can navigate these challenges to ensure an equitable and inclusive learning experience.

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CP3

Andromeda 2.0: Fair Exploration of High-Dimensional Data

Andromeda (e.g., Self et al., "Designing Usable Interactive Visual Analytics Tools for Dimension Reduction, 2016) allows users to visualize and interact with high dimensional data in 2-dimensional projections using Weighted Multidimensional Scaling (WMDS) (Kruskal and Wish, "Multidimensional Scaling, 1978). Motivated by the theory thatinteraction leads to insight (Thomas and Cook, Illuminating the Path, 2005), Andromeda offers an interactive interface where users can explore or discover relationships within their data by manually (directly or indirectly) changing the WMDS projections. In this presentation, we reintroduce Andromeda 2.0 as a Findable, Accessible, Interoperable, Reusable (FAIR), and reproducible Research Software product, and demonstrate the ease of its use in two case studies. In the first case study, secondary science teachers use Andromeda 2.0 to ask and answer questions about connections between pollinators and the environment. In particular, teachers deepened their understanding of their data, developed hypotheses, and assessed their hypotheses without technical distractions from coding or compiling Andromeda 2.0. In the second case study, we bring Andromeda 2.0 to a data-centric, academic workshop where we reveal how the maturation of the product allowed for further extension to a previously unimagined use-case. We conclude with an interactive live demonstration of Andromeda 2.0.

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CP3

Revolutionizing Tomorrow's Renaissance: The Synergy of AI and STEAM Education for Future Engineers, Scientists, Innovators, and Artists

This research paper explores the transformative potential of coupling Artificial Intelligence (AI) with STEAM (Science, Technology, Engineering, Arts, and Mathematics) education as a groundbreaking approach to shaping the finest minds of the 21st century. By uniting the computational power of AI with the creativity and analytical thinking fostered in STEAM disciplines, this innovative educational paradigm seeks to produce a generation of engineers, scientists, innovators, and artists uniquely equipped to redefine the boundaries of knowledge and creation. Emphasizing the role of this dynamic partnership, the paper envisions a future where interdisciplinary collaboration nurtures individuals capable of pioneering new sciences, conceiving unprecedented engineered systems, and producing groundbreaking works of art. The transformative impact of AI and STEAM education is positioned as the catalyst for an era of unimaginable advancements, where the boundaries between scientific, engineering, and artistic fields blur, giving rise to a Renaissance of innovation and creativity. The paper concludes by highlighting the imperative nature of this educational synergy in cultivating a workforce that will propel society into uncharted realms of discovery and ingenuity.

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MS1

Bridging the Digital Divide: Cisco's Pathway to Inclusive Data Science and Technology Literacy

Cisco Networking Academy revolutionizes education by providing universal access to essential skills in Cybersecurity, Data Science, AI (artificial intelligence), and Programming, thereby transforming lives. These courses are

meticulously crafted to democratize data literacy, enabling learners from all backgrounds to harness the power of data and AI, which are pivotal in today's digital economy. By fostering an understanding of complex data analysis, machine learning, and coding, Cisco ensures that anyone, anywhere, can participate in and contribute to the global data dialogue. This commitment to inclusive education not only fuels career growth but also drives innovation and progress. Through robust public-private partnerships, Cisco's high-quality curriculum and workforce development initiatives open doors to new opportunities, empowering a diverse workforce to thrive in a tech-driven future. The Networking Academy's dedication to data democratization is more than just educationit's a pathway to unlocking potential and creating a more equitable world of work.

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MS2

Why Do We Assess? Whats in a Grade? The Results of Unleashing My Inner Educational Philosopher

As the world evolves, we work to change our pedagogical practices to better prepare students for their respective futures. It only makes sense that as our pedagogical practices evolve, so would the focus and method of our assessment practices. Likewise, as assessment practices evolve, it seems natural for grading models to follow suit. While this feels like a logical natural progression one that you would even expect to be perpetually dynamic in nature it is often met with an abundance of friction. The sources of this friction are many. It may come from our students, our colleagues, our administrators, or even possibly most powerfully from ourselves. Over the last decade, or so, I have been on a journey of discovery. I have reached beyond my comfort zone in the classroom so many times, that I have made being bold enough to try new pedagogical practices, assessment techniques, and grading models in my classrooms my new comfort zone. In this talk, I will share a bit about my journey thus far and offer some advice of both the do this! and dont do this! variety.

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MS2

I Cant Read Your Mind Whats On The Paper Must Reflect What You Know and Understand

When we (the experts) write a solution to a workout/word problem, we write something that is coherent, logical, well-executed, well-communicated, and correct. In short, we build an argument that our answer is correct and answers the question(s) asked. We then demonstrate this ideal for our students (the apprentices) in class often with lots of commentary and encourage them to shoot for this ideal in their own solutions. Building to this expectation takes practice, specifically practice communicating in this manner, and to a level that can be understood and followed by someone else. I present the Comm Practice assignment that I developed to help the students practice and achieve this standard before the higher-stakes events, and to become familiar with the grading rubric we use to assess their work. Proverbial lightbulbs come on when the students exchange their Comm Practices in class and have to read/interpret/figure out someone elses solution in order to award it a grade using the provided rubric. These lightbulbs illuminate the need and value of the communication ideal and more often than not, the students carry this insight into their studies (often helping them uncover misconceptions and/or procedural issues in time to fix them) and performance on the various graded events. Their solutions are the coherent, logical, well-executed, well-communicated, and correct solutions that reflect good knowledge and understanding about a given mathematical concept(s).

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MS2

Using Mission-based Grading and Personalized Projects in Upper-level Applied Math Classes

If we truly value the ideals articulated in our mission statements, shouldnt our assessment be centered on those ideals? In this talk, I discuss my efforts to accomplish this in a variety of upper-level applied mathematics courses, most recently in a capstone course for Applied Mathematics majors; assessments in this course included oral presentations, essays, and application problems. I also address how I have utilized this learning-outcome-centered grading in a writing-intensive honors core integration seminar on quantitative literacy. Applied math courses are also excellent venues for including alternative assessments. I have found that students respond particularly well to personalized projects; I discuss several such projects that I have used in a variety of courses: Numerical Methods, Dynamical Systems, Partial Differential Equations, Linear Algebra, and Mathematical Physics.

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MS2

Making Room for Creativity: Ungrading in Applied Mathematics

To successfully incorporate more open ended and real-world modeling projects in applied mathematics courses students need to feel the freedom to be creative and curious without the pressures of grades. In this talk we will look at two applied mathematics courses in which the pressures of grades, points, and rubrics were excluded to make room for student creativity and mathematical expression. We will also offer practical tips and tricks for those wanting to try ungrading in their own classrooms but have reservations and questions.

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MS4

Writing and Broadly Applying Mathematical Modeling Contest Problems

Since 1985, COMAP has annually held its international Mathematical Contest in Modeling (MCM) for undergraduate students, and in 1999 added its Interdisciplinary Contest in Modeling (ICM). COMAP also offers contests at the

school level (MidMCM, HiMCM, and IMMC). The collective contests have resulted in the authorship of over 200 modeling problems all freely available and broadly useful. In this talk, I will discuss the authorship of these problems and the many ways I have applied them in my undergraduate mathematics courses. Additionally, I will discuss how I use the past problems to prepare student teams to participate in the contest each year.

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MS4

Designing Open-Ended Modeling Projects to Balance Skill Assessment and Student Creativity

Courses with an emphasis on mathematical modeling are an excellent venue in which to allow students to exercise creativity and choice. Projects can be designed in such a way that students have multiple avenues of approach, and solutions may vary widely based on assumptions made during the modeling process. But how can we design such projects to ensure that they also assess students understanding of particular skills, without infringing upon their creativity? In this talk, I will discuss several projects that I have designed for use in both introductory and advanced modeling courses, with an emphasis on striking that balance between skills-assessment and student freedom for exploration.

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MS4

A Student Perspective on Modeling the UN Sustainable Development Goals: COMAP ICM 2023 Problem D

Our team has competed in the last three COMAP math modeling competitions. For our second run, we picked ICM problem D, which involved creating a network to model the interconnectedness of the United Nations Sustainable Development Goals, using the structure of our network to establish a prioritization system of the goals, and analyzing how a variety of large-scale factors would influence our models. Later that year, we were surprised to discover that our work had warranted us bothFinalistandMAA Awardrecognition. In this presentation we will primarily focus on our creative approaches to solving the challenges presented in ICM problem D (2023) and the thinking that led us to creating these models. We will also highlight what we learned from our experiences in the math modeling competitions (from successful participants to finalists to leaders helping prepare other teams), as well as what advice we utilized in order to succeed. Most importantly, we hope to showcase why we have competed in this competition and illustrate the reasons why we believe other students should too.

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MS5

Teaching Students Mathematics for the 21st Century

Recent years have seen an explosion of scientific evidence showing that there is a different way to learn, lead and live, available to us all. When people take a limitless approach to learning in learning and in life different pathways open up, leading to higher, more equitable and more enjoyable achievement. In this session we will consider what this different approach is, thinking about the ways we can teach students to increase equity, engagement, and achievement. We will also consider the nature of the content we are teaching. We are in an exciting time in terms of the knowledge we can all access, and the ways knowledge is being communicated. Our world is filled with data and data visualizations and a new, important goal for our teaching is to help students become data literate, learning to make sense of data in their lives and separate fact from fiction. All teachers can teach with a data perspective, integrating the ideas from data science into their teaching. This session will invite you to think about the ways we can teach and learn with a 21st century perspective.

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MS5

Challenges and Opportunities for K-12 Persistence in Math Courses

Student enrollment in mathematics and data science courses in higher education is impacted by student enrollment in mathematics courses in high school. This talk is a presentation on mathematics pathway policies in Tacoma Public Schools, a large urban district in Washington, and how the pathways students take in Tacoma do and do not support student enrollment in courses beyond high school. Students must complete three years of mathematics to earn a high school diploma in the state of Washington, but students who do not pursue elective mathematics courses in high school are also unlikely to pursue degrees in mathematics or data science. Tacoma is over a decade into a policy of accelerating all students into Algebra 1 in eighth grade, which theoretically provides more access for students to the elective courses most likely to prepare students for further study in college. This discussion will include a full explanation of Tacoma's math pathways, data on enrollment trends in math courses, and student responses from math class experience surveys that suggest challenges to building accessible opportunities for students to further study mathematics or data science in college.

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MS5

From Calculus to Data Science in High Schools: How We Got Here and What Comes Next

For decades, calculus has been consider the ultimate goal of K-12 mathematics education. Students and parents see it as a necessary (but not sufficient) condition for acceptance

into elite colleges. But why is this so? As professional mathematicians, we understand the importance of calculus, but also know other areas of math are accessible and useful for students. In particular, linear algebra, statistics, and data science are increasingly important tools for understanding our complex world and might be accessed by high school students, especially with the use of computing to support understanding. In this minisymposium, we will explore how SIAM members can advocate in their local and state communities to shift some of the focus in K-12 education from calculus to alternative pathways in data science and statistics. In this first talk, I will describe the history of how we came to this highly calculus-centric education system. I will also share current efforts to build new pathways into American mathematics education at the high school level. Finally, I will describe several current congressional bills that might lead to federal action in this direction. We will discuss how SIAM members have (in the past) and could (in the future) contribute to this effort to expand the types of math our high school students see, and in turn change the kinds of skills students have when they come to our institutions of higher learning.

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MS5

Developing Sustainable Data Science Education Pathways at Scale

As 2-year and 4-year institutions of higher education across the country have been focusing on incorporating data science into a wide range of undergraduate and graduate curricula through courses, degree programs and other initiatives, there is also a great need for developing sustainable data science education pathways across K-12 and transition years at scale. In this talk, we will share some effective practices that has helped Virginia to become a national leader in Data Science education with Board of education approved Standards of Learning for a high school Data Science course. We will share how this development across state is empowering Virginias students with the data literacy skills they will need to succeed in the 21st-century workforce.

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MS6

Data Modeling for Cancer Cell Growth Predictions and Treatment Reponses

In this presentation we discuss how to conduct data modeling for cancer cell growth predictions and treatment responses. The data was collected from in vitro experiments in biology lab at Jarvis Christian University, Hawkins, East Texas. We took the data model example from a solution of the classical mathematical models on mathematical oncology. To curve fit the data to the model we use the least square method in Python. The homework assignments and projects are simply replacing the model with other models. The instructors in the classrooms may give another example before assigning the assignments and projects.

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MS6

Learning Parameter Estimation Online, Using Matlab and R

In this presentation, we present our work in developing an educational module in parameter estimation. Appropriate to undergraduate students in mathematics and statistics, we start with basic definitions in probability theory, cover topics in point estimation, and discuss how to evaluate estimators. All topics are enriched with worked examples, unsolved problems, projects, and simulation exercises in MATLAB and R. As part of a larger online book on mathematical modeling, our module provides context to and is supported by content in probability modules and Monte Carlo simulations, that collaborators provide.

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MS6

A Modular Book for Mathematical Modeling

In this presentation, we give an overview of the project and its topics. We'll discuss the path that led us to writing a modular book for mathematical modeling, how we got the project started, and our goals for the book. This will include how you can use the book inside and outside the mathematics classroom.

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