

FRONTIERS



BYU COMPUTATIONAL, MATHEMATICS

SCIENCES

FALL 2025

Educational
Mount
Everest

PAGE 4

FRONTIERS

BYU COMPUTATIONAL, MATHEMATICAL & PHYSICAL SCIENCES

FALL
2025

In his 1975 second-century address, President Spencer W. Kimball declared that BYU would become an “educational Everest” while also reminding us that the hills ahead are taller than we might think (see page 4).



Dear alumni and friends,

This fall, we celebrate a momentous occasion: the 150th anniversary of the founding of Brigham Young University, our sesquicentennial celebration. To truly understand BYU, one must recognize its rapid evolution, growth, and development. From its humble beginnings as a struggling frontier school, BYU is on a path to becoming the Everest of education—a leader among the world’s great universities. This ambitious vision was set forth by President Spencer W. Kimball, the prophet who envisioned this transformation within 200 years.

In 1975, President Kimball delivered the second-century address on our campus, marking the 100th anniversary of BYU’s founding. In his speech, he outlined the goals we should strive to achieve in the next century. Among the formidable challenges he presented, he declared that BYU would become an “educational Everest.” He quoted John Taylor’s prophecy, foreseeing a day when Zion would be as advanced in everything pertaining to learning as it is in religion and urging us to “mark [his] words, write them down, and see if they do not come to pass.”

President Kimball also reminded us that the hills ahead are taller than we might think. To me, this signifies that BYU’s destiny is so grand that it is beyond our current imagination. Our human limitations often restrict our dreams to what we can see in the near future. We must first conquer the hills before us, then embrace the towering mountains beyond.

Today, BYU stands at a pivotal point. It began as a struggling frontier school where professors weren’t consistently paid due to a lack of funds. When the school’s main building burned down, BYU President Karl G. Maeser considered giving up and returning to Salt Lake City. However, he had a revelatory dream in which he saw the hill upon which BYU now stands filled with hundreds of beautiful buildings and thousands of students. Inspired, he told his family to unpack the wagons and stay. He was determined to try harder.

Since that time, each generation of students and faculty has grown stronger and larger, with more resources to support learning and teaching. As we reach this 150-year milestone, we take this moment for self-appraisal and introspection, asking ourselves: “Are we the Everest of education in our fields today?” If not, what do we lack, and how will we achieve this within the next 50 years? This issue of *Frontiers* is dedicated to sharing that analysis with you. We believe it is both exciting and inspiring.

We will meet President Kimball’s challenge—in many areas, we are already doing so. I invite you to join us in this endeavor. Stay connected with us and help ensure that we are doing all we can to support your friends and family. We love you and appreciate all you do.

Sincerely,

Grant Jensen, *Dean*
BYU College of Computational, Mathematical, and Physical Sciences

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FRONTIERS

FALL 2025

BYU COLLEGE OF COMPUTATIONAL, MATHEMATICAL & PHYSICAL SCIENCES

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FRONT COVER *An image of Mount Everest (Sabin Kumar, Unsplash) towering over Y Mountain (BYU Photo).*

BELOW *BYU’s anechoic chamber, located in the Eyring Science Center (BYU/Sammy Bryan).*

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Articles by Candice L. Macfarlane

Building brilliant stars in computing, math, and science

ELEVATING EXCELLENCE

IN THE COLLEGE OF
COMPUTATIONAL,
MATHEMATICAL, AND
PHYSICAL SCIENCES

In his second-century address, President Spencer W. Kimball envisioned a future in which Brigham Young University would become an “educational Everest,” producing “brilliant stars in drama, literature, music, sculpture, painting, science, and in all the scholarly graces.” He prophesied that BYU would be the refining host for individuals who would make a global impact long after leaving campus. However, he also emphasized the need for patience, comparing the quest for excellence at BYU to the gradual rise of the city of Enoch, which reached its pinnacle “in process of time” (Moses 7:21). In his address, President Kimball went on to quote John Taylor’s prophecy: “You will see the day that Zion will be as far ahead of the outside world in everything pertaining to learning of every kind as we are today in regard to reli-

gious matters. You mark my words, and write them down, and see if they do not come to pass.” As we approach the sesquicentennial celebration of Brigham Young University, we ask ourselves, “Are we the Everest of education in our fields yet? If not, what do we lack?”

Becoming the “educational Everest” President Kimball spoke of involves more than just offering great classes so our students become these brilliant stars. Our mission in the College of Computational, Mathematical, and Physical Sciences is to achieve this goal by focusing on three primary objectives: exceptional classroom education, outstanding experiential learning opportunities, and excellent advising, mentoring, and networking.

Grant Jensen, dean of the college, says, “There are two ways to be the Everest of education. One is to be big in

number of students, and the other is to be tall in quality of programs. Everest is both tall and big, and so is BYU.” In this college, we strive to ensure students receive top-tier instruction from world-class faculty. Our faculty will help each student reach their potential and send forth the unique light President Kimball spoke about into the educational world. Our faculty members who understand their double heritage will pass along secular knowledge and “the vital and revealed truths that have been sent to us from heaven” (Kimball, second-century address).

Beyond ensuring that each student excels in the classroom, BYU and the College of Computing, Math, and Science focus on providing experiential learning for every student through internships, professor-mentored research, field trips, study abroad programs, and more. These crucial experiences empower students to apply their knowledge in real-world settings and gain valuable skills. Students can get educational and career advice from our academic advisors, who help each student in the college navigate their educational journey, and from our Mentoring Network, which connects students with alumni and professionals in their fields of interest. There are more than two thousand alumni on BYU Connect and 150 members in the Mentoring Network. Through these platforms, our alumni offer mentorship, nurture valuable connections, provide powerful insights, and create opportunities for career advancement.


A Lasting Impact

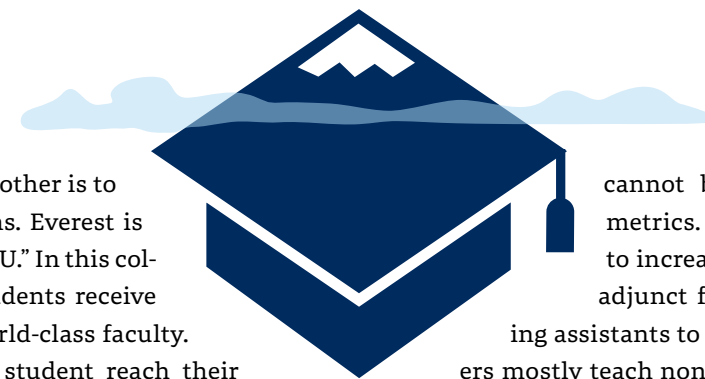
Our college comprises seven departments: chemistry and biochemistry, computer science, geological sciences, mathematics, mathematics education, physics and astronomy, and statistics. We recently added “computational” to the official college name to reflect the growing importance of computer science—more than half of our students major in this field! We are proud to be able to offer paid research opportunities to any undergraduate with a professor willing and able to mentor them—and we encourage professors to include undergraduates in their research. This collaboration enhances learning by stimulating students’ interest in class material and helping them achieve their research goals.

As we conducted our educational Everest assessment, we recognized that each department within our college

cannot be measured by the same metrics. Some departments have had to increase class sizes and hire more adjunct faculty members and teaching assistants to meet program demand, others mostly teach non-major students, and others have small but close-knit specialty offerings. So to truly understand the progress of a department, we looked at the department’s heart and core values, considering the department’s history and what drives it forward.

Each department within the college has its unique strengths and ways that it contributes to the college’s mission: Computer science focuses on growth and innovation, adapting to the increasing demand for tech-savvy graduates. The statistics department centers on data analysis and interpretation, providing students with the skills they need in a data-driven world. Chemistry and biochemistry are foundational sciences that support a wide range of research and applications, from healthcare to environmental science. Mathematics is the language of science, and our mathematics department ensures that students are well-versed in this essential discipline. Physics and astronomy explore the fundamental principles of the universe, inspiring students to think beyond the confines of our planet. Math education focuses on preparing future educators who will inspire the next generation of mathematicians and scientists. The geological sciences delve into the Earth’s processes, helping students understand the planet’s past, present, and future.

By highlighting the unique qualities and achievements of each department in this issue, we aim to provide a comprehensive overview of the BYU College of Computational, Mathematical, and Physical Sciences and have each department answer this question: “Have we become the Everest of education in our field yet?” As we prepared the answers to this question, it became clear that our college embraces the university’s double heritage and dual mission to provide the best education available anywhere while building faith and character. “My goal is that no one has to choose between the spiritual benefit of BYU and the secular educational benefits of somewhere else,” Jensen says. “BYU needs to be the best of both.” Our commitment to excellence in education, experiential learning, and mentoring ensures that our students are well-prepared to become the brilliant stars that President Kimball envisioned, making a lasting impact on the world. 





TRANSFORMING MEDICINE, INDUSTRY,

AND THE ENVIRONMENT

IN ONE NOW LEGENDARY INCIDENT,

a faculty member repurposed a misdelivered shipment of construction materials—originally destined for another building on campus—and used it to build a working lab in a men’s bathroom stall in the Eyring Science Center. This story encapsulates the spirit of the Department of Chemistry and Biochemistry: creative, resourceful, and discovery-minded.

The Department of Chemistry and Biochemistry at BYU not only has a culture of ingenuity and resilience but is one of the university’s largest, most research-active and powerful academic units. With a robust annual intake of over \$7 million in external funding, the chemistry department’s faculty and students are leaders in both education and innovation. Each year, the department serves more than 15,000 students, with approximately 11,500 enrollments in general chemistry, organic chemistry,

and biochemistry. These courses are foundational for students pursuing careers in medicine, dentistry, and other health sciences.

The department maintains the largest dissertation-based graduate program at BYU, with around one hundred graduate students and \$350,000 provided annually in graduate fellowships. A defining characteristic of the department’s undergraduate program is one-on-one mentoring; every student has the opportunity to participate in research projects alongside faculty,

gaining valuable experience that often leads to high-impact publications and presentations.

Student Success Beyond the Classroom

The students’ academic performance is exceptional. All graduating seniors in the department take a national diagnostic chemistry exam, and the departmental median places it in the 88th percentile nationwide. This success is mirrored in postgraduate outcomes. About one-third of graduates go to medical or dental school,

another third enter the industry workforce, and the remaining third pursue graduate studies.

For those heading into medicine, the results are particularly remarkable. Chemistry majors who took the MCAT achieved a median score of 519, placing them in the 96th percentile. In comparison, the average MCAT score of all BYU students accepted into medical or dental school is 515 (90th percentile), while the national average is 512 (83rd percentile). Simply put, chemistry majors are consistently outperforming their peers, making the major an ideal choice for pre-med students looking to distinguish themselves.

Graduates from the Department of Chemistry and Biochemistry don’t just succeed—they excel. Students from the department are regularly placed into top-tier graduate programs, and many later return to BYU as faculty members. Well over half of the department’s current faculty graduated from BYU with their undergraduate degree and went to distinguished graduate schools, including Caltech, Stanford, Berkeley, Purdue, Yale, University of Michigan, Columbia, University of Wisconsin, and MIT.

Faculty at the Forefront of the Future

Research within the department spans an impressive range of disciplines and cutting-edge fields. Pam Van Ry, the most recent recipient of a Fritz B. Burns Foundation grant, has made major strides in lung cancer research, successfully growing a lung tissue model in a dish. This monumental achievement opens the door to testing how cancer develops and responds to treatments at the cellular level. Grant Jensen, dean of the college and a leader in cryo-electron

microscopy (Cryo-EM), recently published a significant paper from data collected at Caltech and analysis performed here at BYU. This example showcases the department’s world-class research infrastructure.

Professor Ryan Kelly is revolutionizing proteomics. Using the department’s Astral Orbitrap mass spectrometer—one of the most advanced instruments available for protein analysis—he is able to analyze eight thousand to twelve thousand proteins in a single human cell. Associate Professor Jeremy Johnson’s research in terahertz radiation, a highly specialized wavelength of light, has earned him a \$1.5 million grant from the Gordon and Betty Moore Foundation to study surface interactions. Dan Ess, another associate professor, works closely with the petroleum industry to design catalysts that convert waste products into useful materials. He is one of the most intensive users of BYU’s supercomputing resources.

Adam Woolley is developing diagnostic tools for early detection of preeclampsia, a life-threatening condition in pregnancy. By adapting 3D printing technology into a medical device, he can create a low-cost test that could allow doctors to identify and treat at-risk women early on. Meanwhile, Paul Savage has engineered an antibiotic surface coating for medical devices like intubation tubes. In clinical trials conducted in Canada, the treatment proved highly effective in preventing bacterial infections, with impressive outcomes for critically ill patients.

Environmental Applications

The department also leads in environmental chemistry. Department Chair Jaron Hansen and his team have built

THE DEPARTMENT OF
**CHEMISTRY &
BIOCHEMISTRY**



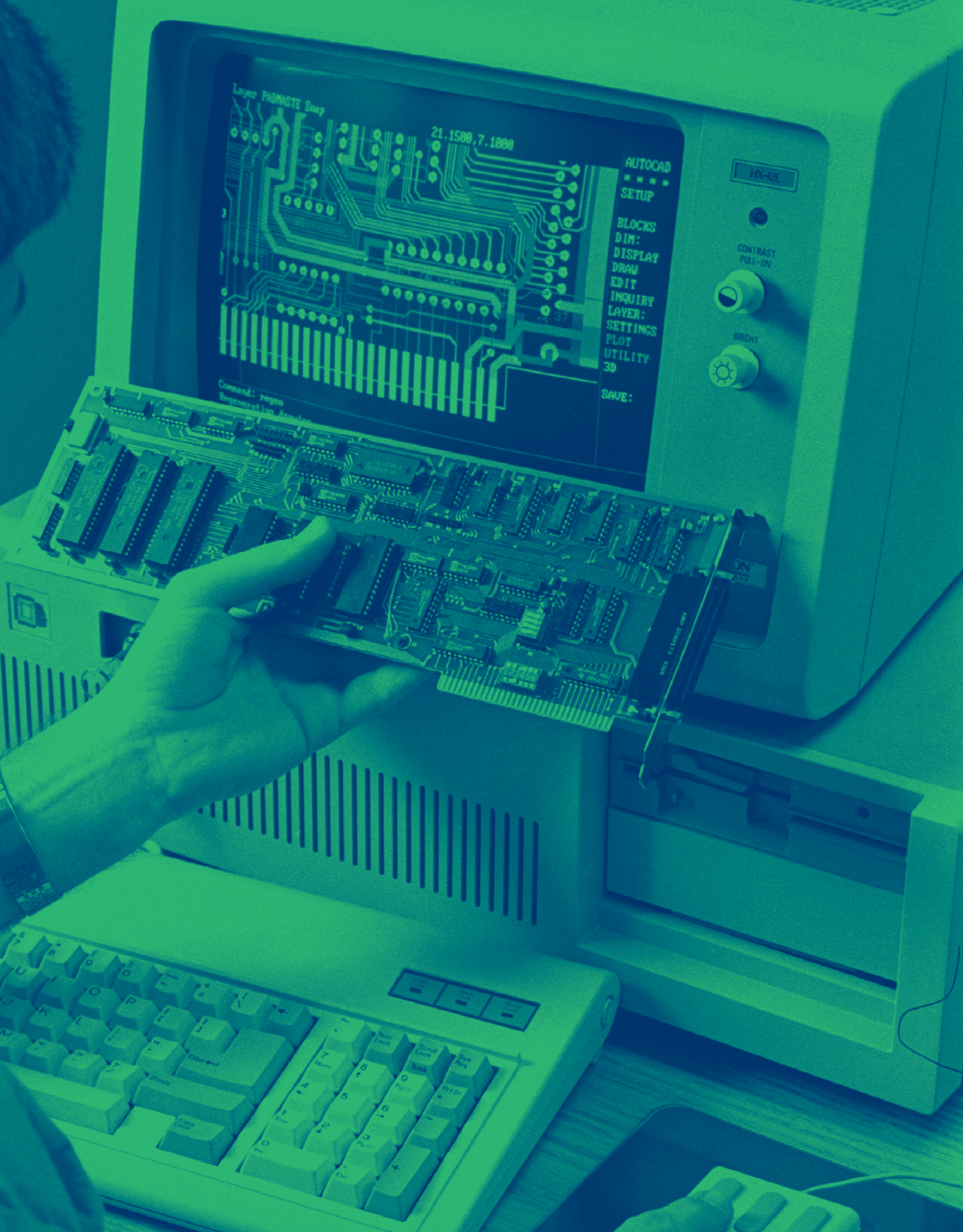
instruments capable of detecting pollutants at concentrations as low as one part per trillion. In a recent study, they investigated claims that exposed lakebed (playa) dust from the shrinking Great Salt Lake was increasing toxic exposure in Salt Lake City. Using inductively coupled plasma mass spectrometry, they analyzed dust samples and found no correlation between lake size and dust toxicity. The findings, published in spring 2025, reassured public health officials and residents alike.

In another major project, Hansen’s team examined tropospheric ozone production along the Wasatch Front, identifying local contributors and advising the state on ways to reduce harmful exposure. Currently, Hansen is leading a multi-institutional effort—including scientists from Utah State University, the University of Utah, and the University of Nevada, Reno—to study the mechanism by which mercury is oxidized in the atmosphere. Using a massive environmental chamber equipped with UV lighting, his lab simulates atmospheric conditions to monitor how mercury transforms over time—increasing or decreasing in toxicity.

The Department of Chemistry and Biochemistry exemplifies what it means to be bold, inventive, and forward-thinking. With a legacy of excellence and a future defined by discovery, the department continues to be a cornerstone of innovation at BYU and a catalyst for change far beyond campus. <#>

PHOTOS (2) COURTESY OF BYU PHOTO





SCALING NEW HEIGHTS IN

THE DEPARTMENT OF
**COMPUTER
SCIENCE**



ANIMATION AND MACHINE LEARNING

PRESIDENT SPENCER W. KIMBALL'S

vision of BYU becoming an “educational Everest” is vividly embodied by the Computer Science Department, which has grown remarkably since its establishment. Founded in 1968 with C. Edwin Dean as chair, the department started with a few dedicated faculty members, including Willard Gardner, Parley Robinson, and Norman Wright. BYU was one of the first universities to pioneer a bachelor of science degree in computer science; most institutions at the time didn't offer computer science degrees or only had graduate programs in the discipline. Over the years, the department expanded to include master's and doctoral programs, with notable early faculty members like Theodore A. Norman and Bill R. Hays contributing to its development.

Computer science started as its own small college and then became part of the College of Physical and Mathematical Sciences—now the College of Computational, Mathematical, and Physical Sciences. The surging number of computer science majors led the college to adjust its name in May 2024. This growth reflects the explosive increase in computer usage, with most people in Western nations now spending much of their day in front of screens.

A Unique Heritage

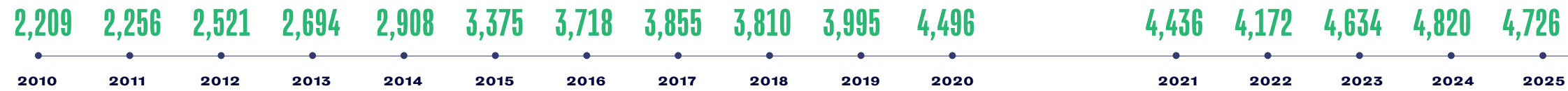
The Computer Science (CS) Department's heritage is rooted in mathematics, which sets it apart from many other computer science programs that originated in engineering. This unique foundation has allowed BYU to offer a strong theoretical education in computer science. Over time, however, the department's curriculum has become more homogenized with other institutions. In the early days, the department's computer occupied an entire room where the math lab is now located. Students from the early seventies recall sub-

mitting punch cards through a window to the computer operator, who would run their programs and return the output the next day. Although this process often involved troubleshooting errors and resubmitting punch cards, the hands-on experience with early computing technology laid a strong foundation for the department's future growth and innovation.

The CS Department has several notable achievements: former faculty member Alan Ashton founded Word-Perfect and a group of students, calling themselves Superset, created Novell

COURTESY OF BYU PHOTO

CS COURSE ENROLLMENTS



during a group project in a networking class. These milestones highlight the department's ability to nurture talent and innovation and drive significant contributions to the tech industry.

Over the past decade, the CS Department has hired numerous machine-learning professors, positioning it ahead in offering a machine-learning degree. This shift allows professors to adapt curriculum to current industry demands, preparing students for cutting-edge careers in machine learning and artificial intelligence.

The department also offers an emphasis in human-computer interaction (HCI). In the 1980s this field prioritized efficiency, but since the 2000s it has evolved to center on designing computer systems within a human context to solve meaningful problems and enhance the

human experience. The HCI program addresses questions about how computing fits into everyday life, aiming to create experiences that improve the human condition and quality of life.

The animation program was integrated into the CS Department about ten years ago. Parris Egbert, professor of computer science and director of the Advanced 3D Computer Graphics Lab, explains that the program began informally in 2002 when a few students approached some BYU faculty and said they wanted to make an animation. Although the faculty members had never even worked on an animation before, they agreed. The informal group spent the next year creating an animation that ended up winning the first of many Student Emmys and Student Academy Awards. The program emphasizes

group projects and family values, and this focus has made our graduates attractive to companies like Pixar. "The overarching goal of the program is to train excellent students that can go out into the animation industry, quickly become leaders in that industry, and be the ones setting the direction of animation in the world," Egbert says. "Having this goal has made us prioritize the things we do and the manner in which we run the animation program at BYU."

Another part of the success of the department comes from recognizing the diverse backgrounds of its students. Some students have an extensive programming background before arriving at the college, and others are just starting out. That is why the department introduced CS 110 and CS 111 as alternatives to CS 142. CS 110 is

designed for students who have never programmed before, while CS 111 is for those with prior experience. Department Chair Mike Jones explains that this adjustment has been beneficial, allowing the department to engage both sets of students appropriately and ensure that all students receive the support they need to succeed in their initial programming courses.

Leading the Way in Teaching and Mentoring

The CS Department's staff are true BYU heroes, enabling it to function effectively. Adjunct faculty and teaching assistants are crucial to managing class sizes and ensuring quality education. Without their support, Jones says the college would struggle to continue providing such a high standard of education.

ABOVE Standing in the lobby of the Talmage Building is an 8-foot-4-inch statue of Po, the titular character of the movie *Kung Fu Panda*. The statue honors BYU alumnus Jason Turner, who was responsible for all of the computer models in the movie and personally built the computer data for Po.

The department's passionate faculty and professional educators lead the way in teaching and mentoring. "Our goal is to create disciples of Jesus Christ who are also computer scientists; combining those two objectives makes us better at educating computer scientists," Jones says. "We have only scratched the surface on that concept, but I think as we continue to engage in authentic discussion and experimentation, we'll do both better." This dual focus enriches the educational experience, fostering both technical expertise and personal development.

The BYU Computer Science Department has a rich heritage. Its unique foundation has allowed the department to offer strong theoretical education and foster innovation. Even with the high ratio of students per faculty member, the department is able to involve a large number of undergraduates in research, with around 270 students being mentored by more than 30 faculty members. These experiential learning opportunities are crucial for students to apply their knowledge in real-world settings and gain valuable skills.

Innovation has been a cornerstone of the department's success. In the 1990s, BYU alumni dominated the software industry, with two major companies in the Utah Valley founded by graduates. And in 2008, Instructure, which created Canvas, was founded by

two BYU CS students. The animation and video game programs, initiated by Egbert, have garnered numerous student awards and produced notable alumni like Jeremy and Donald Mustard, the creators of *Fortnite*. The department recently received permission to offer a bachelor's degree in machine learning, differentiating it from basic computer science.

The department currently faces challenges with large class sizes, which can prevent students from forming personal connections with professors. Efforts are underway to balance class sizes by making lower-level classes larger, which will free up faculty for smaller senior-level classes. Experiential learning is emphasized through capstone projects and entrepreneurial programs, in which students collaborate to solve real-world problems and develop marketable products. The department's excellence is evident in its number of degrees awarded and its success in programming competitions, including top placements in regional and world events. Significant contributions from Ira A. Fulton and other donors have supported the animation program and other initiatives. As the CS Department continues to scale new heights, it remains a testament to President Kimball's prophecy, striving to become the "educational Everest" he envisioned. [\[1\]](#)

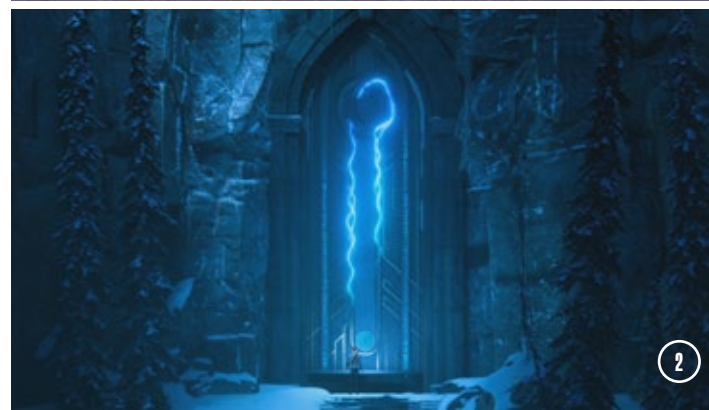
BYU ANIMATION WINS BIG

The BYU animation program has won twenty-three Student Emmy (College Television) Awards,* seven Student Academy Awards, and one Visual Effects Society Award. Its productions have played in the Cannes Film Festival, the Annecy International Animated Film Festival, the Sundance Film Festival, and many other venues.

BYU's games have also won several awards, including E3 and Intel Game Competition awards, in which five winners are selected from 100 or more games. BYU has also won Rookie Awards.

- 1—STUDENT ACCOMPLICE
- 2—LOVE & GOLD

* This award is given only once a year, and several hundred schools compete for it annually. The BYU animation program has won the Student Emmy for the last four years in a row.



PAGE 11, TOP: PHOTO BY BYU/GRACE MACFARLANE; BELOW COURTESY OF BYU ANIMATION



COURTESY OF BYU PHOTO



A LEGACY OF DISCOVERY

within the College of Physical and Engineering Sciences. In 2006, it became the Department of Geological Sciences, reflecting its expanding research focus. Over the years, Lehi F. Hintze, J. Keith Rigby, W. Revell Phillips, Morris S. Petersen, Wade E. Miller, Dana T. Griffin, Bart J. Kowallis, and Jeffrey D. Keith have served as department chairs, guiding students through rigorous academic and field training.

FROM JAMES E. TALMAGE

TO MODERN PLANETARY GEOLOGISTS

Inspiring Hands-On Learning

A defining feature of BYU's geology program is its commitment to immersive education. Students don't just study rocks in a classroom; they experience them firsthand in the field. Whether piling into a van for a field trip and being immediately quizzed by professors or embarking on summer fossil expeditions, geology students learn by doing. Utah's terrain provides an unparalleled natural laboratory, with the Wasatch Front, Moab, and Canyonlands National Park offering exposure to diverse geological formations that are rarely as conveniently accessible as they are in Utah.

One particularly inspiring story is that of Department Chair Brooks Britt, a paleontologist whose career began with an improbable childhood discovery. As a young boy, Britt set out on his bike with a friend to hunt for dinosaur fossils and, astonishingly, stumbled upon a fossil bone on

THE STUDY OF GEOLOGY AT Brigham Young University is more than just an academic pursuit; it's an adventure, a bond forged through fieldwork, and a legacy passed down through generations of dedicated students and faculty. From early pioneers like James E. Talmage, who taught at BYU between 1880 and 1888, to modern experts exploring planetary landscapes, geology at BYU has

always been about discovery. The department has evolved over the years, adapting to new scientific challenges while preserving its commitment to hands-on learning.

Founded in 1957 as the Department of Geology and Geological Engineering Science, the program has undergone several transformations. In 1968, it was renamed the Department of Geology and placed

LEFT James A. "Dinosaur Jim" Jensen giving a tour to a group of children at the BYU Museum of Paleontology. Jensen helped curate the museum and discovered both the first complete dinosaur eggs in North America and a 120-foot-long sauropod Supersaurus. His most lasting contribution to paleontology was his method of hiding structural display mounts alongside dinosaur bones to support dynamic, freestanding skeletons—like the Allosaurus skeleton displayed in the Museum of Paleontology.

his very first attempt. The moment hooked him, and he has been uncovering prehistoric wonders ever since. Following in the footsteps of former BYU Professor Jim Jensen, another legendary dinosaur hunter, Britt exemplifies the spirit of geological exploration nurtured at BYU.

A Tradition of Excellence in Teaching

The department has always been home to distinguished educators, including J. Keith Rigby, who joined the faculty in 1955, and Ken Hamblin, whose textbook became the most widely used geology textbook in the country. Hamblin went beyond academia, using the book's proceeds to establish the Hamblin Global Geology Field Trip, enabling students to travel worldwide and study geological sites firsthand. The tradition continued this past spring, as students embarked on a Hamblin Global trip to Iceland, supported by generous donors. This summer, faculty traveled to the Himalayas to conduct environmental research aimed at ensuring access to fresh drinking water. Meanwhile, students interested in energy production are securing internships at industry leaders like Exxon Mobil and Chevron, positioning themselves at the forefront of geological applications.

BYU's geology alumni are known for their generosity and enduring connection to the department. Many former students have gone on to great success and remain eager to give back. For example, Bob Lindsay personally funded the shipment of eight-hundred pounds of core samples to campus and spent a week teaching students at his own expense. A particularly strong network of alumni and an advisory board ensures



continued support for students, often fully funding study trips abroad. Last year, alumni financed an excursion to England, where students spent days analyzing geological formations and discussing their findings.

Another inspiring alum, Sarah Naone, has made a name for herself in the industry by supervising drilling operations remotely from her home, proving that geology expertise can transcend geographic limitations. Faculty members are also making an important difference.

Greg Carling, for example, is conducting critical research on the Great Salt Lake, studying its health and the environmental consequences of disappearing water resources.

Geology Beyond Earth

The geology department at BYU isn't confined to the study of Earth. Faculty and students are delving into planetary geology, examining landscapes across the solar system. Jani Radebaugh, a planetary geologist, has conducted NASA-funded

BELOW PHOTO BY SHANE WESTWOOD

ABOVE PHOTO BY JASON BARNES, UNIVERSITY OF IDAHO; ESC PHOTO COURTESY OF BYU PHOTO

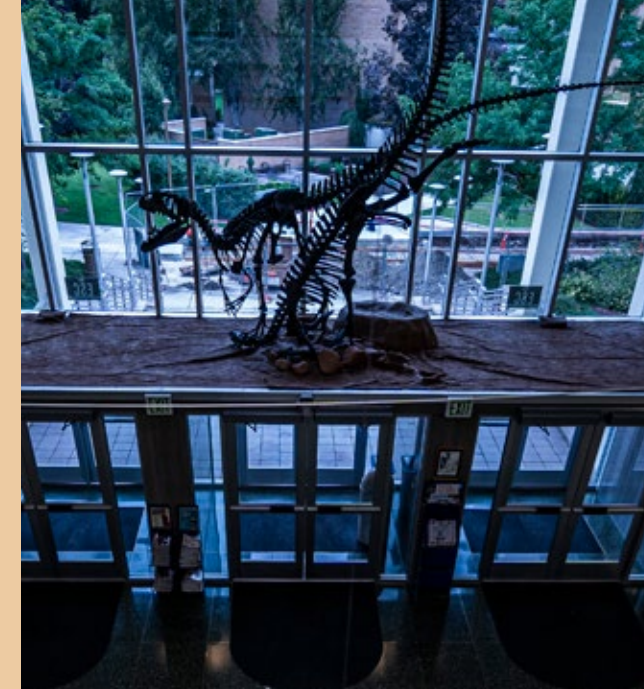
research around the world, studying Earth's dunes for analogs of dunes on other planets and their moons. She is also part of the Dragonfly mission, a groundbreaking three-billion-dollar NASA project that will explore Titan, one of Saturn's moons.

The department embraces geology's ability to span 4.5 billion years of planetary formation, connecting the study of Earth to the broader cosmos. BYU students are learning not only about their own planet but about the entire solar system, making geology an ever-expanding frontier of discovery.

While many students pursue careers in traditional geology paths, there has been a notable shift toward mining, especially in Utah and Nevada, where mineral resources are critical for modern technology. With the increasing global demand for rare minerals used in batteries and sustainable energy, geologists play a vital role in securing and managing these resources.

As environmental concerns mount and industries recognize the necessity of geological expertise, interest in the field is expected to continue to rise. The geology department has recently launched high school summer geology camps to help spark curiosity among younger students and introduce them to the vast opportunities in the geological sciences.

ABOVE A research group studying the subsurface of a large dune that is a perfect analogue for the dunes of Saturn's largest moon, Titan. **Left to right:** Clayton Chandler (BYU master's student), Titus Shuuya (Gobabeb Research Station), Jani Radebaugh (BYU professor), Theo Wassenaar (Gobabeb Research Station), Karl Arnold (BYU master's student).



YOUR ESC TO THE PAST

The Eyring Science Center, rich with donated geological collections, houses specimens that inspire new generations of geologists. Popular courses on gems and dinosaurs continue to draw interest, with Department Chair Brooks Britt humorously suggesting that his dinosaur course should qualify as a religion class, given how much it expands students' perspectives on Earth's history.

Uniting Science and Art

Geology also has unexpected intersections with art and history. A few years ago, Tom Holdman, head of Holdman Studios, approached BYU geologists to help select precious stones for stained-glass windows in a room of the Rome Italy Temple. Holdman was inspired by a biblical scripture that references twelve stones representing the twelve tribes of Israel, and the project required slices of beautiful, transparent stones on short notice. Remarkably, many of the selected stones had been collected by James E. Talmage himself, and his handwritten labels were still attached. An alumni field trip to Rome allowed BYU geologists to see their contributions displayed in a cultural and spiritual masterpiece.

BYU geology remains a powerhouse of art, education, adventure, and discovery. From environmental research in Indonesia to forensic investigations of mineral deposits in Alaska, the department's impact extends far beyond campus. With faculty investigating everything from glaciers in Peru to Mars-like landscapes in the Arctic, students are gaining global and even extraterrestrial perspectives. **FR**



EMPOWERING STUDENTS TO

SUCCEED BEYOND THE CLASSROOM

THE DEPARTMENT OF
MATHEMATICS



PRESIDENT BRIGHAM YOUNG

once told Karl G. Maeser, “You ought not to teach even the alphabet or the multiplication tables without the spirit of God.”¹ The Mathematics Department at BYU has taken that counsel to heart.

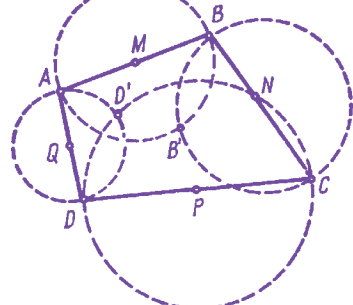
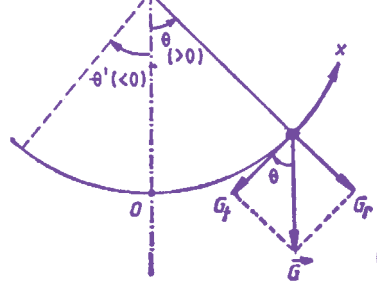
The first courses in the new Department of Mathematics were officially listed in the 1904 course catalog, laying the foundation for what would become a robust and dynamic program. In 1906, the Mathematics Department appointed its first chair, marking the beginning of a legacy that would grow and evolve over the next century. At first, mathematics and physics were combined into a single department in the College of Arts and Sciences. The Mathematics Department was transferred to the College of Physical and Engineering Sciences in 1954 and then to the College of Physical and Mathematical Sciences in 1973. Several notable chairs have led the department, including Carl F. Eyring, Mil-

ton Marshall, Harvey J. Fletcher, Kenneth L. Hillam, and Tyler Jarvis. Paul Jenkins served as chair from 2019 to 2025. Michael Dorff served as chair from 2015 to 2019 and became chair again in the summer of 2025.

A significant milestone in the history of the department was when it began offering a PhD in mathematics in 1986. This allowed the department to expand its research capabilities and offer advanced instruction to students aiming for careers in academia and research. In the fall of 2013, the department introduced the Applied and Computational Mathematics Emphasis (ACME), a standout program that has received national recognition, including the 2024 Exemplary Program Award from the American Mathematical Society.

The cohort structure of ACME, where students take classes together as a peer group their junior and senior years, has proven to be one of its greatest successes. The cohort fosters a strong community and enhances students’ mathematical skills through intensive, collaborative learning. About two-thirds of the department’s students are in the ACME program now, with the rest in the newly rebranded APEX Math (Applied and Pure Explorations in Math) program. Recognizing the success of the ACME program, the department continually seeks innovative ways to provide similar experiences for more students. The Early Math Computational Cohort (EMC²) for first-year students and sophomores is one such initiative, offering eight credits of the foundational math

COURTESY OF BYU PHOTO



$$\begin{aligned}
 -Q_{41} &= \sqrt{C}T_1(1 - e^{1/2}) + \sqrt{C_V}T_1(\% - 1), \\
 -Q_{34} &= \sqrt{C_V}T_2(\% - 1) + \sqrt{C}T_2(1 - e^{1/2}), \\
 1^{\frac{1}{2}}, \frac{T_2}{T_1} &= \%, \frac{T_2}{T_1} = e^{1/2}, \frac{T_2}{T_1} = \%,
 \end{aligned}$$

and computing courses each semester for a year. This program prepares students for research and advanced studies, creating a solid foundation and a supportive community.

A Commitment to Excellence

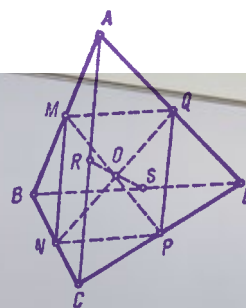
Another element of student success is an outstanding faculty, many of whom have received prestigious awards, including BYU's Karl G. Maeser Excellence in Teaching Award, the BYU University Professorship, and distinguished service awards from the Mathematical Association of America. The department's commitment to excellence is further evidenced by two faculty members receiving Fulbright Awards last year.

Mentored undergraduate research is a priority for faculty in the department. In 2024, more than 150 students engaged in undergraduate mentored research with faculty, a testament to the department's dedication to experiential learning. Professor Blake Barker is working with students to discover the mathematics of wildfire spread and prevention, while Professor Jared Whitehead is collaborating with faculty from the BYU Geological Sciences Department to predict tsunamis.

Another professor, Ben Webb, works with students on network theory and dives into questions on the tool FamilySearch. These are just some examples of the faculty who include undergraduates in their research.

There are also about thirty students at a time working as tutors in the Math Lab. "This is a great experiential learning opportunity for many of our students to learn to teach a little bit and to provide a service that really helps other students in the university," says Jenkins, a former department chair.

PHOTOS (2) BY BYU/GRACE MACFARLANE



RESEARCH FUNDING & AWARDS

Thirteen faculty members in the Department of Mathematics have external research funding through the National Science Foundation or the Simons Foundation.

KYLE PRATT was awarded a prestigious National Science Foundation LEAPS-MPS grant for early career researchers.

PAGE NIELSEN won the Karl G. Maeser Excellence in Teaching Award from the university last year.

MICHAEL DORFF received the BYU University Professorship in 2023 and won a distinguished service award from the Mathematical Association of America (MAA) in 2024 for his contributions to mathematics. Dorff is also a former president of the MAA.

NICK ANDERSEN won the college Early Career Teaching Award in 2025.

LONETTE STODDARD won the Fred A. Schwendiman Performance Award, the university's highest staff performance award, in 2022.

TOP Dedicated study spaces strengthen the sense of community among students in the math programs. **BOTTOM** Michael Dorff led the department from 2015 to 2019 and began serving as the current department chair in July of 2025.

A Rich Double Heritage

Each semester, the department sponsors a devotional in which a faculty member speaks to students and employees about their journey as a disciple-scholar. Additional efforts to build a covenant community include hosting an Open Door Day: One Thursday morning each semester, faculty members open their offices and make themselves available to answer questions about classes or mentored research. Sometimes they sweeten the deal by putting a bowl of candy by the door to welcome students in.

Through the recent remodel of the Talmage Building, the department created dedicated study spaces that strengthen the sense of community among graduate students, ACME students, APEX students, the EMC² cohort, and mentored research groups.

With a rich history and a commitment to innovation and excellence, the BYU Department of Mathematics continues to work toward becoming the Everest of education that President Spencer W. Kimball envisioned in his second-century address. According to Grant Jensen, dean of the College of

Computational, Mathematical, and Physical Sciences, "What makes BYU one of the best places to study math, even independent of the spiritual benefits, is the incredible faculty, the great research opportunities, the cohort structures, and the innovative curriculum. This is evidence that the math department is the Everest of education in its field." ¹

NOTES

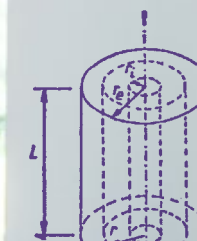
¹ Brigham Young, quoted in Reinhard Maeser, Karl G. Maeser: A Biography by His Son (Provo: Brigham Young University, 1928), 79.

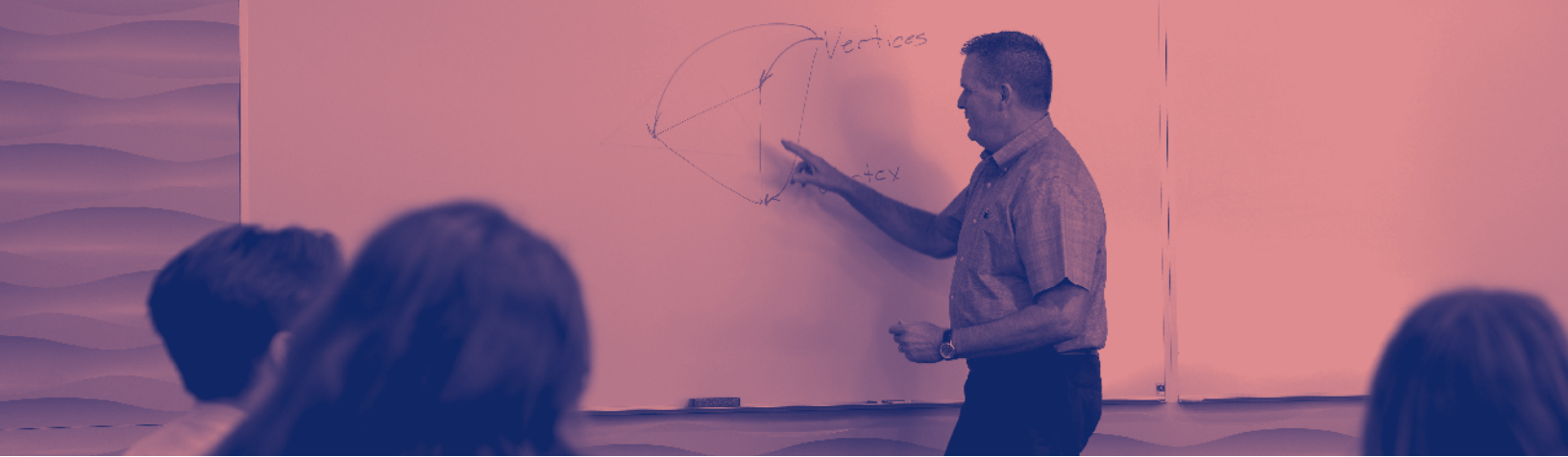
WILLIAM LOWELL PUTNAM MATHEMATICAL COMPETITION

The William Lowell Putnam Mathematical Competition is the preeminent mathematics competition for undergraduates in the US and Canada. With nine top-thirty placements in the past fifteen years, the BYU team has really made its mark:

2023 - 7TH	2017 - 22ND
2022 - 13TH	2016 - 25TH
2021 - 11TH	2013 - 9TH
2019 - 21ST	2012 - 7TH
2018 - 19TH	

The Putnam exam consists of two three-hour tests with twelve problems in total. Each problem is graded on a scale of zero to ten points. Undergraduates from the US and Canada take the exam, forming teams to represent their respective universities. The top-five teams and the top-twenty-five individuals with the highest scores are awarded scholarships and prize money. It takes place each December on the first Saturday of the month.





PROVIDING EXCEPTIONAL EDUCATIONAL EXPERIENCES

AND SUPPORTING FUTURE TEACHERS

chance to learn how to do it.” As a department, the professors and staff aim to convince each student of the value and joy of the profession and help them learn how to excel in it.

To do this, the department offers MTHED 101, a unique introductory course designed for anyone interested in exploring the field of math education. This optional half-credit class, which is not part of the major, provides a taste of what it is like to be a math educator. There are approximately ten participants each semester, and about a third decide to join the program.

The first major course, MTHED 177, then serves as a rigorous boot camp for aspiring math teachers; it challenges students to interrogate and deeply understand the math they previously learned and it problematizes the teaching and learning of mathematics. This course reveals the complexities of math education and prepares students to effectively teach other people. The next major course formally introduces students to the standards and practices of the discipline and includes a field experience where they observe middle and high school mathematics classrooms.

The major’s seven additional mathematics education classes provide extensive hands-on experience, culminating in a fifteen-week student teaching experience. In recent

THE MATHEMATICS EDUCATION Department at Brigham Young University was established twenty-five years ago and is proud to be part of the BYU College of Computational, Mathematical, and Physical Sciences.

The department’s goal is to give every student with an inkling of a desire to teach math the opportunity to explore that option. “Once that desire is established,” says Department Chair Keith Leatham, “we want to give them a

years, all student teachers have received the Fulton Student Teaching Scholarship, which was established by Ira A. Fulton specifically to alleviate the financial burden during student teaching. This scholarship has blessed the lives of many students, making it so that they do not have to work additional jobs while trying to complete the full-time job that is student teaching.

Seeking to heed President Reese’s call for every student to be provided with inspiring learning experiences, the Mathematics Education Department offers several mentored learning opportunities. Some students collaborate with professors on research projects. Others serve as a “TA Plus,” working closely with professors on grading, administrative tasks, and instructional support. These mentored experiences are beneficial for both students and faculty.

The department’s public-school outreach program offers yet another invaluable mentored experience. Students assist at the high school in the state hospital, where they support the sole math teacher in assessing student needs, designing instruction, and modeling dedication and interest. This program fosters empathy and compassion, helping students understand the challenges faced by those who have struggled in school. The public-school outreach program is a testament to the department’s dedication to community engagement and practical learning.

Another experiential learning opportunity is the department’s annual Discover STEM event, which brings middle school and junior high students to campus for hands-on activities in various STEM fields. Organized by math education students, this event serves as a recruiting

tool, showcasing BYU as an exciting place to study STEM and potentially pursue a career in teaching. The focus on math education means that the department has a strong presence at the event, even though mathematics education is one of the smaller departments. The BYU Mathematics Education Department is dedicated to providing exceptional educational experiences and supporting future teachers, who are in high demand.

Small but Mighty

The BYU Mathematics Education Department has eleven full-time faculty members, including eight professorial and three professional faculty. There is also a rotating clinical faculty associate position, which allows a practicing teacher from a local school to join the department as a full-time teacher for two years, as part of the CITES Program in the School of Education. The department pays the clinical faculty associate’s salary to the school district, ensuring that the local schoolteacher maintains their school tenure during the two years at BYU.

THE DEPARTMENT OF MATHEMATICS EDUCATION



The department is also fortunate to have two large National Science Foundation (NSF) grants. Dawn Teuscher’s grant focuses on understanding teachers’ curricular reasoning, while Blake Peterson and Keith Leatham have received their third consecutive NSF grant to study how teachers utilize teachable moments in the classroom. This research involves working with teachers to develop effective teaching practices.

The NSF’s recognition of the department’s excellence is mirrored from within the college as well: “The Math Ed Department is already hands down the best in the world, yet they are still trying to figure out ways to be even better,” says Grant Jensen, dean of the College of Computational, Mathematical, and Physical Sciences. [it](#)

MATH THE WORLD

Math the World is a YouTube channel created by BYU mathematics education Professor Doug Corey and a team of students to bridge the gap between theoretical math and its real-life applications. The channel’s videos take everyday questions and harness the power of mathematical modeling to provide insightful and meaningful answers. And because the channel’s creators are also math educators, they know the material, how to teach it, the common pitfalls students make, and the pedagogy needed to help empower other teachers! [@MATHTHEWORLD](#)

104 VIDEOS
3.9M+ TOTAL VIEWS

200K+ VIEWS EACH FOR 7 VIDEOS
56.4K SUBSCRIBERS

PHOTO BY BYU/GRACE MACFARLANE



TRADITION, INNOVATION, AND A VISION FOR THE FUTURE

THE PHYSICS AND ASTRONOMY Department at Brigham Young University is a powerful example of research excellence, student mentorship, and scientific innovation. The department has grown significantly over the years, particularly in acoustics. Initially, acoustics research at BYU focused on musical and vocal studies. But with the arrival of energy-based acoustics specialist Scott Sommerfeldt, the focus expanded to include structural acoustics, such as sound damping. Today, faculty members explore various aspects of acoustics, including jet and rocket noise with Kent Gee, underwater applications led by Traci Neilsen, and structural studies conducted by Micah Shepherd and Brian Anderson.

Housing physics and astronomy in the same department has fostered both

interdisciplinary collaboration as well as ongoing discussions about their relationship. While physics traditionally classifies astronomy as a subfield, astronomers advocate for distinct departmental structures. Despite this debate, BYU regards the two fields as equals, allowing students to engage in broad scientific research and leverage strengths in acoustics and astrophysics.

Shifting Resources to Expand Horizons

The department has been evaluating the future of the West Mountain Observatory, BYU's modern astronomical research facility. With limited faculty expertise in observatory operations, keeping the facility fully functional is increasingly difficult. Instead, BYU

LEFT BYU graduate student Makayle Kellison stands next to the United Launch Alliance's Delta IV Heavy rocket at Cape Canaveral Space Force Station in Florida, where she was part of a team of students led by Dr. Kent Gee that collected acoustical measurements of the rocket's final launch in April of 2024.

has focused on utilizing the six telescopes at the Eyring Science Center, which offer comparable capabilities with greater accessibility for students. Discussions about relocating the West Mountain Observatory telescopes continue, including the possibility of moving the thirty-six-inch telescope to the Southern Hemisphere—ideally to New Zealand. This shift could enable research on celestial objects that are currently beyond BYU's observational reach.

Another valuable resource has been BYU's connection to the Astrophysical Research Consortium (ARC), which has revolutionized the university's astronomy program. This partnership provides students with access to high-level telescopes and fosters collaborations with major institutions. It has enabled research in infrared spectroscopy, high-resolution imaging, and faint celestial objects.

Joining ARC was the result of years of discussion within the astronomy faculty. Department Chair Kent Gee and the college's dean, Grant Jensen, secured membership for BYU when circumstances were right. The connections established through ARC have opened doors for students, making them more competitive candidates for prestigious research positions and graduate programs.

Early Emphasis on Hands-On Research

Research is one of the defining strengths of the Department of Physics and Astronomy, largely because all graduates from the college are required to complete a senior thesis. This requirement ensures that every undergraduate participates in meaningful research during their time at BYU. The Department of Physics and Astronomy has successfully integrated research into its under-

graduate curriculum for more than twenty-five years, setting it apart from major institutions like Harvard, Ohio State, and UC Boulder. While larger programs struggle to provide hands-on research experiences, BYU has long emphasized its importance.

This proactive approach gives BYU graduates a significant advantage when applying to graduate schools; their research experience places them at a higher level than many peers, making them competitive candidates for elite institutions.

Faith, Education, and Innovation

BYU's Department of Physics and Astronomy uniquely integrates science and faith. While many universities separate religious beliefs from scientific truths, BYU embraces a perspective that acknowledges the harmony between the two. Dean Grant Jensen explains that in Doctrine and Covenants 88:79, the Lord instructs His followers to study things above the earth, on the earth, and below the earth. He says BYU fulfills that directive in this department by encouraging exploration of the heavens through both scientific and spiritual lenses.

Additionally, BYU's planetarium shows are uniquely designed to incorporate scriptural and prophetic quotes about the heavens, providing an educational experience unlike any other. The Royden G. Derrick Plane-

THE DEPARTMENT OF PHYSICS & ASTRONOMY



tarium is named after the father of one of the department's most influential donors, David Derrick. Derrick has contributed generously to astronomy research and advancing astrophysics studies at BYU.

The department also invests considerable effort into enhancing classroom learning. Faculty members maintain a library of physics demonstrations, ensuring that students engage with practical applications of complex theories.

The department maintains strong industry connections, including partnerships with leaders like Pete Roming, a director at the Space Dynamics Laboratory. His expertise has strengthened research capabilities and provided students with valuable networking opportunities. The external advisory council has also played a vital role in shaping the department's direction. Their support has helped maintain BYU's reputation for excellence in physics and astronomy education. These collaborations bridge the gap between academia and industry, ensuring graduates are well-prepared for professional careers. ■

PHYSTEC 5+ CLUB

BYU has received the PhysTEC 5+ Club Award every year since 2014, when it first received eligibility. This award recognizes universities with five or more physics teaching graduates each year. Recently, the BYU Department of Physics and Astronomy hired a physics education professor, Adam Ben-nion, solidifying the importance of secondary physics education programs.

PHOTO COURTESY OF KENT GEE



VISIONARY BEGINNINGS AND ENDURING IMPACT

lege of Physical and Engineering Sciences; in 1973, it transferred over to the newly formed College of Physical and Mathematical Sciences.

Since its founding in 1960, BYU's Department of Statistics has steadily become a pillar of academic excellence, innovation, and mentorship.

Leadership and Academic Offerings

The Department of Statistics provides a range of academic programs at both undergraduate and graduate levels, including degrees in actuarial science, data science, and statistics. It aims to provide exceptional education and foster research opportunities, which prepare students to excel in data-centric careers.

Throughout its history, the department has benefited from visionary leadership. Foundational progress was driven by Melvin W. Carter, Dale O. Richards, H. Gill Hilton, and J. Earl Faulkner. These early leaders fostered a collaborative spirit in the department, welcoming student involvement. Among their students is Dennis Tolley, who graduated with a bachelor's of science in statistics in 1970 and served as department chair from 2012 to 2017. Tolley often states, "Statistics is the language of evidence, and it's how we make sense of complexity."

THE STORY OF THE BYU DEPARTMENT

of Statistics began with foresight. BYU President Ernest L. Wilkinson recognized the growing importance of data and analytics and declared the need for a dedicated Department of Statistics. It was originally established to support the Bureau of Church Studies, which was tasked with predicting and planning for Church educational needs.

President Wilkinson hired Howard C. Nielson, then a Stanford professor, to build the department from the ground up. He integrated existing courses from across the univer-

sity and developed a curriculum designed to prepare undergraduates in subjects then typically reserved for graduate studies.

Though the Department of Statistics was first housed in the College of Business (now the BYU Marriott School of Business), degrees in statistics were awarded either through the College of Business or the College of Physical and Engineering Sciences. Between 1961 and 1966, thirty-two bachelor's degrees were awarded. In 1966, the Department of Statistics was officially listed as one of the ten departments in the Col-

PHOTOS BY BYU PHOTO, SELLINGPIX/ADOBE STOCK

Evolving Disciplines and Strategic Growth

The department has continued to expand its academic footprint. In addition to its core offerings, the department now includes a data science major, which was developed by Shannon Tass and Robert Richardson through cross-department collaboration with the computer science, math, and physics departments. Recent hires Jake Rhodes and Tom Kerby also greatly contributed to the department's efforts in data science.

In the actuarial science program, Brian Hartman, the current coordinator, has infused the major with energy and innovation. His leadership has positioned BYU among a select group of institutions designated as Centers of Actuarial Excellence by leading professional societies. With nearly one hundred students currently majoring in actuarial science, the program continues to thrive. "Our students are sharp, and our professors are genuinely committed to their development," Hartman says.

Candace Berrett has led efforts to strengthen the statistics master's program within the department, providing state-of-the-art classes and a top-notch program recognized by industry leaders and PhD programs nationwide.

A Culture of Research and Real-World Impact

The statistics department's research culture is thriving. Faculty members have published in the top jour-

nals in this field and done important work inside and outside of the department. Heaton restructured the foundational STAT 121 course to improve student success, and Richard Warr, Matt Heaton, and William Christensen have recently organized international conferences in their areas of expertise. Associate professor Alex Petersen recently won the College Discovery Award and an NSF grant, further elevating the department's research profile. Phil White and Michael Christensen demonstrate how to be excellent in both teaching and research. Faculty members Berrett and William Christensen are leading outreach efforts and inspiring future statisticians by visiting high schools after AP Statistics exams.

But the department is also making a difference on a grander scale. Led by Garritt Page and other schol-

ars, the department is using its foundation in Bayesian statistics to strengthen its growing influence in environmental science, climate modeling, and pollution analysis.

Sports Analytics as a Flagship Frontier

Among the department's most dynamic areas is sports analytics. Gil Fellingham, who serves as editor of the *Journal of Quantitative Analysis of Sports*, has helped make BYU a national leader in the field. C. Shane Reese—now president of BYU—pioneered key research in sports analytics, including innovative models that compare athletes across generations.

Students play a central role in this momentum. Thanks to the esteemed faculty in this program, students are gaining hands-on experience with professional sports teams, turning theory into practice.

PAGE 26 PHOTO BY ALMENDRA CLAWSON; PAGE 27 COURTESY OF RILEY WILLIAMS

Teaching, Mentoring, and Experiential Learning

With over four thousand students taking STAT 121 each year, the department plays a central role in BYU's general education. Teaching assistants, many of whom are undergraduate majors, are essential to this effort.

Experiential learning programs provide students with meaningful opportunities to learn and grow through professor-mentored research, internships, and competitions. For example, in the annual data analysis challenge organized by Richardson, teams tackle complex datasets and present their findings to panels of alumni and employers, receiving feedback and forging connections.


Many students gain valuable hands-on experience through the department's Consulting Center. Under the mentorship of Greg Snow, students assist campus and external

BYU'S ACTUARIAL PROGRAM

BYU's actuarial program has earned top-tier recognition from the leading professional organizations. The Society of Actuaries recognizes BYU as one of just fifteen US programs—and twenty-two worldwide—with University Earned Credit designation. Similarly, the Casualty Actuarial Society awards BYU gold-level recognition, a distinction shared by only fourteen US programs and seventeen global programs. BYU is one of seven institutions to receive both honors.

researchers in designing methodologically sound studies and experiments. Their role often extends to analyzing complex datasets and providing crucial insights that support high-impact research.

The student association, originally advised by Hartman and now supported by Jamie Perrett, provides additional opportunities for community building, research collaboration, and professional networking.

Whether the focus is on actuarial science, sports analytics, environmental modeling, Bayesian statistics, or data science, the statistics department's influence is far-reaching. At BYU, statistics is not just a discipline—it is a summit. And the ascent continues. 

BELOW The BYU Statistics Association hosts numerous activities and events to promote unity within the BYU Statistics Department and foster a lifelong study of statistics.



RIGHT Left to right: Danika Lasson (applied statistics and analytics), Chloe Walcott (actuarial science, 2025 graduate), and Camilla McKinnon (statistics, integrated BS/MS).



JAMES E. TALMAGE BUILDING

The Talmage Building is home to the Departments of Mathematics and of Computer Science. Fittingly, it features a statue of Po, the panda from DreamWorks's *Kung Fu Panda*, designed by former BYU student Jason Turner.

Built in 1971, this was the first building on campus constructed with an earthquake-resistant design. An annex was added later. The building houses many of the university's core computer systems, providing networked programs and storage space that faculty and students can access around the clock.

COURTESY OF BYU PHOTO >



THE BUILDINGS THAT SHAPE DISCOVERY

At BYU, the buildings aren't just backdrops to student life; they're central characters in the story of learning. Nowhere is this more evident than in the College of Computational, Mathematical, and Physical Sciences, where each building plays a vital role in shaping the academic experience.

BRICK WALL GARETH DAVID/UNSPLASH; CELLS PETER HERMES FURIAN/ADOBE STOCK



EYRING SCIENCE CENTER

Named after Carl F. Eyring, who served as dean of the College of Arts and Sciences for nearly thirty years, the Eyring Science Center (ESC) was dedicated in 1950 and underwent a major renovation from 1995 to 1997. The ESC is home to both the Physics and Astronomy and the Geological Sciences Departments.

A Foucault pendulum demonstrating Earth's rotation swings in the lobby, and a 16-inch telescope—donated during the renovation—resides in the Orson Pratt Observatory. The ESC is home to various specialized laboratories and to the Pendulum Court Café, a full-service cafeteria operated by students and interns during the fall and winter semesters.

The building also houses BYU's anechoic chamber, which absorbs at least ninety-nine percent of sound energy, making it one of the quietest places on campus.

^ PHOTO COURTESY OF L. TOM PERRY SPECIAL COLLECTIONS, HAROLD B. LEE LIBRARY, BRIGHAM YOUNG UNIVERSITY

EYRING SCIENCE CENTER ANNEX ADDITION

Completed in the spring of 2025, this striking addition on the north end of the ESC expands the college's capabilities. It houses the Department of Mathematics Education, the University Electron Microscopy Facility, and the College Business Office. A large, flexible-use space within the annex is available for events and collaborative work across the college.

< PHOTO BY BYU/GRACE MACFARLANE



EZRA TAFT BENSON BUILDING

The Benson Building, built in 1995, supports a wide range of scientific research and is home to the Fritz B. Burns Cancer Research Laboratory and Biological Mass Spectrometry Facilities. The building features eight microcalorimeters capable of measuring respiration and metabolic heat loss in small tissue samples across various temperatures.

On the main level, a walk-in growth room and two large plant-growth chambers support biological research. The building also houses an isotope ratio mass spectrometer with an elemental analyzer. These facilities make the Benson Building a fitting home for the Department of Chemistry and Biochemistry.

^ COURTESY OF BYU PHOTO



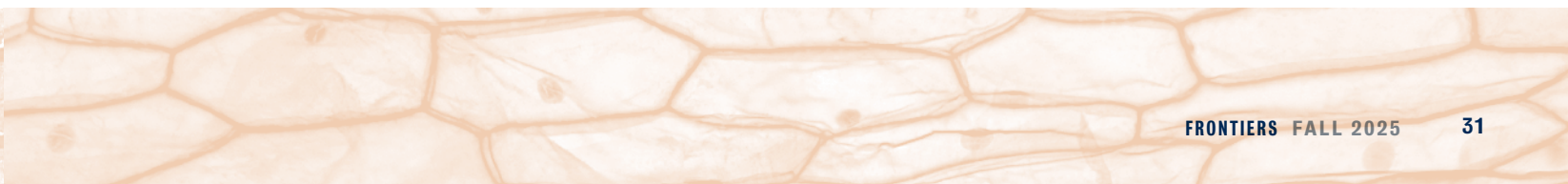
THE WEST VIEW BUILDING
 Announced in November 2018 and completed in July 2020, the West View Building replaced the Faculty Office Building. It now serves as the home of the Department of Statistics, offering modern office and research space for faculty and students. v COURTESY OF BYU PHOTO



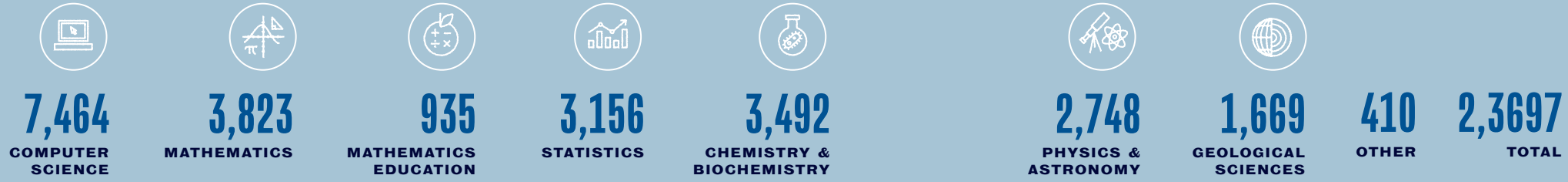
JOSEPH K. NICHOLAS BUILDING

The Nicholes Building supports the college's operations behind the scenes. It was built in 1971 and houses the chemical stores, the college events team, and chemistry computer support. The building plays a crucial role in keeping the college's research and events running smoothly.

< COURTESY OF BYU PHOTO



NUMBER OF GRADUATES BY DEPARTMENT



2,039 CURRENT ALUMNI ON BYU CONNECT

150 CURRENT MEMBERS OF THE MENTORING NETWORK

3 RECENTLY ANNOUNCED MAJORS: DATA SCIENCE, MACHINE LEARNING, AND APPLIED PHYSICS

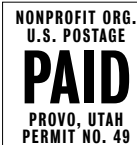
NUMBER OF ALUMNI BY COUNTRY



NUMBER OF GRADUATES BY DECADE



TOTAL **26,332**



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RISESTORIES/](https://alumni.tools.byu.edu/rise/stories/)