



## SELECTED FACULTY AND STUDENT AWARDS

### Faculty

**Caroline Brettell, Professor of Anthropology**  
*American Academy of Arts and Sciences Member*

**Mark Chancey, Professor of Religious Studies**  
*Fellow, Guggenheim Memorial Foundation*

**Klaus Desmet, Professor of Economics**  
*Fellow, National Bureau of Economic Research*

**David Meltzer, Professor of Anthropology**  
*Fellow, American Academy of Arts and Sciences; Member National Academy of Sciences*

**Nicolay Tsarevsky, Associate Professor of Chemistry**  
*National Science Foundation CAREER Award*

**Wei Cai, Betty Clements Chair in Applied Mathematics**  
*National Science Foundation and Air Force Grants*

**Jill Kelly, Associate Professor of History**  
*Fulbright Scholar*

### Students/Recent Alumni

**Patricia Nance, '17 – Chemistry**  
*Goldwater Scholar*

**Joseph Di Pane, '17 – Biological Sciences, History**  
*Goldwater Scholar*

**Nicole Hartman, '16 – Physics**  
*National Science Foundation, Graduate Research Fellowship*

**Ryan Cross, '18 – Political Science, International Studies**  
*Presidential Fellow at the Center for the Study of the Presidency and Congress*

## ASK US HOW

For more information and to learn about how you can support Dedman College research, please contact:

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**Your support for faculty and student research is needed more than ever.**

## DEDMAN COLLEGE.

The academic heart of SMU, Dedman College is committed to the promise and reality that a liberal arts education is essential preparation for life and career. Its students gain the analytical, creative and practical skills necessary for professional success and personal growth in a rapidly changing world. Graduates are passionate, self-reflective, globally aware and civically engaged leaders and citizens.

Equally committed to pursuing new knowledge and bringing benefit to society through research, Dedman College fosters the process of discovery across the humanities and sciences, seeking innovation and insight through pure and applied research. Driven by the conviction that research and teaching in the liberal arts must be intimately linked, Dedman College strives to engage undergraduate and graduate students directly in the process of problem-solving and scholarly exploration.

SMU will not discriminate in any program or activity on the basis of race, color, religion, national origin, sex, age, disability, genetic information, Veteran status, Sexual orientation or gender identity and expression. The Executive Director for Access and Equity/Title IX Coordinator is designated to handle inquiries regarding nondiscrimination policies and may be reached at the Perkins Administration Building, Room 204, 6425 Boaz Lane, Dallas, TX 75205, 214-768-3601, [accessequity@smu.edu](mailto:accessequity@smu.edu).



# Changing Our World for the Better

## SUPPORTING GROUNDBREAKING RESEARCH BY FACULTY AND STUDENTS

## ASKING THE RIGHT QUESTIONS

Every day, SMU Dedman College faculty and students pursue, discover and share new knowledge to help us better understand the world and our place in it.

Groundbreaking research lies at the heart of what we do, and our internationally recognized faculty members dedicate themselves to asking hard questions and pursuing creative ideas and practical solutions to make the world a better place to live and work.

As teachers, mentors and problem solvers, they inspire that same curiosity in their undergraduate and graduate students, partnering with them to take research beyond the lab, the classroom and out into the world.





# WORLD-CHANGING RESEARCH IN DEDMAN COLLEGE SPANS 16 DEPARTMENTS ACROSS THE HUMANITIES, SOCIAL SCIENCES AND NATURAL SCIENCES

## MATHEMATICAL SCIENCES

- Spatial modeling and analysis of functional magnetic resonance imaging
- Data mining in electronic medical records
- Methods and statistics for optimizing adaptive testing methods in large-scale assessments
- Using super computers to solve scientific problems

## THE NATURAL WORLD

- New biodegradable materials
- How to remove toxic heavy metals from wastewater
- The properties of the most fundamental constituents of matter and the laws governing their behavior
- Deciphering the nature of dark matter
- Harnessing the interactions between light and matter to visualize the chemistry of life in cells, animals, and patients

## DISEASES AND CURES

- Genetics and developmental biology
- Aging, cancer and infectious diseases
- Drug discovery for the treatment of cancer and neurodegenerative diseases
- Nonresistant antibiotics and nontoxic anticancer drugs
- How the body's circadian clock is implicated in cancer, diabetes, heart disease and depression
- Biostatistics, bioinformatics and epidemiology
- Preventing human papillomavirus in medically underserved communities
- Asthma and airway disease
- Novel drugs and drug delivery system



## ENERGY AND THE ENVIRONMENT

- Determining why large numbers of earthquakes have clustered in four North Texas areas that previously had seen almost none
- Designing the next generation power grid

## ECONOMICS

- Impact of globalization, industrialization and urbanization on human populations
- The causes and consequences of hunger in North Texas
- Oil price fluctuations and strategic interaction among oil producers
- Regional trade agreements and global trade
- Economic growth under uncertainty and the effect of risk and risk aversion
- The causes of budget deficits in the United States
- Identifying the best incentives for motivating human behavior

## GOVERNMENT AND PUBLIC POLICY

- The impact of cyber operations on U.S. and global internet security
- Assessing the political, economic and social implications of national immigration policies
- The policy implications of deficit reduction and fiscal stabilization in the United States
- Factors explaining persistent differences between men's and women's economic, professional and political outcomes
- How offensive cyber operations affect global internet security
- Why Hispanics have low rates of political participation

## CULTURES IN CONTACT

- Indian origins of Enlightenment science as represented in 18<sup>th</sup>-century literature
- The history of white supremacy in 19<sup>th</sup>- and 20<sup>th</sup>-century American literature
- The three-and-one-half centuries of Spanish colonial expansion, from the voyage of Christopher Columbus to the independence movements in North and South America in the early 19<sup>th</sup> century
- How Latinos' struggle to gain full citizenship has helped make American culture more democratic, egalitarian and true to its origins
- Contemporary French citizenship and immigration

## RELIGION AND PHILOSOPHY

- How the Bible is taught in public schools
- The role of religion in economic development
- The impact of the American Revolution on global Protestantism
- The history of Jewish philanthropy
- The archaeology of the historical Jesus
- The environmental history of Buddhism
- How rationality and self-knowledge intersect
- The moral foundations of legal punishment and what legitimates punishment by the state

## HUMAN BEHAVIOR

- Improving parent-child relationships and reducing child abuse
- Reducing sexual assault and dating violence on high school and college campuses
- New methods for detecting and measuring mental illness
- Understanding and identifying the structural mechanisms that produce social inequality
- Using technology to improve health behaviors

## HUMAN IDENTITY AND EXPRESSION

- Origins, antiquity and adaptations of the first peoples who colonized North America in the Ice Age
- The relation between corporate law and modernist aesthetics in literature and art
- Shakespeare in performance and on film
- The writing of important African-American activists of the 19<sup>th</sup> century
- How our brains are capable of conscious experience: how do neurons generate sensations and emotions?
- The representation of time in popular commemorations

