

THE UNIVERSITY OF NOTRE DAME GRADUATE SCHOOL BANNER BOOK

*A selection of graduate student research representing the
breadth and depth of the University of Notre Dame's
scholarly impact on our community and world.*

KIDS' STORIES SHOULD BE SCARY



Sarah Martin
Art, Art History and
Design
M.F.A. Program

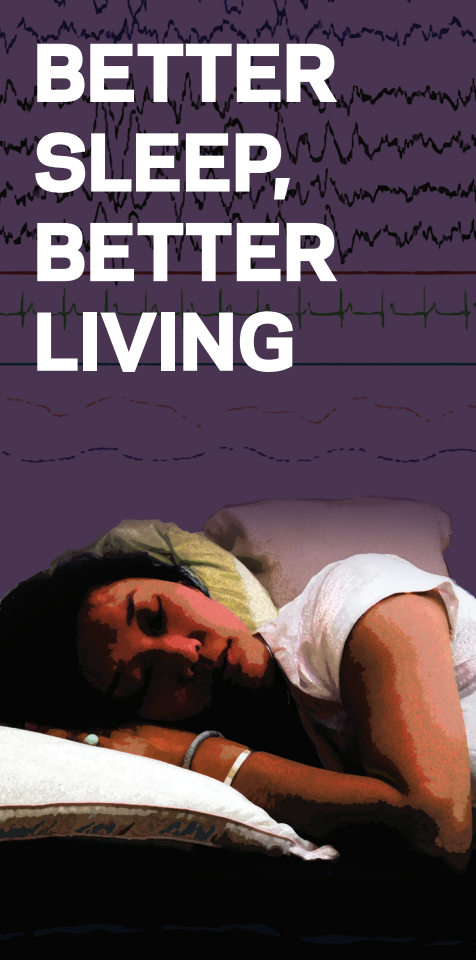
Was it Bambi's mom, or Simba's dad—the moment a children's tale broke your heart? By creating a series of apps, digital films, and books, Sarah Martin helps children navigate difficult, sometimes scary, themes—death, the destruction of the environment, greed, and identity—while helping young readers accept that bad things happen to everyone.

WORLD'S DEADLIEST ANIMAL



Matthew Eng
Biological Sciences
Ph.D. Program

Mosquito-borne diseases annually kill over 700,000 people, and put half the globe at risk for malaria, dengue fever, yellow fever, and encephalitis. Matthew Eng researches one such killer, the *Aedes aegypti*, a dengue-transmitting mosquito that sickens millions of people world-wide. By expanding our knowledge of how mosquitoes act as a vector for dengue (a disease similar to West Nile), Matthew's work may ultimately help develop effective control strategies, prevent infection, and improve the quality of life for millions of people affected by this disease every year.



BETTER SLEEP, BETTER LIVING



Tony Cunningham

Psychology
Ph.D. Program

What price do you pay
when you lose a good night's
rest? Research suggests that

such a loss may be quite costly. Sleep helps us encode information and experiences; deep sleep consolidates knowledge and is integral to processing trauma. Tony Cunningham is interested in the ways that sleep, stress, emotion, memory, and mental health all interact and affect one another. His research will ultimately have a positive impact on therapies for people suffering from sleep loss that emerges from disorders such as depression and post-traumatic stress disorder.



WHAT MAKES A BEST- SELLER?



Kara Lee Donnelly

English
Ph.D. Program

What makes a work or an
author the “best”? Who gets
to decide? How does reading
diverse literature from around

the world help us to know the world and its people?

Kara Lee Donnelly investigates these questions through a careful analysis of one of the most commercially and critically influential literary prizes, the Man Booker Prize for Fiction. Her research uses the Booker prize as a lens on the central change at the heart of contemporary English-language literature: its spectacular integration across media forms and around the globe.

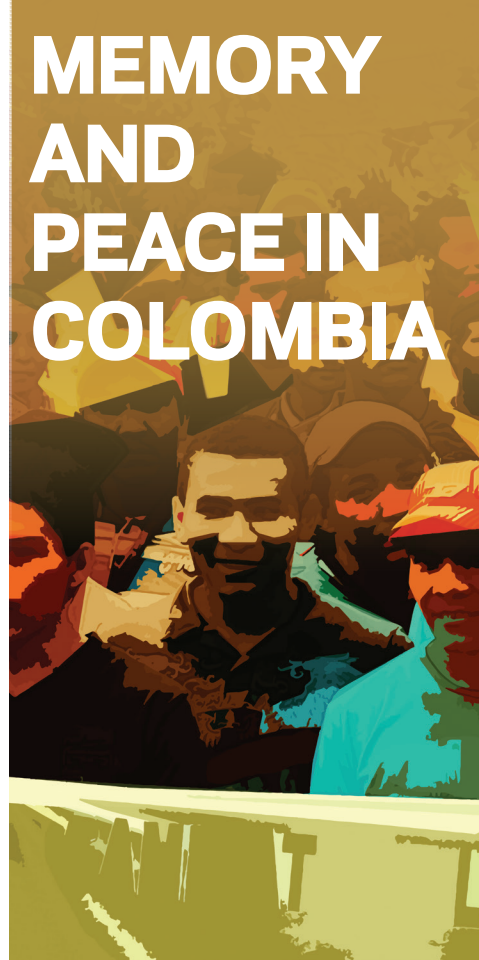
LASERS IN THE SKY



Edwin Mathews
Aerospace and
Mechanical
Engineering
Ph.D. Program

How do you keep intense air turbulence from turning a high-powered laser with a focused beam into a diffuse and therefore useless flashlight? Edwin Mathews' research seeks solutions for maintaining the integrity of a laser's beam as it flies high in the sky. The Institute for Flow Physics and Control's Aero-Optics group at Notre Dame is one of the nation's leaders in aero-optics research, and Edwin is paving the way for airborne laser applications in communications and national defense.

MEMORY AND PEACE IN COLOMBIA



Angela J. Lederach
Peace Studies and
Anthropology
Ph.D. Program

Today, the Latin American country of Colombia is at a historic crossroads, on the cusp of signing a national peace accord to end a 50-year war. Alta Montaña, a rural farming village in northern Colombia, is representative of many of the country's villages, where over 4 million people have been forcibly displaced by a half-century of sustained violence. Embedded within the story of violence and displacement is an equally powerful story of resiliency, creativity, and hope. Angela Lederach's research focuses on Alta Montaña's community-based peacebuilding processes, which are laying the foundations for sustainable peace.



Chris Galeucia

Psychology
Ph.D. Program

Distracted driving is dangerous driving. Chris Galeucia studies how GPS units, phones, headlamps, lane warnings—all features of cars and the driving experience that we take for granted—affect our attention. These technologies, while helpful, can blind us to hazards, and even turn us into hazards. The research Chris undertakes informs smarter, safer car design by aiding in the development of instruments and warning lights that do not distract drivers while simultaneously keeping them well informed.



Claire Bowen

Applied Computational
Mathematics and
Statistics
Ph.D. Program

While big data has big rewards, there is great concern whether personal information can ever remain private. Claire Bowen is working on an algorithm that provides a high level of privacy protection for media users and on-line consumers while preserving the statistical structure of big datasets for researchers, corporations, and government agencies. Her research provides a means for addressing the confidentiality issues of big data.

There are more than 2,100 graduate students
pursuing research at the University of Notre Dame.





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The Graduate School

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