NEUROSCIENCE INITIATIVE



Inspire. Achieve. Scale.



Wharton Neuroscience Initiative (WiN) works at the nexus of business and neuroscience to reframe how companies approach a wide variety of challenges — including brand strategy, talent assessment, team dynamics, and business decisions.

WiN currently produces research leading to best practices in five mission-critical areas for visionary companies:



BRAND STRATEGY and CUSTOMER EXPERIENCE



TALENT ASSESSMENT and DEVELOPMENT



03. TEAM DYNAMICS and TRUST BUILDING



04. NEGOTIATION and COMMUNICATION



BUSINESS DECISION-MAKING

BUILDING BETTER BUSINESS THROUGH BRAIN SCIENCE



A professional soccer player participates in a drill while wearing eye tracking glasses and a wireless electroencephalogram (EEG) sensor developed by WiN Faculty Director Michael Platt to gather data in real world contexts. Photo Credit: Kevin Monko

The Wharton School, known for its tradition of innovative approaches to business education and its commitment to analytical rigor, attracts the most talented students and most accomplished faculty because of its leadership in all of these areas. Wharton alumni are trained to make decisions with authority and confidence, focused on garnering the best returns, whether financial profits or other performance measures.

WiN is an intrinsic part of Wharton's ambition to drive business leaders to reinvent decision-making through analytics.

WiN leverages breakthroughs in neuroscience to reframe how businesses approach a wide variety of challenges such as brand strategy, negotiation, persuasive messaging, decision making, team management, leadership, and communication.

STUDENT SOCIETY

The Wharton Neuroscience Initiative Student Society (WiNSS) is an influential student group comprised of undergraduates, MBA students, and graduate students across the University. The society holds monthly meetings, hosts luncheons with companies, shares job opportunities, encourages involvement in research, and facilitates learning about how neuroscience and business connect. WiNSS also advocates for academic initiatives at the University level, such as proposing an academic concentration and establishing an internship program.

Membership continues to increase each academic year

Student Members



2018-19





PROGRAM OVERVIEW

WiN is firmly rooted in Wharton while spanning the entire University to engage students and faculty in the rapidly evolving area of brain science and business. While a handful of schools are pursuing activities in this field, WiN is the first comprehensive, strategic undertaking at an elite institution. The initiative capitalizes on the substantial resources already in place at Penn — at Wharton, the Perelman School of Medicine, the Annenberg School for Communication, Penn Engineering, and the School of Arts & Sciences.

Brain activity and other related biometrics, such as eye gaze, pupil dilation, posture, heart rate, facial muscle contractions, tone of voice, and respiration, can now be measured in real-world contexts and in multiple people simultaneously. Such biometric measurements, increasingly available through wearable, consumer-friendly neurotechnologies, help to predict decision-making by consumers and in social environments.

These technological innovations are changing our understanding of cognition, the flow of information between people, and the role of dynamic feedback, thus providing a wealth of new insights and the capacity to develop even more robust technologies and analytics as well as enhance business decisions.

Under the leadership of Penn Integrates Knowledge (PIK) Professor Michael Platt, WiN aims to serve as a catalyst driving the development of such technologies and deployment in diverse applications in business, medicine, and engineering.

MOVING NEUROSCIENCE OUT OF THE LAB AND INTO THE REAL WORLD

Recent breakthroughs in neuroscience are helping business leaders understand more accurately what holds people's attention and what motivates them.

WiN Faculty Director Michael Platt has developed a low-cost, mobile, wearable electroencephalogram (EEG) device with high quality nanowire sensors that is being developed and commercialized through the Penn Center for Innovation to help gather data in real-world contexts.

For example, WiN collaborated with an enterprise solution company to determine levels of engagement at a trade show using Platt's wearable technology. The data collected helped predict which booths and keynotes were most effective at driving interest and engaging visitors, without interrupting them to ask questions.

The findings offer a disruptive new approach for companies to maximize customer experience not only at trade shows but also in entertainment and retail.



Michael Platt wears eye-tracking glasses and a wireless EEG among the food trucks on campus. Photo Credit: Kevin Monko

COURSES

Introduction to Brain Science for Business

Students are introduced to the basic anatomy and physiology of the brain and important techniques for measuring brain function. The course surveys major findings in neuroscience with applications to business, including selective attention and advertising; valuation and marketing; decision-making and the tyranny of choice; learning innovation and creativity; and social influence, team-building, and leadership. Discussions include ethics, brain-machine interactions, and artificial intelligence.

Consumer Neuroscience

Neuroscience applications to marketing research and product development are experiencing explosive growth. This course provides an overview of the neuroscience behind and the potential for these developments, ranging from well-known and widely used applications, like eye-tracking, to emerging methods and measures, such as mobile technologies, face-reading algorithms, and neural predictors of market response. The course discusses applications in branding and product development, including wearable physiological devices and apps, sensory branding for food and fragrances, pharmaceuticals and medical devices, and products designed to enhance cognitive functions.

Visual Marketing

This course emphasizes how to measure, interpret, and optimize visual marketing. It also provides an overview of visual perception and visual cognition, eye movements, and attention — and their role and influence on consumer memory, persuasion, choice, and other behaviors. Real-world examples demonstrate how advertising, design, and marketing can be significantly enhanced by knowledge of how visual information and its presentation context can be optimized to deliver desirable and advantageous messages and experiences.



Win Annual Summit

The WiN annual summit has become the preeminent gathering of the leading minds in the field of neuroscience. This day-long event fosters energetic discussions, knowledge sharing, and new discoveries at the intersection of neuroscience and business.

The Intersection of Neuroscience and Marketing

December 2, 2016

The Legal, Ethical, and Societal Implications of Neuroscience and Business

February 2, 2018

The Future of Human Interaction and Performance



September 13, 2019



NeuroFlow CEO Christopher Molaro, WG'17, (left) and COO Adam Pardes, GR'18, speak at a recent BrainBiz Luncheon.

BrainBiz Luncheons

BrainBiz Luncheons provide a venue for students at all levels to hear from industry representatives who connect brain science and business.

BrainBiz Luncheons connect students with people outside of academia who share how their organization's work incorporates knowledge and methodologies from both neuroscience and business. These lunches are both information-rich and educational and provide opportunities for students to find internships and future employment.

GAINING

POPIII ARITY





KEY BIOGRAPHIES



Michael Platt

Faculty Director of the Wharton Neuroscience Initiative

Michael Platt is the James S. Riepe University Professor, professor of neuroscience in the Perelman School of Medicine, professor of psychology in the School of Arts & Sciences, and professor of marketing in the Wharton School.

Michael is a former president of the Society for Neuroeconomics, publishes regularly in toptier scientific journals, and has been featured in prominent TV, radio, print, and online media.

Professor Platt's pioneering research has deepened the understanding of how key areas of the brain work — and how that understanding can be applied in business settings. He is the author of *The Leader's Brain: Enhance Your Leadership, Build Stronger Teams, Make Better Decisions, and Inspire Greater Innovation with Neuroscience.*



Elizabeth Johnson

Executive Director and Senior Fellow of the Wharton Neuroscience Initiative Elizabeth (Zab) Johnson received an AB in psychobiology at Mount Holyoke College and a PhD in neural science at New York University. Before moving to Penn, she was the associate director of the Duke Institute for Brain Sciences and an assistant research professor in the Department of Neurobiology at Duke University's School of Medicine.

Her research focuses on the mechanisms underlying vision and visual behavior, from retinal and early visual cortical physiology in animal models to eye tracking, to investigate how human observers look and visually navigate through the world and the role of social cognition in these processes. She has a long-time interest in how our perception of visual art informs how we see.

CORPORATE Partners

• AIIR Consulting

A business psychology executive coaching company that is beginning to include relevant neuroscience approaches and methods.

• Amplio.ai

A company working to help people unlock their full potential. Amplio has pioneered technology that augments human reasoning with AI to deliver personalized recommendations and programs.

Vanguard

One of the world's largest investment management companies, offering a large selection of low-cost mutual funds, ETFs (exchange-traded funds), advice, and related services.

BRAINBIZ PARTICIPANTS

• Thiel Foundation's Breakout Labs and Breakout Ventures

A fund for early-stage scientific entrepreneurs working at the intersections of technology, medicine, biology, materials, and energy.

Halo Neuroscience

A neurotechnology company that developed a headset with direct current stimulation for motor training optimization.

Communication Neuroscience Lab

A lab that works to predict behavior change following exposure to persuasive messages and understand what makes successful ideas spread.

FUNDING OPPORTUNITIES

As interest in this emerging field continues to rise, Wharton seeks philanthropic support to establish a clear path to sustainability and growth for this trailblazing program. A gift of \$250,000+ enables Wharton Neuroscience to advance in the following areas:

- **Team-Based Research:** WiN offers business leaders partnerships with faculty and students to develop and refine neuroscience applications specific to their industry's challenges to help create innovative business solutions.
- Student Practice and Experience: Undergraduate and MBA students work with companies to apply the science they learn to real-world business challenges. MBA students lead research teams with companies, gaining the unique experience of representing the initiative and the School as pioneers in the field.
- WiN Research Innovator Prizes: This program awards financial support to faculty partners from two or more departments at Wharton to explore an idea that applies a concept and/or technology from neuroscience to a business question. Wharton faculty partners may also engage faculty members from other schools across the University.
- BrainBiz Luncheons: This series brings companies and organizations at the intersection of neuroscience and business to Wharton. Students network and learn about career opportunities and business paths from leaders in the field. As excitement around the luncheon grows, so does the need to expand the event.

ENDOWED GIFTS TO THE WHARTON SCHOOL

An endowed gift provides sustained funding that transforms a program or initiative. This level of philanthropy enables Wharton to confidently launch new initiatives and plan for future activities or address immediate needs.

TERM GIFTS TO THE WHARTON SCHOOL

Term funding provides greater financial support upfront than an endowed gift and funding is spent down over a period of years.

Typically philanthropic commitments are paid over a period of three to five years.

To learn more about supporting the Wharton Neuroscience Initiative, please contact Wharton External Affairs: +1.215.898.8479 or external.affairs@wharton.upenn.edu