INDIANA UNIVERSITY SCHOOL OF INFORMATICS AND COMPUTING AT IUPUI

FOR ALL

The Indiana University **Bicentennial Campaign**

FOR ALL WHO SHARE KNOWLEDGE WITH THE WORLD

The future will be built by experts in informatics and computing. As the world makes tremendous gains in portable device technology, wireless connectivity, personalized health records, and genomic analysis, graduates of the IU School of Informatics and Computing at IUPUI are in high demand. And as technology continues to advance at an accelerated rate, imagine what new opportunities will be open to our students in the next century.

That future depends on all of us. We share a responsibility to be stewards of a smarter tomorrow. Together, we can open new doors to higher education. We can create real tools and resources where now there are only ideas. We can build more useful connections, more enlightened citizens, and a smarter society.

As part of ***For All: The Indiana University Bicentennial Campaign***, the IU School of Informatics and Computing at IUPUI is raising critical private support to help achieve these goals. With your help, we will empower our faculty and students to realize their greatest potential. We will harness the power of information to transform our world for the greater good.

Together, we can create a stronger community, a brighter Indiana, and a better world for all.

FOR ALL WHO INVEST IN OUR FUTURE

GOAL #1: SUPPORT STUDENT SUCCESS

The heart of our mission is educating the great minds that will profoundly change how people around the world use information technology to live, work, play, improve health care, and better their communities.

With your support, the IU School of Informatics and Computing at IUPUI can provide access for deserving students, retain a diverse and talented student body, and give students meaningful learning experiences beyond the classroom. Your support builds the future of our IT workforce in Indiana and around the globe.

NURTURING THE BEST AND BRIGHTEST TALENT

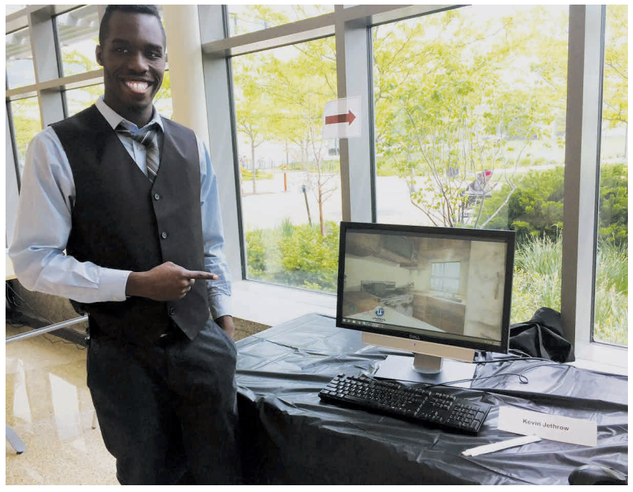
American universities are not preparing the number of graduates needed for millions of jobs that will require experts in computing and information technology. These jobs are and will continue to be among the highest in both demand and compensation in the United States.

We need to grow our talent pool, but the price tag for a college degree is prohibitive for many bright minds that can contribute to our increasingly digital world. Merit-based financial assistance and financial need-based assistance are among the most powerful tools we have to attract the very best students and provide access to an IU education regardless of financial situation.

Financial assistance and scholarships for economically disadvantaged students also provide life-changing educational research and study-abroad opportunities.

Student research scholars work with faculty to break ground in projects like building health care apps to manage diseases or creating virtual environments to help diagnose and treat psychological disorders. Our study-abroad program in Paros, Greece, gives students experience producing media such as video documentaries and 3-D graphical renderings of historical sites—documenting a city rich in cultural artifacts and traditions.

Your support shapes the future of information technology as well as the lives of our future graduates— giving them the skills, knowledge, and ability to change our world for the better.



IT STARTS WITH YOU

Undergraduate scholarships attract a dynamic, highly talented student body that we can prepare for the top professions of today and tomorrow through an innovative curriculum and essential learning experiences like research mentorships and study-abroad programs.

FOR ALL WHO MENTOR THE WORLD'S PIONEERS

GOAL #2: CREATE THE NEXT GENERATION OF GLOBAL LEADERS

The IU School of Informatics and Computing at IUPUI must better educate our younger generations in the topics of technology, informatics, and computing. Strong skills in these areas are critical for developing global thinkers—particularly among urban students, underrepresented minorities, and females.

With your support, we can continue to prepare a diverse cross section of high school students for careers in information technology—and build an IT talent pipeline that will advance our field, strengthen the economy, and mentor the next generations of global leaders.

PREPARING HIGH SCHOOL STUDENTS FOR IT CAREERS

By 2024, there will be 4 million jobs related to information technology in the United States. But the country's current computing undergraduates can fill only approximately 40 percent of those positions.

The Informatics Diversity-Enhanced Workforce (iDEW) program tackles two critical problems—a boom in IT-related jobs that cannot be met by the current workforce, and a lack of representation in this job sector from underrepresented minorities and women, whose interest in information technology is staggeringly low according to the Higher Education Research Institute's survey *The American Freshman*. To bridge that gap, the iDEW program focuses on high school populations that have higher concentrations of students from these groups.

In its pilot years, our faculty developed an innovative iDEW curriculum, working directly with teachers and students in three Indianapolis high schools—Arsenal Technical, Providence Cristo Rey, and Pike—to increase interest in and access to careers in technology. The results have been enormously heartening. Most of the students in the iDEW program earn dual high school and college credit at the IU School of Informatics and Computing at IUPUI.

The program's comprehensive, sustained-contact approach gives high school students in at-risk populations access to skills workshops, internships, professional certifications, and campus and tech company visits. "Personal interaction with students over a sustained period of time is key to making this program a success," says Executive Associate Dean and iDEW Program Director Mathew Palakal.

With your support of iDEW, we can sustain the program and give more at-risk students access to lucrative careers in informatics. And we can advance the economic strength of Indiana and our nation—creating a brighter future for all.

"iDEW students get opportunities they would not be exposed to otherwise. Most of these students will be the first in their families to go to college."

—Patti Hammerle
iDEW Teacher 2015–2016
Providence Cristo Rey High School

IT STARTS WITH YOU

Civic outreach programs address gaps in our workforce and inequities in access and opportunities, allowing our faculty to apply their knowledge in real-world settings, where they can teach future leaders in informatics and information technology.

Your support of the

SCHOOL OF INFORMATICS AND COMPUTING AT IUPUI

will fund world-class initiatives like the

CENTER FOR PERSONAL AND COMMUNITY HERITAGE INFORMATICS

WHICH DEVELOPS BETTER WAYS TO **HONOR OUR HERITAGE**

by **CAPTURING** and **STORING** digital data and artifacts

THAT ARE MANAGED BY PEOPLE IN LOCAL COMMUNITIES

FOR THE PEOPLE who live in them

PRESERVING THE **HUMAN NARRATIVE** AND

CREATING LONG-TERM **ACCESS TO OUR MEMORIES**

EMPOWERING AND CONNECTING PEOPLE EVERYWHERE

FOR ALL WHO MAKE OPPORTUNITY ACCESSIBLE

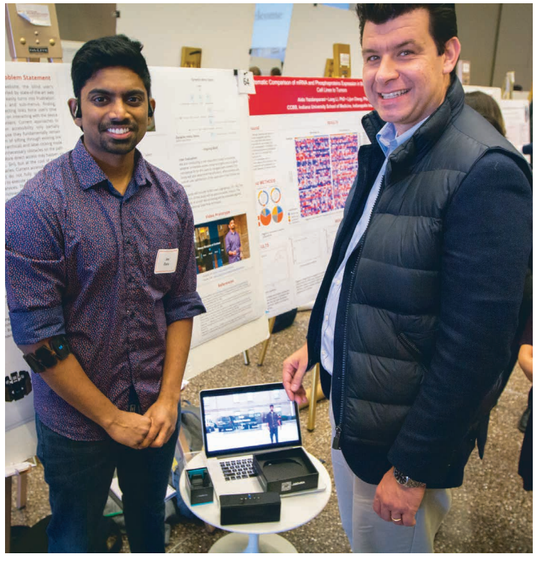
GOAL #3: DISCOVER IDEAS AND INNOVATIONS THAT CHANGE THE WAY WE LIVE

The IU School of Informatics and Computing at IUPUI aspires to become a leader in transforming lives through advances in computing and information technology. To realize this goal, we must attract top researchers and sustain their innovative work in the lab, in the community, and in the classroom.

Research grants allow us to meet the challenge of attracting and supporting researchers who make life-changing discoveries and collaborations. With your support, we can continue to champion excellence in transformative research that enhances our reputation and makes a meaningful difference in the world.

IT STARTS WITH YOU

Research support is critical for building and sustaining the work of a superior faculty, creating a community of innovation, and growing our world influence and reputation.



EMPOWERING THE BLIND AND VISION IMPAIRED

Thriving in today's technology-intensive, knowledge-based work environments is a challenge for the blind and vision impaired—a population that has historically faced high unemployment. Through a groundbreaking research initiative, Accessible Careers through Technology (ACT), we're working with the Indiana School for the Blind and Visually Impaired (ISBVI) and other partners to increase access to job opportunities.

On the education front, Professor and Associate Dean for Faculty Affairs Steven Mannheimer brings education workshops to ISBVI students that incorporate his original concept of "audemes"—meaningful units of sound, such as the jingle of keys or clicks on a keyboard—which are used to enhance their aural memory of subjects. The remarkable results include significant gains in students' test scores.

On the technology front, Professor and Executive Associate Dean Mathew Palakal and Associate Professor and Department Chair of Human-Centered Computing Davide Bolchini are leading research projects that build assistive technologies for integration into the workforce—such as aural web navigation, which employs auditory senses for navigating complex websites.

The ACT initiative presents new avenues for workforce development that go beyond empowering the blind and vision impaired via educational enhancement and assistive technologies in the workplace. ACT explores job opportunities that rely specifically on the special talents of the blind and vision impaired, such as heightened sensory awareness and rapid language-processing skills.

With your support, we can fuel important research—and recruit and retain the talented scholars who are shaping tomorrow by creating access to opportunities and building stronger economies and societies, locally and globally.

"Informatics is a powerful tool for improving opportunities for the underserved."

—Davide Bolchini
Associate Professor and Chair
Department of Human-Centered Computing

FOR ALL WHO CHANGE THE FACE OF HEALTH CARE

GOAL #4: CREATE A HEALTHIER STATE, NATION, AND WORLD

Faculty at the IU School of Informatics and Computing at IUPUI apply their expertise in informatics to a variety of areas in health care—making novel research collaborations and connections, and enabling advances that make enormous differences in the lives of patients and the jobs of caregivers. With your help, we can create faculty endowments to attract and retain the faculty members whose innovations make our world a healthier place.

USING 3-D TECHNOLOGY FOR SURGICAL PROSTHESES

"True amazement" is how dental patient Shirley Anderson describes his new prosthetic mandible, which represents a revolution in the future of dental prostheses and digital surgical design—as well as the quality of life for patients in a wide array of medical fields.

In a collaboration with the IU School of Dentistry, Media Arts and Science (MAS) faculty member Zebulun Wood and recent MAS graduate Cade B.T. Jacobs from the IU School of Informatics and Computing at IUPUI created Anderson's prosthetic mandible utilizing digital scanning and 3-D sculpture and printing technology—bringing a world of possibilities to a field that has long relied on more cumbersome materials and techniques.

Dr. Travis Bellicchi from the IU School of Dentistry at IUPUI approached Wood when his patient, Anderson, required a prosthetic that was too large for traditional materials. Using a model of Anderson's digitally created likeness, Wood and Jacobs created the mandible with technology in the Advanced Visualization Lab (AVL). The work opens new paths for applications of 3-D technologies that have not been considered previously.

This unique collaboration transforms maxillofacial prosthetic prototypes and the lives of patients who use them. It also positions the IU School of Informatics and Computing at IUPUI as a pioneer in pursuing digital 3-D sculpting and printing to create these kinds of prosthetics.

Faculty endowments ensure continued breakthroughs in the application of technology to medical challenges. With your support, we can attract and support faculty who make discoveries in informatics that change the face of health care—and the lives of patients in Indiana and around the globe.

IT STARTS WITH YOU

Support for faculty endowments attracts and retains faculty whose research and scholarship forge unique collaborations and transform lives.

"It's nice to be on a campus with a health care focus like IUPUI—to be in an atmosphere where helping others is integral to our research."

—Zebulun Maxwell Wood
Lecturer, Media Arts and Science Program

FOR ALL
WHO BELIEVE IN THE FUTURE OF TECHNOLOGY

In the information age, computing and technology are pivotal to our future, individually and collectively.

The Indiana University School of Informatics and Computing at IUPUI aims to lead the industry, both nationally and internationally, through education, research, inclusion, economic development, and entrepreneurship.

But the field changes quickly and constantly demands new ideas. We're uniquely prepared among schools of our kind to address these needs. And that means we must rise to the occasion—to have a long-lasting influence throughout our state and beyond its borders.

Together, we can empower our faculty to develop new ideas and applications. We can equip our students for solving complex issues. And we can preserve our heritage as we shape tomorrow.

Together, we can fulfill the promise of a more accessible society, a smarter Indiana, and a better world, for all.

Photography: AFP, Geoff Coryell, IU Communications, Lesa Petersen, Abigail Watson

FULFILLING *the* PROMISE

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