

March 23, 2009
University of Southern California
Bovard Auditorium

x

ideas

empowered

TED^xUSC

x = independently organized TED event



Krisztina "Z" Holly

Welcome to the first ever TEDx USC: "Ideas Empowered."

At its heart, the mutual goal of TED and USC is to foster the spread of great ideas. We aim to provide a platform for the world's smartest thinkers, greatest visionaries, and most-fascinating teachers to inspire a better understanding of the world and create a better future. We found great synergy with TED and consider this independently organized event to be a grand experiment — one where we can bring new ideas, dialogue, and conversation to the USC community through a wide array of thought-provoking and innovative content.

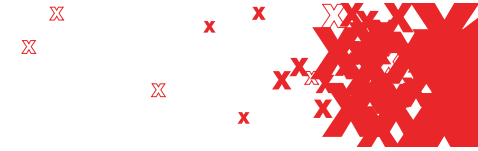
Core to this goal is a belief that there is no greater force for changing the world than a powerful idea.

Consider:

- An idea weighs nothing.
- An idea costs nothing.
- And it can be created out of nothing except an inspired imagination.

And yet an idea, when received by a prepared mind, can have extraordinary value and impact:

- It can reshape that mind's view of the world.
- It can dramatically alter the behavior of the mind's owner.
- And with the help and engagement of others, it can lead to the next generation of solutions to the opportunities and challenges that we face as a society.



But having an idea isn't enough. Whether tackling a disease, establishing a non-profit organization, introducing a new business model, devising a new technology, or creating a work of art, innovators need more than imagination and skill; they need to know how to give their ideas life, and how to bring them into the real world with tangible societal impact.

USC is home to some of the most groundbreaking research and brilliant minds. Bringing TEDx to this university exposes innovators at USC and beyond to some of the world's most fascinating doers and thinkers, inspiring them to move their ideas beyond the campus and out into the world.

This program dramatically extends TED's original mission to share "ideas worth spreading." Ultimately, our

hope is to help create a model for a worldwide TEDx experience.

Throughout today, we hope that the speakers, performers and interactive experiences you see will inspire, surprise, and delight you. And hopefully, we will all come up with a few ideas of our own.

We are thrilled to be able to embark on this adventure together with the passionate and dedicated team at TED. We see a bright future together that can perhaps lay the foundation for others to become part of this unique and stimulating program. So, after the event, make sure to let us know what you think!

Krisztina "Z" Holly

Vice Provost for Innovation,
University of Southern California
Executive Director,
USC Stevens Institute for Innovation



C.L. Max **Nikias**

OUR BEST MINDS CAN BRING A NEW LIGHT TO THE CHALLENGES OF OUR DAY, SAYS C. L. MAX NIKIAS — IF THEY CAN LEARN FROM ONE ANOTHER. HERE, HE TAKES A CUE FROM AN ANCIENT GREEK LEGEND TO OFFER A PRESCRIPTION FOR HOW A LITTLE “INTELLECTUAL FRICTION” CAN CHANGE OUR WORLD.

Dr. Nikias serves as Executive Vice President and Provost at the University of Southern California. As a researcher, educator, and university administrator, he has earned acclaim for his leadership, innovation, and fundraising, as well as his commitment to advancing university-wide education in the arts and humanities. Nikias joined USC’s faculty in 1991 and currently holds the Malcolm R. Currie Chair in Technology and the Humanities. From 2001 to 2005, he served as Dean of the Viterbi School of Engineering. During his tenure, the school staked out a consistent position as a top-ten engineering school. A member of the National Academy of Engineering, Nikias has been recognized internationally for his research on digital signal processing and communications, digital media systems, and biomedicine.



Paul **Debevec**

HOW CAN YOU CAPTURE THE FACE OF A REAL PERSON TO CREATE A PHOTOREALISTIC DIGITAL COMPUTER MODEL, SEEN FROM ANY ANGLE, IN ANY LIGHTING, AND DELIVERING ANY VIRTUAL PERFORMANCE?

Associate Director of Graphics Research at USC’s Institute for Creative Technologies, Dr. Paul Debevec will present new technologies for creating photoreal digital actors in Hollywood films, such as Spider Man 2 and Superman Returns. Debevec will reveal to the audience some of the more exciting technological advancements we can expect to see in digital media in the coming years.

Jane **Poyntner**



BRITISH-BORN JANE POYNTNER IS A TV HOST, BIOSPHERE 2 CREWMEMBER, SUSTAINABILITY CONSULTANT, AUTHOR, SPEAKER, AND TECHNOLOGY COMPANY PRESIDENT.

She has conducted experiments on the International Space Station, worked on projects to mitigate climate change, dived with sharks, raced motorcycles, and flown in zero gravity. Two years sealed inside the first-ever man-made biosphere gave Jane Poyntner a particular perspective on sweet potatoes, carbon dioxide, sunlight, booze, policy, Mars, business, health, the new green revolution, and just about everything. Now she’s turned her inimitable energy and passion toward sustainability and living green. She focuses on what it means to be a biospheric species and what we can do to save the planet. (You may think humans can be greedy, but they’re nothing compared to microbes!)

Donal T. **Manahan**



IS OUR WORLD READY FOR A BLUE REVOLUTION? AGRICULTURE ACREAGE IS DECREASING, MANY COMMERCIAL FISHERIES ARE PREDICTED TO COLLAPSE, AND WITH AN EVER-INCREASING HUMAN POPULATION TO FEED, NOVEL WAYS TO INCREASE FOOD PRODUCTION ARE ESSENTIAL.

Dr. Donal T. Manahan is Professor of Biological Sciences at the University of Southern California, Director of the USC Wrigley Center for Environmental Sciences, and author of the pioneering book, “The Blue Revolution.” Expanding our ability to cultivate the ocean will be critical to sustainable human food production in the future. Dr. Manahan will unlock the future of human food.



Markus **Nordberg**

A HUGE SCIENTIFIC ADVENTURE IS STARTING AT CERN, THE EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH IN GENEVA, SWITZERLAND TO REVEAL THE SECRETS OF THE EARLY UNIVERSE.

Dr. Markus Nordberg is a physicist and an MBA, and he's been tapped to coordinate the resources on the ATLAS experiment on the Large Hadron Collider (LHC), the most complex instrument ever built. The goal of the LHC is to recreate the conditions one billionth of a second after the Big Bang. Nothing like this has ever been attempted before. But we've already heard about the physics. Dr. Nordberg's true talent is something even more impressive: how to motivate and coordinate thousands of physicists from over a hundred different countries around the world to achieve the same goal, without being in charge of their paychecks.



Mark **Humayun**, M.D., Ph.D.

RESTORING SIGHT TO THE BLIND? ALL IN A DAYS WORK FOR MARK HUMAYUN.

Dr. Huymayun has tackled the challenges of bioengineering in ophthalmology, through basic research to clinical applications to bring to life the artificial retina. Dr. Humayun is a professor of Ophthalmology, Biomedical Engineering, and Cell and Neurobiology at the Doheny Eye Institute, Keck School of Medicine at the University of Southern California.

Kellee **Santiago**

GAME INNOVATOR KELLEE SANTIAGO INSISTS THAT GAMES ARE MORE THAN ENTERTAINMENT. THEY ARE ART.

As a student in the MFA Interactive Media program at the University of Southern California School of Cinematic Arts, Kellee's research focused on game design, interactive narrative, and physical and gestural interfaces for digital media. She has produced and managed a number of interactive projects including "I'm Gonna Kill the President! A Federal Offense" at PS122, and "The Angel Project" at Lincoln Center. While at USC, she teamed up with fellow student Jenova Chen to develop the student-created game, "Cloud." The critically acclaimed game led them to found their own studio, thatgamecompany, which landed a three game deal with Sony Computer Entertainment America, Inc. to develop downloadable games for Playstation Network. thatgamecompany's mission is to create games that push the possibilities of what games can communicate.



Dave **Logan**

SINCE THE DAWN OF CIVILIZATION PEOPLE HAVE FORMED TRIBES, AND RESEARCH DEMONSTRATES THAT HUMANS ARE GENETICALLY PROGRAMMED TO FORM INTO GROUPS. TRIBES HELPED HUMANITY SURVIVE THE ICE AGE, AND ARE THE KEY TO MAKING A DIFFERENCE IN TODAY'S WORLD.

Best-selling author, management consultant, and USC Marshall School of Business professor Dave Logan explains tribes, and shows how to create a world-class tribe that can do just about anything.





Salman **Ahmad**

DR. SALMAN AHMAD LEADS AN INTERESTING DOUBLE LIFE. HE IS A UN GOODWILL AMBASSADOR AND THE BIGGEST ROCK STAR IN THE MUSLIM WORLD. THE LEAD GUITARIST OF JUNOON HAS SOLD MORE THAN 25 MILLION RECORDS, AND THE BAND IS CONSIDERED THE "U2 OF SOUTH ASIA."

Dr. Ahmad is an artist, physician, humanitarian, and social activist and has led Junoon to perform at diverse venues like the U.N. General Assembly Hall — the first performance of its kind. In December 2007, Junoon performed at the Nobel Peace Prize ceremony in Oslo. In May 2008, Junoon defied death threats from militants to perform in the ethereal valley of Kashmir, the first ever rock concert to be held in Srinagar. He will perform unplugged, and give us a sneak peak into his next project: solving world peace.



Qi **Zhang**

QI ZHANG, USC THORNTON SCHOOL OF MUSIC PH.D. CANDIDATE AND AWARD-WINNING INTERNATIONAL ORGANIST, UNLEASHES THE SOUNDS OF HER UNIQUE YAMAHA ELECTONE, A RARE, IMPORTED INSTRUMENT SPECIALLY PROGRAMMED BY QI HERSELF.

Born in 1984 in Shanghai, China, Qi Zhang was matriculated by the Shanghai Conservatory of Music in September 2003 and received her Bachelor degree in Electronic Organ major in July 2008. She is currently a Master of Music student at Thornton, studying Organ Performance with Professor Cherry Rhodes.

Summer **Storm** (2008)

THIS ANIMATED SHORT EXPLORES WHAT HAPPENS WHEN ONE SUMMER DAY, TWO GIRLS (AND THEIR LITTLE BROTHER) DECIDE TO SAVE THE WORLD FROM GLOBAL WARMING.

Valerie LaPointe, USC MFA 2008



Abridged (2008)

A LONG-DISTANCE AFFAIR.

Arjun Rihan, USC MFA 2008



BREATHE (2008)

BREATHE CELEBRATES THE MAGICAL POSSIBILITY OF ROMANCE WITHIN A CHAOTIC WORLD.

John Thompson (expected graduation Dec 2009) and Sean Conaty, USC MFA 2008



Juan **Enriquez**

IN THIS TED TALK FROM 2009, JUAN ENRIQUEZ RAISES ALARM BELLS ABOUT THE FINANCIAL CRISIS, BUT PROVIDES HOPE WHEN HE DESCRIBES THREE GROUNDBREAKING TECHNOLOGIES THAT HE BELIEVES WILL CHANGE THE WORLD.

Even as mega-banks topple, Enriquez says the big reboot is yet to come. But don't look for it on your ballot — or in the stock exchange. It'll come from science labs, and it promises keener bodies and minds. Our kids are going to be...different. A Harvard Business School Professor, Enriquez thinks and writes about the profound changes that genomics and other life sciences will cause in business, technology, politics, and society.

Elizabeth **Gilbert**

ELIZABETH GILBERT MUSES ON THE IMPOSSIBLE THINGS WE EXPECT FROM ARTISTS AND GENIUSES — AND SHARES THE RADICAL IDEA THAT, INSTEAD OF THE RARE PERSON “BEING” A GENIUS, ALL OF US “HAVE” A GENIUS.

It's a funny, personal, and surprisingly moving talk. The author of “Eat, Pray, Love,” Elizabeth Gilbert has thought long and hard about some large topics. Her next fascination: genius, and how we ruin it.

Aimee **Mullens**

AIMEE MULLINS EXPERIENCES FIRST HAND WHAT IT'S LIKE TO NEED PROSTHESES. BUT SHE DOESN'T ACT OR SEEM DISABLED.

In fact, she's taken a whole new twist in this poignant and funny talk from TED 2009 and makes us consider our assumptions about disability. A record-breaker at the Paralympic Games in 1996, Aimee Mullins has built a career as a model; and actor; and an activist for women, sports, and the next generation of prosthetics.

Natasha **Tsakos** (TED2009 Premiere)

WHO SAYS INNOVATION CAN'T HAPPEN IN THEATER?

In the world premiere of her talk from TED 2009, playwright and performer Natasha Tsakos works in a brave new form of theater, where sounds, computer-generated images, and the performer move in sync to create a dreamlike yet sharply real stage environment. Within this space of total possibility, the president and founder of ZERO, LLC, muses on the deepest questions of the human soul.



Don't miss the TEDx USC reception immediately following the formal program. Taking place at Town & Gown, just a short walk from Bovard, the reception is a highlight of the event, chock-full of interactive and highly engaging art installations, progressive media demos and other hands-on experiences. It's one of the most important parts of the TEDx USC experience.

Big Stage Entertainment

BIG STAGE ENTERTAINMENT, INC. IS A MEDIA TECHNOLOGY COMPANY THAT ENABLES THE PROJECTION OF ONE'S SELF INTO DIGITAL LIFE.

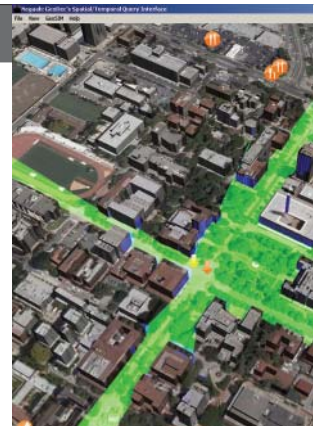
At TEDx USC, Big Stage Entertainment will be demonstrating how its products and services are driving the personalization phenomenon in interactive entertainment. Using Big Stage Entertainment's proprietary facial modeling technology, anyone can create a fully photorealistic, 3-D, animated Digital You (called an "@ctor") to insert into digital media such as video games, video clips, and still images, as well as to represent themselves in online communities. Everyone can generate a free, animated 3-D @ctor from a few digital photos on BigStage.com. Big Stage Entertainment is based on technology developed by USC professor Dr. Gerard Medioni of the Viterbi School of Engineering.



GeoDec: USC Viterbi School of Engineering, IMSC

EXPERIENCE HOW DR. CYRUS SHAHABI, DR. CRAIG KNOBLOCK, DR. ULRICH NEUMANN, AND DR. RAMAKANT NEVATIAUNDER FROM USC'S INTEGRATED MEDIA SYSTEMS CENTER (IMSC) CONSTRUCT AN INFORMATION-RICH AND REALISTIC 3D VISUALIZATION AND SIMULATION OF A GEOGRAPHICAL LOCATION, RAPIDLY AND ACCURATELY.

GeoDec is a geospatial platform that enables rapid, realistic, accurate, and scalable virtualization of a location (e.g., USC campus) with all its relevant data. Guests at TEDx USC will see how GeoDec enables real-time decision-making and provides an intuitive yet powerful graphical user interface (GUI) for users to interactively access contextualized, embedded data while navigating through the virtual location.





CNN iReport

iREPORT.COM IS A USER-GENERATED NEWS COMMUNITY THAT CNN LAUNCHED IN FEBRUARY 2008. THE SITE INCORPORATES SIMPLE TOOLS THAT ALLOW USERS TO ENGAGE DIRECTLY WITH CNN AS WELL AS THE GREATER iREPORT COMMUNITY BY UPLOADING STORIES AND ON-THE-SCENE VIDEO OR PHOTOS, AS WELL AS COMMENTING ON THE NEWS.

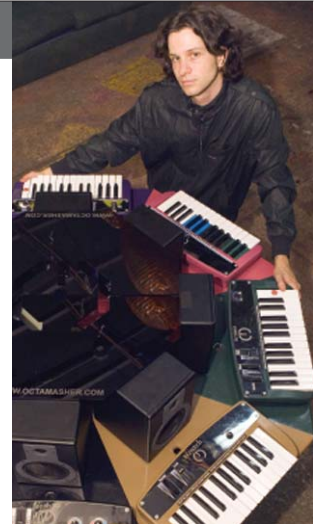
CNN producers often look to iReport.com for fresh insight and perspective, raw video, and photos to complement CNN's own reporting. Before using iReports on any CNN network or CNN.com, the company's journalists verify the authenticity of the content, designated on iReport.com by an "On CNN" stamp.

The iReport camera at TEDx USC is part of the mobile iReport "kit" that CNN created to use during large news events, such as the Democratic and Republican National Conventions and the Veteran's Day celebration in Washington, D.C. Using the kit, people are able to upload their own photos and videos directly to iReport.com, as well as share their stories on camera. At TEDx USC, students will be able to use the iReport kit to share their perspectives on the event and answer questions about technology and innovation.

Synchomasher

THE SYNCOMASHER IS AN INTERACTIVE SONIC SCULPTURE DESIGNED BY ARTIST MOLDOVER. FIVE UNIQUE INSTRUMENTS ARE ALL NETWORKED TO ONE COMPUTER BRAIN.

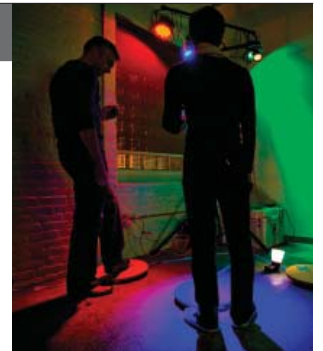
Each instrument controls one aspect of a complete musical structure (i.e. rhythm, harmony, melody etc). Careful programming and human interface design simplify advanced music performance concepts. Participants with no musical training can immediately manipulate high-level musical structures in seamless collaboration with the people around them. The SyncoMasher is a catalyst for creativity, community, and the simple joy of playing music. Moldover is a music performer, composer, and producer based in San Francisco. He is the creator of The Warper Party (NYC's biggest live-electronic music showcase), The Octamasher (a world-touring music installation), and Sound Control (a community-building educational network). Moldover is best known for developing the concept of controllerism: using software and computer controllers in the spirit of a musical instrument. (www.moldover.com)



Mindshare Labs

MINDSHARE LABS WAS FORMED IN 2008 BY A GROUP OF CREATIVE ENGINEERS WHO TWIST TOGETHER ART AND TECHNOLOGY.

They build interactive installations that encourage strangers to play together by lowering social barriers. Mindshare projects include "ArtFall," an interactive whiteboard; "Sonic Stalagmites," which allows people to paint with sound; and "BadgeVision," which uses augmented reality to bring an event's badges to life. Mindshare Labs regularly showcases new projects at the monthly Mindshare event in Downtown LA. (<http://mindshare.la/labs>).





thatgamecompany

THE DEVELOPER THAT BROUGHT YOU THE AWARD-WINNING PLAYSTATION NETWORK TITLE *flow* IS BACK WITH ANOTHER CONCEPT THAT CHALLENGES TRADITIONAL GAMING CONVENTIONS.

At TEDx USC, guests will demo the latest title from TGC, *Flower*. *Flower* expands the team's tradition of delivering accessible controls, simple gameplay, and a medium to explore emotional chords uncommon in video games. In *Flower*, the surrounding environment, most often pushed to the background in games, is pulled to the forefront and becomes the primary "character." The player will journey through a beautifully vivid and changing landscape in this fresh and genuine game only on PS3.



USC Institute for **Creative** Technologies

AT USC'S INSTITUTE FOR CREATIVE TECHNOLOGIES, HIGH-TECH TOOLS AND CLASSIC STORY-TELLING COME TOGETHER TO PIONEER NEW WAYS TO TEACH AND TO TRAIN. ICT PARTNERS WITH HOLLYWOOD AND THE GAMING COMMUNITY TO HARNESS THE POWER OF INTERACTIVE AND VIRTUAL ENVIRONMENTS.

Together, they create guided experiences that are compelling, educational, and relevant. At TEDx USC, guests will experience exciting breakthrough technologies, including a fully immersive therapy for treating post-traumatic stress disorder, game-based rehabilitation systems for people with disabilities, and SGT Star, an interactive 3D virtual character. SGT Star represents a new class of virtual human guide, using USC's Institute for Creative Technologies' (ICT) interactive character technologies, such as natural language understanding and realistic conversational gestures. (<http://ict.usc.edu>)

Innovation is the process of translating new ideas into tangible societal impact.

At the University of Southern California, we understand that the most innovative ideas can arise from the edges and intersections of disciplines, from technology and science to the arts and social sciences. It can take the shape of new products and services, new ventures, as well as new organizational models.

Innovation is essential to "meeting societal needs," one of the three pillars in USC's strategic plan. Just as importantly, innovation is critical to economic competitiveness, as well as to the well-being and improved quality of life for people worldwide.

USC is a leading research university with a research budget surpassing half a billion dollars a year. Coupled with a diverse student body of 33,500, and the largest population of international students at any university in the country, USC is one of the most creative and entrepreneurial places on Earth. Many of USC's 17 professional schools, research centers, and the USC College have made innovation one of their key strategic priorities, leading to life-changing innovations in fields such as digital media, cancer therapies, robotics, security, medical devices, and more.

USC's innovative history includes the Internet domain naming system, DNA computing, antiviral drugs, the Viterbi algorithm, CDMA cellular technology, the cinematic audio standard THX, and polyominoes, the inspiration for Tetris. Notable startups include QUALCOMM, salesforce.com, Kinko's, and MySpace.com. Not to mention Trojan pioneers like former CEO of Apple Mike Markkula, filmmakers George Lucas and Robert Zemeckis, architect Frank Gehry, and Nobel prize-winning chemist George Olah. In fact, the cotton t-shirt was invented here, by football coach Howard Jones in 1932.

USC has most recently been developing a new model for innovation at a major research university. The USC Stevens Institute for Innovation is a university-wide resource in the office of the provost and collaborates with partners on and off campus to help faculty and students make maximum impact with their ideas.

To learn more about innovation at USC, visit <http://stevens.usc.edu>

We'd like to take a moment to recognize those people who have made significant behind-the-scenes contributions to the inaugural TEDx USC event. Our team offers the deepest gratitude to the following friends:

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The USC Stevens Institute for Innovation team (especially Polai Av, Richard Hull, Joe Koepnick, Kristi Schneider, John Sweet, and Juan Felipe Vallejo)

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Many thanks to our sponsors and partners for this event. TEDx USC was made possible, in part, due to their generous support.



USC Student Affairs

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USC

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X = independently organized event