



**2011**  
**BIOMIMICRY CONFERENCE**

presented by mirasol 

Nature, Innovation, and  
the New Economy

**SAN DIEGO 2011**

# NATURE'S SOLUTIONS



TO DESIGN CHALLENGES

## **2011 BIOMIMICRY CONFERENCE:**

*Nature, Innovation, and the New Economy*

Thank you for attending the San Diego Zoo's 2011 Biomimicry Conference, presented by mirasol®, a nature-inspired display by Qualcomm.

### **Biomimicry –Nature in a New Light**

Biomimicry, or bioinspiration, is the discipline of taking inspiration from nature – its systems, processes and elements – to solve human design challenges in a sustainable manner.

### **Why Biomimicry?**

One of our goals for this conference is to prove the value proposition for innovation inspired by nature. Through keynote speeches and panel discussions, we hope that you will come away with a deeper understanding of how and why bioinspiration will play an ever-increasing role in research, development and design – from cars, portable devices and buildings to swarm technology and industrial ecosystems. The global economic impact could reach up to \$1 trillion in just 15 years.

### **Biomimicry at the Zoo**

By taking you outside (literally!) of the normal work environment, we hope to put you into a different mindset – one which will help you look at nature, innovation, and even your own design challenges in a different, more creative way. Through interaction with a diversity of plants and animals, you will go through the bioinspiration design process, starting with a natural object and using it to create a new innovation concept. You will also hear from Zoo keepers and industry practitioners who will help unpack the real-life benefits and challenges of innovation inspired by nature.

### **Nature-Inspired, Nature-Friendly**

By looking to nature for inspiration for new innovations, not only do we anticipate better designs, we also expect that they will be more efficient and environmentally sustainable. Thus, bioinspiration will be an economic game changer and a transformative tool for conservation.

The vision of San Diego Zoo Global is to connect people to wildlife and conservation. Through biomimicry, we hope to extend this connection to apply nature's inspiration to human design innovation.

Observe, explore, interact, and enjoy!

[sandiegozoo.org/biomimicry](http://sandiegozoo.org/biomimicry)

# CONFERENCE AGENDA

Thursday, April 14, San Diego Zoo  
10:00 a.m. – 8:00 p.m.

10:00 a.m.

Registration opens

12:30 p.m. – 6:30 p.m.

Biomimicry Expo

1:30 p.m. – 1:40 p.m.

Welcome and Introductions

1:40 p.m. – 2:10 p.m.

Introduction to Design Workshop with Animal Presentation

2:10 p.m. – 2:45 p.m.

**"Why Biomimicry, Why Now?"** with Jane Fulton Suri, IDEO

2:45 p.m. – 3:00 p.m.

Break

3:00 p.m. – 4:00 p.m.

**"Biomimicry, Innovation, and Economics"** moderated by  
Randy Ataide, PLNU

4:00 p.m. – 5:00 p.m.

Biomimicry Bus Tours of the San Diego Zoo

5:00 p.m. – 6:30 p.m.

Appetizers, Networking, and Student Poster Displays

6:30 p.m. – 7:30 p.m.

**"The Future Ain't What it Used to Be"** with James Burke

A special thanks to our conference host  
Matt Mason, Author, [The Pirate's Dilemma](#)

Friday, April 15, Prado Ballroom, Balboa Park  
8:00 a.m. – 3:30 p.m.

8:00 a.m.  
Registration opens

8:15 a.m. – 9:00 a.m.  
Networking and Continental Breakfast

9:00 a.m. – 9:30 a.m.  
Welcome, Introduction to Biomimicry BRIDGE

9:30 a.m. – 10:00 a.m.  
**"From Animal to Concept to Production"** - the mirasol® Story

10:00 a.m. – 10:45 a.m.  
**"Performance Biomimicry"** with David Schenone, Nike

10:45 a.m. - 11:00 a.m.  
Break

11:00 a.m. – 12:15 p.m.  
Interactive Design Workshop with Animal Presentation

12:15 p.m. - 1:15 p.m.  
Lunch and Networking in the Prado Courtyard

1:15 p.m. - 2:00 p.m.  
**"Bioinspired Innovation: The Power of the Crowd"** moderated by  
Graham Milner, WD-40 Company

2:00 p.m. – 2:30 p.m.  
Break and Animal Presentation

2:30 p.m. - 3:15 p.m.  
**"Making it Real: From Idea to Innovation"** with Dr. Robert Full, UC  
Berkeley

3:15 p.m. - 3:30 p.m.  
Closing Thoughts

## SHAUN ABRAHAMSON



Accused of living in the future. Guilty on a few counts. Shaun founded [www.mutopo.com](http://www.mutopo.com) a Social Production company to help organizations benefit from collaboration in design and communications. He is also an early stage investor at [www.eigen-value.com](http://www.eigen-value.com). Shaun has a BSc from the University of Cape Town, MSc from MIT CADLab and an MBA from Berlin School of Creative Leadership. He is Papai to Max & Oli and married to Andrea. Shaun grew up in Cape Town and now calls NYC home.

## RANDY ATAIDE

Professor Randy Ataide brings considerable business experience to his current position as Professor of Entrepreneurship and Executive Director of the Fermanian Business and Economic Institute at Point Loma Nazarene University in San Diego, CA. As Director, Professor Ataide provides primary leadership for the strategic planning of the Center's mission, and teaches contemporary management, entrepreneurship, and the leads the small business institute and Entrepreneur program at the Fermanian School of Business. The San Diego Daily Transcript has named Professor Ataide one of "San Diego's Top 50 Influentials" for 2010.

He has worked for more than 25 years as an entrepreneur in developing several inter-related diversified agricultural companies and provides strategic consulting services to a variety of firms. He remains engaged in several active business start-ups and Boards.

Professor Ataide holds a B.A. degree in Speech Communication (Magna Cum Laude), a Masters Degree in Theology and a Juris Doctor degree, and he has been a member of the California State Bar Association.



## PAULA BROCK



**Paula Brock** joined the Zoological Society of San Diego as Chief Financial Officer in June 2001. Prior to joining the Society, Ms. Brock was the founding partner in Brock, Tibbitts & Snell, An Accountancy Corporation, specializing in due diligence and securities work. She served as Senior Vice President and Senior Financial Officer at ITT Residential Capital Corporation with assets of \$700 million and a mortgage-servicing portfolio of over \$2 billion. She was also the Senior Audit Manager with KPMG. Ms. Brock received her Bachelor of Science degree with honors from San Diego State University in California. She is a member of Financial Executives International, the American Institute of CPA's, the California Society of CPA's, American Woman's Society of CPA's, American Association of Zoos and Aquariums, American Association of Museums, and Legatus International. She is actively involved in numerous church and community organizations and projects.

## JAMES BURKE - KEYNOTE SPEAKER

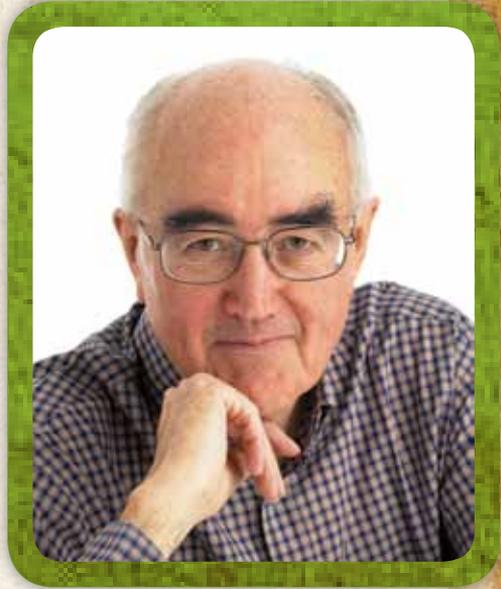
Science historian, television host and author, James Burke was hailed by The Washington Post as "one of the most intriguing minds in the Western world." Burke entertains audiences with his unique perspective on the process of innovation and how it causes people and institutions to change.

For over forty years Burke has produced, directed, written and hosted award-winning television series (including the landmark Connections) on BBC, PBS, Discovery and The Learning Channel. Burke is the best-selling author of Connections, The Day the Universe Changed and The Knowledge Web. His most recent titles are Circles, Twin Tracks and American Connections.

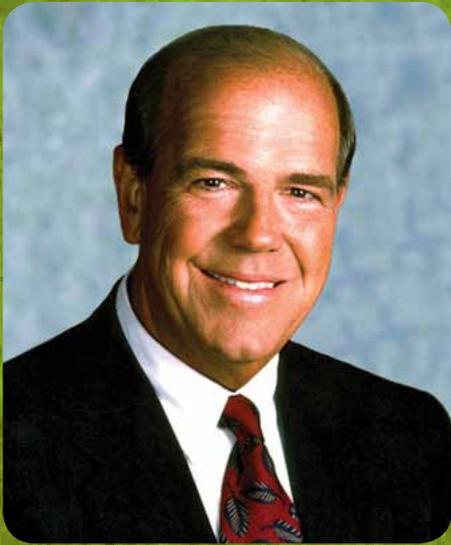
Burke leads audiences on a journey through the history of science, technology and social change, showing the interconnected nature of the world, stimulating innovative thinking, and revealing the remarkable serendipity behind humankind's tireless commitment to invention.

His latest project, launched in 2010, is an online interactive knowledge mapping system to be used as a teaching aid, a tool for innovation and management, and a predictor. He was a regular columnist for 6 years at Scientific American and recently wrote the new Epcot script for Disney.

At present he is working on his next book, provisionally titled The Culture of Scarcity, and due for publication in 2012.



## GEORGE CHAMBERLAIN



**George Chamberlain** is the Executive Editor for the Daily Transcript, San Diego's only daily business newspaper. He is also the business editor for KOGO Radio and host of "Money in the Morning", a personal finance program heard each Sunday morning. In addition, he is the Money Advisor for NBC 7/39. He is the publisher and editor of a national newsletter, Investing for Rookies. George has been honored three times by the Small Business Administration as the Media Advocate of the Year.

## JENNIFER FOGARTY, P.h.D

**Jennifer Fogarty, P.h.D** is currently the Portfolio Manager for the NASA Human Health and Performance Center (NHHPC) at the Space Life Sciences Directorate, NASA Johnson Space center. In this position she has been charged with developing and maturing NHHPC collaborations and applying tools such as portfolio mapping, and open innovation and collaboration tools to further research and enhance clinical resources and technology development . Dr. Fogarty joined NASA in 2004 as a cardiovascular discipline scientist with Wyle Laboratories and supported the Human Adaptation and Countermeasures Division by reviewing and analyzing NASA funded research in light of the risks and gaps documented in the Bioastronautics Roadmap. In 2006, she expanded her responsibilities to include development of a cardiovascular performance standard which was included in the NASA Space Flight Human System Standards Volume 1: Crew Health and from there began supporting human system risk management development and activities in the Space Life Sciences Directorate. In 2007, Dr Fogarty accepted a NASA position as the Johnson Space Center Health and Medical Technical Authority (JSC HMTA) coordinator and as such supports the directives of the NASA governance model and the JSC Chief Medical Officer, with respect to the International Space Station, Shuttle, Constellation, and Human Research Programs. In addition, Dr. Fogarty served as the Space Medicine Constellation Integration lead. This role involved the identification of design and development issues, allocation of appropriate subject matter experts, paths to resolution on discontinuities of design with human space flight requirements, and communication of resolution or lack there of to all levels of management.



Dr. Fogarty received a PhD from Texas A&M University System Health Science Center and the Cardiovascular Research Institute in 2002. She is currently on the editorial team for the Fundamentals of Aerospace Medicine the 4th edition, regularly lectures on space physiology and human system risk management at a variety of forums, and has continued interacting with the research and technology development community through NASA's Human Research Program.

## PETE FOLEY



**Pete Foley** is currently the Associate Director of the Cognitive Science Group at Procter and Gamble. In this role he is responsible for development of New Innovation Capability, and new visual, cognitive and linguistic communication strategies, derived from insights taken from the Cognitive and Social Sciences.

Pete is a 20 year veteran of P&G, where he has worked across a range of disciplines, and with responsibilities that covered many countries in North and South America, Asia, and Europe. He has experience in formulation design, new surfactant design, products research, process development, perfume technology development, new business development, visual communication design, applied behavioral economics, and innovation capability development. Among numerous products he has helped develop across the globe are the first dishwashing liquid launched by P&G in Japan, and the first micro emulsion based dishwashing product, launched as "Dawn Direct Foam" in North America. Pete has over 100 published and granted patents describing everything from novel surfactant structures to commercial designs for in-store communication materials.

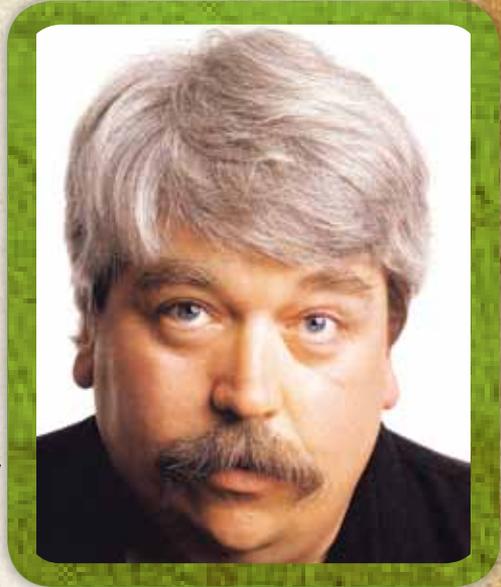
Pete holds Undergraduate and PhD degrees in Chemistry from the University of Nottingham, in the UK.

## ROBERT FULL - KEYNOTE SPEAKER

Professor Full completed his undergraduate, graduate, and doctoral studies at SUNY Buffalo. He held a research and teaching post doctoral position at The University of Chicago from 1984 to 1986. In 1986 he joined the faculty of the University of California at Berkeley as an Assistant Professor of Zoology. He was promoted to Associate Professor of Integrative Biology in 1991, and to Full Professor of Integrative Biology in 1995, a position he holds today. Professor Full received a Presidential Young Investigator Award, has presented his research at the National Academy of Sciences and is a National Academy of Sciences Mentor in the Life Sciences.

In his 24 years at Berkeley, he has led a focused international effort to demonstrate the value of integrative biology and biological inspiration by the formation of interdisciplinary collaborations of biologists, engineers, mathematicians and computer scientists from academia and industry. Professor Full serves on the advisory boards of Harvard's Bio-inspired Design Wyss Institute, Research Corporation for Science Advancement, Science Education for New Civic Engagements and Responsibilities and the editorial board of the journal Bioinspiration and Biomimetics. Recently, Professor Full briefed the United States House of Representatives Science, Technology, Engineering and Mathematics Education Caucus on interdisciplinary research and American innovation.

Professor Full is founder and director of CiBER, the Center for interdisciplinary Bio-inspiration in Education and Research focused on discovering fundamental principles of biology that inspire novel engineering and where engineers provide biologists with new hypotheses, approaches and techniques. The center has 32 faculty from 7 departments. Professor Full is the Principal Investigator on an National Science Foundation Integrative Graduate Education and Research Traineeship on Bio- and Bio-inspired Motion Systems Operating in Complex Environments that is training the next generation of biologists and engineers to collaborate in mutually beneficial relationships. Professor Full directs the Poly-PEDAL Laboratory, which studies the Performance, Energetics and Dynamics of Animal Locomotion (PEDAL) in many-footed creatures (Poly). His research program in comparative physiology and biomechanics has shown how examining a diversity of animals can lead to the discovery of general principles. His fundamental discoveries in animal locomotion have inspired the design of novel neural control circuits, artificial muscles, autonomous legged robots such as RHex, Sprawl, RiSE and Stickybot and the first, synthetic self-cleaning dry adhesive named one of top ten nanotechnology patents. Professor Full has authored over two hundred contributions and has delivered over three hundred national and international presentations.



## JANE FULTON SURI - KEYNOTE SPEAKER



As a Partner and Creative Director at IDEO, Jane plays a global leadership role, evolving content and craft, human insight, and design thinking in support of client projects worldwide. She came to design from psychology and architecture with the ambition to integrate social science-based perspectives into design practice and to foster a collaborative community of kindred spirits.

Jane is the author of *Thoughtless Acts? Observations on Intuitive Design* (Chronicle Books, 2005), a book of snapshots that depict the subtle and amusing ways in which people interact with the world. Jane believes that design, like life, is about seeking creative harmonies with elements of our world. This belief not only fuels her creativity, but also her enthusiasm for wilderness sports.

She teaches courses at Stanford University, the University of California at Berkeley's Haas School of Business, and the California College of the Arts.

## JENNIFER GILLE

**Jennifer Gille**, senior staff engineer with Qualcomm MEMS Technologies, Inc., oversees image quality performance and color processing for Qualcomm MEMS Technologies displays. During her tenure at the company, Jennifer has been a frequent speaker at industry events, including SID, ADEAC, IDRC, Electronic Imaging Conference and IDW, and recently co-authored a white paper on optimizing the brightness of reflective displays in mobile applications that was selected as a distinguished contributed paper of the 2011 SID International Symposium.

Prior to joining Qualcomm, Jennifer was at NASA Ames, where she served as a senior scientist with Raytheon STX. As part of the ViDEOS team, Jennifer conducted vision research and developed software tools for display designers.

Jennifer served on the faculty at the University of California Santa Cruz where she taught perception and experimental psychology. She was also a researcher for the Visual Perception group at SRI International.

Jennifer holds a bachelor's degree in mathematics and a Ph.D. in vision science with an emphasis on color and spatial vision from the University of California Los Angeles (UCLA). She is a member of SID, IS&T, SPIE and OSA.



## TODD GLORIA



San Diego City Councilmember Todd Gloria was elected to represent District Three on November 4, 2008. As a third generation resident of District Three, his roots in the community are deep and his commitment to the community is strong.

Todd is the Chair of the Budget and Finance Committee and the Ad Hoc Committee on Redevelopment. He is also a member of the Committee on Public Safety and Neighborhood Services, the Committee on Land Use and Housing, and the Committee on Rules, Open Government, and

Intergovernmental Relations. Councilmember Gloria represents San Diego on the board of the Metropolitan Transit System, the San Diego Convention and Visitors Bureau, the San Diego Consortium Policy Board, and on numerous SANDAG committees. His work has been recognized by numerous organizations, including Save Our Heritage Organization, the National Conflict Resolution Center (formerly the San Diego Mediation Center), the Greater San Diego Business Association, and the HIV Consumer Council.

In 2009, Councilmember Gloria received an A- on San Diego City Environmental Quality Report Card which was the most comprehensive report to date. Over one hundred City council votes and public statements were analyzed and weighed according to their respective environmental impacts

Todd is a graduate of the University of San Diego and an enrolled member of the Tlight-Haida Indian Tribes of Alaska. He is a homeowner in the Cherokee Point neighborhood of City Heights.

## CHERYL GOODMAN

**Cheryl Goodman** is the director of publisher relations for Qualcomm Inc. In this role, Goodman is responsible for forging connections in the publishing industry and facilitating their engagement in the wireless ecosystem. Currently one of Cheryl's chief directives is to secure content for Qualcomm MEMS Technologies (QMT) mirasol® display-enabled e-readers. In addition, Cheryl oversees global marketing and communications efforts for QMT, coordinating analyst and media relations across international markets and providing strategic input into market research and product development strategies.

Prior to joining QMT, she managed the industry analyst relations program and public relations efforts for Qualcomm's FLO TV and FLO Technologies divisions.

Prior to joining Qualcomm, Cheryl served as the director of public relations and marketing for start-up Lindows.com, creator of a Linux-based operating system, and also led public relations efforts at MP3.com. She has extensive experience in broadcast journalism, having served as the technology Web reporter for ABC affiliate KGTV and Web reporter for CBS affiliate KFMB.

Goodman is a frequent spokesperson for Qualcomm; she has been quoted in multiple publications and has spoken at top tier industry events such as The Digital Publishing & Advertising Conference, the Magazine Publishers Association's Dimensional to Digital, M-Publishing, and DEMO 2009. Most recently she delivered a keynote address at O'Reilly Tools of Change for Publishing 2011. She also oversees QMT's successful awards program, which includes honors such as the WSJ Innovation Award, PC Magazine Technical Excellence Award, EDN Innovation Award, Andrew Seybold Choice Award and finalist standing for the CES Innovation Awards and GSMA Global Mobile Awards.

Goodman attended San Diego State University, where she earned a bachelor's in political science and television, new media and film. She was named the 2010 Marketing/Marcomm Leader of the Year by PRNews. In 2004, she was nominated for PR Leader of the Year by T-Sector Magazine.

Find Cheryl's updates on digital publishing and portable device ecosystem at Qualcomm's blog, OnQ, and via QMT's Twitter feed, @mirasoldisplays.



## CHRISTIAN HAEUSELMANN



**Christian Haeselmann** is an innovation-driven Swiss economist and serial entrepreneur.

Christian has 20 years of experience in the Cleantech sector, both with start-ups and global organizations.

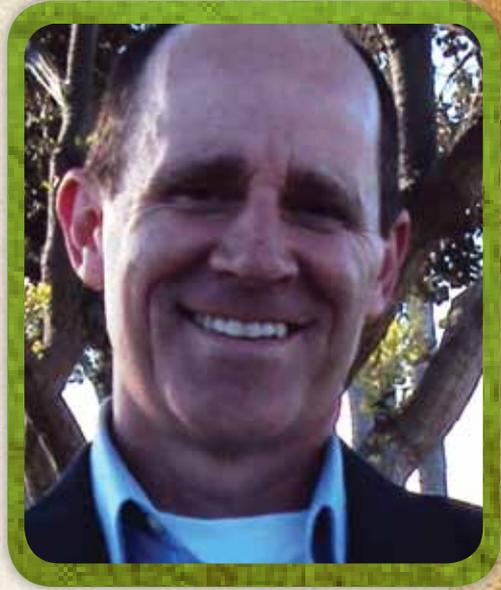
Today he lives in San Diego/California developing strategic partnerships between Swiss and US Cleantech entrepreneurs, as the co-founder of *swisscleantech*. *swisscleantech* is the business association driving innovation and sustainable policy development in Switzerland. In 2010 he co-founded the Global Cleantech Cluster Association (GCCA), driving collaboration among 20+ global Cleantech clusters, including CleanTECH San Diego.

In 1996 he won the young entrepreneur award for his first start-up company BKTech and the development and market introduction of the powerful FLYER electric bike. The FLYER electric bike defined a new vehicle category in Switzerland and Europe. Prior to FLYER he was a research assistant at the University of Berne/Switzerland with a focus on eco design. He got his MS in Business Administration at the University of Berne/Switzerland.

## TONY HUFFMAN

Tony Huffman has been developing innovative products and services for BP, Arco, Amoco, AMPM, and Castrol for nearly 20 years. In 2002, he created BP's Bluesky program a grass root movement that that led to a formal specialized innovation team that focused on ideation, concept development and rapid prototyping of new ideas to accelerate the new offer development process. The work resulted in several novel and patented products.

In his current role as Director of Strategic Cooperation, Tony utilizes his creativity and innovation expertise to evaluate and develop sustainable energy business models, products and services by working closely with partners, nascent industry experts, and internal stakeholders to help accelerate the transition and "jump the gap" to a low carbon economy.



## MATT MASON



**Matt Mason** is the bestselling author of *The Pirate's Dilemma*, the first book in the history of the world to hit the number one spot on Amazon's economics/free enterprise bestseller list, and the rap bestseller list, at the same time. It has since been published in ten countries and counting. He was recently voted Pirate of the Year by *BusinessWeek*. He currently serves as Strategy Director at Syrup and is an Advisory Board Member of PopTech.

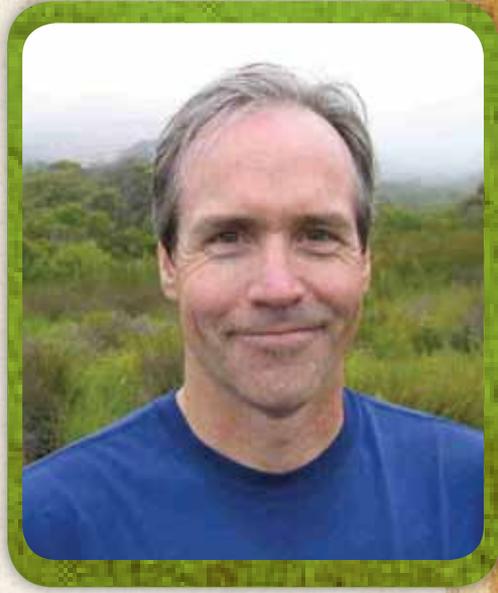
Mason began his career as a pirate radio and club DJ in London, going on to become founding Editor-in-Chief of the seminal magazine *RWD*. In 2004, he was selected as one of the faces of Gordon Brown's Start Talking Ideas campaign, and was presented the Prince's Trust London Business of the Year Award by HRH Prince Charles.

He has written and produced TV series, comic strips, viral videos and records. His journalism has appeared in *The Guardian*, *The Independent*, *The Observer Music Monthly*, *Dazed & Confused*, *Adweek*, *VICE*, *Complex*, *Libération*, and other publications in more than 20 countries. He has spoken on the subjects covered in the book all over the world. He lives in New York City.

## TOM McKEAG

Tom McKeag is a licensed landscape architect and community planner who teaches the studio course “How Would Nature Do That?” to undergraduate and graduate students at the California College of the Arts and the University of California, Berkeley. He founded BioDreamMachine, a California public benefit corporation dedicated to teaching K12 science through bio-inspired design and teaches fourth and fifth graders after school in the Marin County, California, public school system through the Gifted and Talented Education (GATE) program.

Tom writes a regular blog about bio-inspired design at [www.greenerdesign.com](http://www.greenerdesign.com) and is an Education Fellow and member of the Educational Advisory Board of the Biomimicry Institute. Organizations that he has consulted to include the Marine Science Institute, HOK architecture firm, and the Center for Environmental Education, Westchester, NY. Tom is an adjunct professor in interdisciplinary Studies at the California College of the Arts and a lecturer in the Plant and Microbial Biology Department, University of California, Berkeley. He holds a bachelor’s degree in History and master’s degree in Community Planning and Area Development from the University of Rhode Island, and a master’s degree in Landscape Architecture from the University of California, Berkeley.



## GRAHAM MILNER



**Graham Milner** leads Team Tomorrow, the group charged with innovation and extension of current and new brands. The current brand portfolio is: WD-40, LAVA, 3-IN-ONE, X-14, 200FLUSHES, SPOT SHOT, CARPET FRESH in the USA, 1001 in the UK and SOLVOL in Australia.

Mr. Milner has been with WD-40 Co. since 1992 in various management positions, including senior vice president the Americas with sales and marketing responsibility for USA, Canada and Latin America , vice president sales and marketing the Americas, director international (Latin America and Asia)

Mr. Milner also has an in-depth knowledge of advertising. In his last position at Phillips Ramsey, he was senior vice president, director of client services where in addition to other clients was responsible for the WD-40 Company' account.

Mr. Milner holds a Bachelors of Science degree in business administration from the University of San Diego and a Masters Degree in business administration from San Diego State University.

## **DR. LYNN REASER, Ph.D.**

**Dr. Lynn Reaser, Ph.D.** is Chief Economist for Point Loma Nazarene University, where she leads the PLNU Economic Institute. The Institute engages in economic analysis, modeling, and forecasting with practical and actionable recommendations for corporations, non-profit organizations, and government agencies based primarily in San Diego. Dr. Reaser has deep experience in the financial services sector, including work during the past ten years as Chief Economist of the Investment Strategies Group at Bank of America. She is also the incoming President of the National Association for Business Economics, an organization comprising 2300 of the nation's leading economists from business, academia, and government. Dr. Reaser received her bachelor's, masters' and doctoral degrees in economics from the University of California, Los Angeles. She will address the potential of Biomimicry as a key economic sector and its potential for linking the dual goals of economic growth and environmental protection.



## SUNNI ROBERTSON



**Sunni Robertson** has been employed as a Lead Educator Guide at the San Diego Zoo since 2005. She received a Bachelor's degree in biology in 2000, and a degree in Exotic Training and Management from Moorpark College in 2005. Since coming to the San Diego Zoo, she has been involved in many programs that include behind-the-scenes tours of the zoo grounds, camps, sleepovers, outreach programs to schools, hospitals and nursing homes, and most recently biomimicry programs. Currently she facilitates introductory biomimicry workshops for corporate and professional educator groups, biomimicry-themed tours for school-age children, and has done numerous presentations with various zoo "Animal Ambassadors" on the topic of biomimicry.

## ANDERS SAHL HANSEN

Anders Sahl Hansen is currently a Lab Agent and BioMeme project manager at Innovation Lab where he works on ideation, conceptualization, and trend and technology forecasts for large organizations both in the private and public sectors. He also runs talks, workshops, and projects based on biomimicry.

Anders is involved in several ongoing projects including KRAFT – The Powers of Nature, Vestas – From Organization to Organism, and VELUX – Biomimicry workshop. KRAFT is an amazement park powered by Nature where the forces of transitions in Nature are turned into rides in four main areas representing Wind, Sun, Water, and Earth. The vision is that the municipality surrounding the amazement park will transform into a real time bio tech/green tech/clean tech/biomimicry test plant for services and products of corporations worldwide. Vestas is a project that developed a new organizational structure based on anthropological studies of culture, external research, and the concept of meta-biomimicry. VELUX is a full-day biomimetic and conceptualization workshop based on pre-defined and researched engineering challenges in collaboration with Denmark's Technological University.

Anders received a Bachelor of Economy, International and a Master of Science in Economics and Business Administration, Innovation Management from Aarhus School of Business (Aarhus University).



## DAVID SCHENONE - KEYNOTE SPEAKER



I was fortunate to discover at an early age that becoming a designer would hold an interest and passion for a lifetime. Growing up in the San Francisco Bay Area, I was able to watch the evolution of the Silicon Valley, and was heavily influenced by its associated technology.

I obtained a degree in Industrial Design from San Jose State University, and spent the next 18 years working for various computer companies. The most recognizable being Xerox, Atari and Tandem Computers. And as most of us do at some point, spent time running my own business. During those years, I achieved more than my fair share of design awards from Japan, Germany, Italy and America.

On a rainy Tuesday afternoon in 1992, I got a call from a small company in Oregon called Nike. "Were interested in your design career and athletic experience, come up for a visit and see what you think" fifteen years have gone by in a flash. My design exposure immensely broadened through the diversity of Nike products and experiences. I have carried many different torches from Design Director of Footwear to Innovation Director for Advanced Concepts. Big change from the Silicon Valley!

## RUPRECHT VON BUTTLAR

**Ruprecht von Buttlar** directs the execution and development of CONNECT's Business Creation programs, including Springboard, the Entrepreneurs in Residence program, the Venture Roundtable program and Deal Network. Springboard, CONNECT's flagship program, assists innovators and entrepreneurs with the definition of a compelling commercialization strategy through mentoring by seasoned, C-level executives – CONNECT's Entrepreneurs-in-Residence (EIRs). Under Ruprecht's guidance these four programs have experienced continuing and rapid improvement. Since 2005, over 200 companies have completed the Springboard process and over 50% of these companies are still in operation as of December 2010. These companies have raised over \$ 190 Million in seed-, venture- and debt financing.

Prior to CONNECT, Ruprecht held global chief executive, general management and business development positions in the Internet and communications industries with companies including Motorola, DSC Communications (Alcatel), Nortel Networks and Scientific Atlanta. Ruprecht has a BS in Industrial Engineering from the University of Hamburg and a MBA from Loyola College in Maryland.



## BILL WALTON

William Theodore Walton, III (Bill) was born on November 5th, 1952, in San Diego, California.



Bill Walton was introduced to the game of basketball while in the fourth grade at Blessed Sacrament Elementary School by Coach Frank "Rocky" Graciano. Walton then attended Helix High School, where the basketball coach was Gordon Nash. At Helix, his team won the California Interscholastic Federation High School title two years in a row, while winning their final 49 consecutive games.

Walton enrolled at UCLA in 1970 and played center for John Wooden's Varsity team for three seasons (1972-1974). He was a member of two NCAA championship teams compiling an NCAA record 88 consecutive game winning streak. He was the recipient of several awards, including the NCAA Player of the Year Award in 1972, '73 and '74. At UCLA Walton was a scholar-athlete who also earned Academic All-

American honors three years in a row. He graduated with honors earning a B.A. in History.

Walton's professional career began when he was the number one overall pick in the 1974 NBA Draft by the Portland Trailblazers. He won championship titles with the Blazers and the Boston Celtics. He also played with the San Diego Clippers, and the relocated Los Angeles Clippers. Over the course of his NBA career, he was honored with numerous awards, including NBA's MVP and All-Star Team. Eventually Bill was inducted into the Basketball Hall of Fame.

Walton started his broadcasting career in 1990 as an analyst for the then Prime Ticket Network. Walton worked for CBS Sports in the early 90's during the NCAA Final Four and then for NBC for many years, including work on the 1996 Atlanta and 2000 Sydney Summer Olympic Games. Over the last 15 years he has worked for ABC, ESPN, NBC, CBS, Fox, MSNBC, Turner Sports, KCAL, and the NBA. In 2001, Walton won an Emmy for best live sports television broadcast.

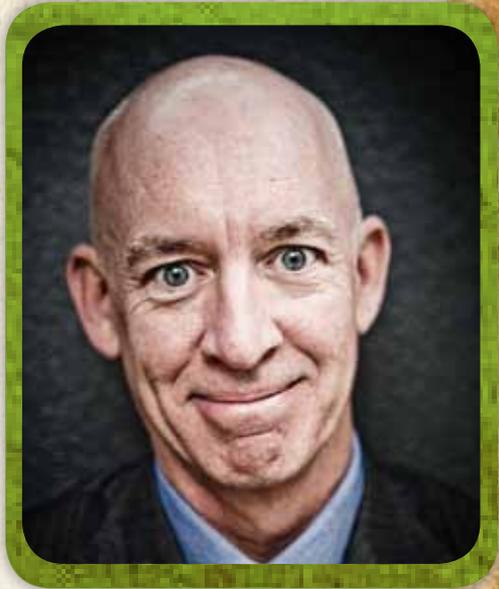
Walton is currently the Executive Chairman of SD Sport Innovators (SDSI). SDSI is a business accelerating, trade organization that connects and drives the growth of Southern California's vibrant sports economy by offering innovative programs and services for start ups, mature companies and service providers. We offer mentoring, education and capital funding opportunities for start-ups; best practice collaboration, access to new technology, and public policy advocacy for mature companies; as well as deal flow to our service providers and the Southern California Investment Community.

## JOHN WINSOR

**John Winsor** is a leading strategic marketing and product innovation thinker especially known for his work in collaboration, co-creation and crowdsourcing. Currently, he is the CEO of Victors & Spoils, the world's first creative (ad) agency built on crowdsourcing principles. The launch of Victors & Spoils in the autumn of 2009 made instant waves in the marketing industry, marking the advent of a new era in regard to the perception of crowdsourcing within advertising. Today, Victors & Spoils works with CMOs at Fortune 500 companies and continues to turn heads as its clever output reaches the mainstream. The agency was named by Advertising Age as one of the "Top 10 Agencies to Watch" in 2011.

Before Victors & Spoils, Winsor was the VP/Executive Director of Strategy and Innovation at Crispin, Porter + Bogusky helping the company become the most awarded advertising agency in the world for the last two years. In 2007, Winsor sold his company, Radar Communications, to CP+B. He founded Radar in 1998 with Nike as its first client. Using strategy and academic-based market intelligence tools, Winsor helped some of the country's most progressive companies learn from key voices in their communities through methods he gleaned from his years as a journalist. Prior to founding Radar, Winsor built a magazine publishing company devoted to sports such as mountain biking, in-line skating, and extreme skiing. In 1990, he acquired the rights to publish a then-struggling magazine, Women's Sports & Fitness. Within three years he turned the magazine around and launched several other highly profitable titles and events including The Gravity Games, selling the business to Conde Nast in 1998.

Winsor is also a frequent industry speaker and respected author. His body of work includes *Beyond the Brand: Why Engaging the Right Customers is Essential to Winning in Business* (2004), *Spark: Be more Innovative through Co-Creation* (2005), *Baked In: The Power of Aligning Marketing and Product Innovation* (2008) and *Flipped: How Bottom-Up Co-creation is Replacing Top-Down Innovation* (2009). *Baked-In*, a bestseller, was named as an award winner in the Marketing category for the 800-CEO-Read 2009 Business Book Awards.



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## BIOMIMICRY STUDENT POSTERS

This year San Diego Zoo Global partnered with Design Institute of San Diego, NewSchool of Architecture and Design, and Sam Fox School of Design & Visual Arts at Washington University in an entirely student-based, bio-inspired poster project. These members of the design community show that it is not necessary to be a scientist or engineer to practice biological inspiration. We would like to take this opportunity to thank the students and faculty for their participation in this project and help in bringing the 2011 Biomimicry Conference to life.

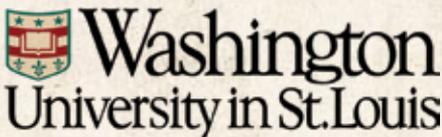


### DESIGN INSTITUTE OF SAN DIEGO

Posters from DISD feature innovations inspired by three unique Zoo animals - the elephant, the weaver finch, and the tailless whip scorpion - displayed in a "movie poster" format.

**STUDENTS:** Sharon Ancheta, Roel Bautista, Ruth Bernal, Misty Birchall, Kelcy Blann, Shara Ehrlich-Burton, Rachel Fariior, Monica Fillet, Ariana Gillen, Daphne Handy, Ghadir Hanoush, Megan Hearon, Rachel Hughes, Karla Kapssof, Alina Leyton, Sarah Lindsay, Tina Marshall, Virginia McCuin, Allison Pendergast, Adanna Roberts, Alexandra Roocroft, Linda Santos, Ollie Shepherd, Beth Stewart, Heather Young

**INSTRUCTOR:** Ron Neumond

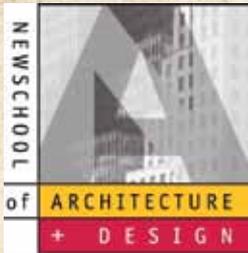


### WASHINGTON UNIVERSITY IN ST. LOUIS

Posters from the College and Graduate School of Art at Washington University feature notable innovations from leaders in biomimicry and sustainability.

**STUDENTS:** Julia Gordon, Gabrielle LaMarr LeMee, Jill McKay, Brittany Mikottis, Alissa Millenson, Erin Miller, Anna Shafer-Skelton, Adira Weixlmann, Sasha Yan, Limor Zisbrod

**INSTRUCTOR:** Heather Corcoran



## NEWSCHOOL OF ARCHITECTURE AND DESIGN

Posters from the NewSchool feature case studies of bio-inspired architecture and are displayed in a special order following the "evolution" of bioinspiration in architecture from simple mimicking of form to complex implementation of natural function.

**STUDENTS:** Ann Capinguian, Kevin Colbert, Jason Durr, Fallon Lemos, Ivan Picazo, Rodrigo Villalon

**INSTRUCTORS:** Charles Crawford, Adriana Cuellar

### EASELS

The easels displaying these posters were designed and built by NewSchool of Architecture and Design. Each easel is made of environmentally conscious plywood and is comprised of multiple interlocking parts, negating the use of unsustainable glues or fasteners. The design uses minimal material while maximizing strength and stability.



*\*A special thank you to Lee Hagey, Denise Homme, Corine Maggio, and Robert Thiele for their contributions to this project.*

## A SPECIAL ANNOUNCEMENT: BIOMIMICRY BRIDGE

San Diego Zoo Global is pleased to formally announce Biomimicry BRIDGE, an innovative plan of action for the economy and the environment. This unique collaboration brings together the Zoo, universities, government and business to promote bioinspiration as a means to drive technological and business innovation. Biomimicry BRIDGE initiatives are guided by a steering group comprised of community leaders including:

**Allison Alberts**

Chief Conservation Officer, San Diego Zoo Global

**Randy Ataide**

Executive Director, Fermanian Business and Economic Institute, Point Loma Nazarene University

**Paula Brock**

Chief Financial Officer, San Diego Zoo Global

**Elizabeth Castillo**

Director of Development, Balboa Park Cultural Partnership

**Helen Cheng**

Conservation Finance Manager, San Diego Zoo Global

**Jacques Chirazi**

CleanTech Program Manager, City of San Diego

**Cathy Gallagher**

Director, Fermanian Business and Economic Institute, Point Loma Nazarene University

**Heather Honea**

Faculty, San Diego State University

**Jon Prange**

Venture Business Manager, San Diego Zoo Global

**Michael Rondelli**

Technology Transfer and Commercialization Director, San Diego State University Research Foundation

**Lisa Shaffer**

Faculty, University of California, San Diego

**Ruprect von Buttlar**

Business Creation and Development Director, CONNECT

To remain updated on the advancement of Biomimicry BRIDGE please visit [sandiegozoo.org/biomimicry](http://sandiegozoo.org/biomimicry)



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## Division of Professional and Continuing Education



The University of San Diego Division of Professional and Continuing Education houses a variety of professional programs and services that extend the University's reach to the San Diego business community, international corporations, and educators in California and beyond. Programs include a variety of workshops, seminars, in-house training, English-language services, graduate level extension classes and certifications and non-degree credit classes. The Division is housed in the Douglas F. Manchester Executive Conference Center, which is also available for the professional conference and training needs of the external community.

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### Community Outreach Programs

- University of the Third Age

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**Patrick Wade** *Vice President Global Innovation Sourcing, WD-40 Company*

## BIOMIMICRY AT THE SAN DIEGO ZOO

San Diego Zoo Global offers unparalleled facilities to introduce biomimicry in an interactive and multi-sensory way. Moving into the future, we hope to share our resources with local, national, and global communities to progress biomimicry and build San Diego into a hub for sustainable, nature-inspired innovation. We are pleased to offer introductory biomimicry workshops for students of all ages.

### BIOMIMICRY RECEPTIONS

Through our ongoing reception series, open to the public, visitors are invited to mingle with representatives from multiple disciplines and hear the latest news from leading biomimicry implementers. Past topics have included bio-inspired architecture, sustainability, and the economic potential for bioinspiration.

### BIOMIMICRY SPECIAL TOURS

Tour groups are treated to a private two-hour bus tour that explores the San Diego Zoo's grounds. While viewing our extensive collection of plants and animals, groups will stop at two behind-the-scenes animal areas and complete an introductory activity to biomimicry.

### HIGH SCHOOL WORKSHOP

This workshop introduces high school students to the subject of biomimicry through a behind-the-scenes tour of the Arnold and Mabel Beckman Center for Conservation Research, several hands-on activities, and an interactive scavenger hunt in the San Diego Zoo Safari Park.

### STUDENT AND EDUCATOR WORKSHOP

Catered to college-level students and/or professional educators, this workshop provides an introduction to biomimicry, hands-on activities, a private tour with a Zoo educator, and a behind-the-scenes experience with Zoo animals.

### CORPORATE PROGRAMS

In this three-day professional development opportunity, companies will be exposed to the full scope of the Zoo's unparalleled facilities including the San Diego Zoo Safari Park and San Diego Zoo Institute for Conservation Research. Participants will receive an overview of biomimicry, gain a deeper understanding through interactive exercises, collaborate with experts, and experience special plant and animal encounters. The San Diego Zoo will work closely with corporations to tailor the experience to meet specific needs.

[sandiegozoo.org/biomimicry](http://sandiegozoo.org/biomimicry)



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