Accelerating Change

Artificial Intelligence
Intelligence Amplification

2005

Stanford University - Palo Alto, California
September 16-18

Transforming Technology, Empowering Humanity

Acceleration Studies Foundation

The Conference

Dear Change Leader:

***Accelerating Change* 2005** is the premiere conference in the world exploring the opportunities and benefits of accelerating technological change.

Our conference exists to network and inform the most broad minded, future-aware, practical and passionate change agents, both presenters and participants.

AC2005 delivers three main benefits: a community of exceptional attendees, foresight into coming events, and strategies for navigating the future.

Today, every technology-dependent executive and organizational leader is a de facto futurist. Certain types of change are so rapid and disruptive that only the most foresighted are ready for what comes. At the same time, many new technologies are overhyped, overinvested, and underdesigned. If information overload is our greatest problem, creating strategic foresight is our best solution.

Efficiently driving change today requires pragmatic knowledge of technical, business, and social change, an innovator's attitude, a philosophy of lifelong learning, and a desire to network with inspirational, multidisciplinary colleagues.

Intelligent strategic thinking today begins with a commitment to support communities like ***Accelerating Change***. I cordially invite you to join us at Stanford this September

Sincerely,

John Smart
President, ASF

Keynote
Vernor Vinge
Mathematician; Computer Scientist; Author, *A Fire Upon the Deep*; *The Coming Technological Singularity*

Keynote
Ray Kurzweil
CEO, Kurzweil Technologies; Award-Winning Inventor; Author, *The Age of Spiritual Machines*; *The Singularity is Near*

Keynote
Daniel G. Amen, MD
Medical Director and CEO, Amen Clinics; Author, *Change Your Brain, Change Your Life*; Monthly columnist, *Men's Health*

Keynote
Tom Malone
MIT Sloan Business School; Author, *The Future of Work*

Change Leader
Blake Ross
Co-Creator and Project Director, Mozilla Firefox; Open Source Entrepreneur; Computer Science Student, Stanford University

Change Leader
Esther Dyson
Editor, *Release 1.0* and Editor at Large, CNET Networks

Change Leader
Ron Kaplan
Fellow, Information Sciences and Technologies Lab, PARC; Principal, CSLI, Stanford

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The Foundation

The **Acceleration Studies Foundation (ASF)** is a 501(c)(3) nonprofit corporation. ASF seeks to improve the way we look at the future through research, education, consulting, and selective advocacy of communities and technologies of accelerating change. We promote a broad, multidisciplinary, and critical understanding of accelerating technological change in service to professional competency and economic, political, social, and personal development. In a world of accelerating technological change, discovering which technologies have the greatest potential benefit in each environmental context, and selectively advancing those in a culturally sensitive manner, while regulating and mitigating destabilizing technologies, is the essence of strategic foresight.

> There should be a periodic conference of different types of people to think about ... some means by which we can make the best of both worlds. The best of the purely human world, and the best of this extraordinary, wonderful, and terrifying world of [technological] technique.
>
> **Aldous Huxley (1959)**

Conference Themes

Artificial intelligence (AI), broadly defined, improves the intelligence, capacity, and autonomy of our technology. **Intelligence amplification (IA)** empowers human beings and their social, political, and economic environments.

Speakers emphasize a mix of analysis, forecasting, and action plans and examples, using multidisciplinary inquiry and a synthesis of technical, entrepreneurial, and social development dialogs.

AI subthemes addressed:

- Algorithmic Intelligence
- Architecture Intelligence
- Data Intelligence
- Distributed/Embedded Intelligence
- Evolutionary/Biomimetic Intelligence
- Interface/Agent Intelligence
- Locational/Spatial Intelligence
- Linguistic Intelligence
- Nano/Miniaturization Intelligence
- Network Intelligence
- Robotic Intelligence
- Systems/Emergent Intelligence
- Virtual Intelligence

IA subthemes addressed:

- Artistic/Creative/Cultural Intelligence
- Cooperative/Collective/Democratic Intelligence
- Competitive/Enterprise Intelligence
- Economic/Financial/Investing Intelligence
- Education Intelligence
- Environmental Intelligence
- Foresight/Forecasting Intelligence
- Health and Wellness Intelligence
- Innovation and Tech Transfer Intelligence
- Intra- and Interpersonal Intelligence
- Media/Communications Intelligence
- Political/Policy Intelligence
- Security/Crime Intelligence
- Spiritual/Ecumenical Intelligence

> When the rate of change on the outside exceeds the rate of change on the inside, the end [of a business] is near.
>
> Jack Welch

Attendee Benefits

- 45 leading presenters on key topics in accelerating change
- 300 future-aware attendees, many selectively invited (see **accelerating.org/changeleaders**)
- Two days and nights interacting with some of the top minds in the world.
- Five keynotes, two themes, three panels, one debate, many breakout and Q&A sessions
- Conference handbook, podcast proceedings
- Realtime DVD recordings for sale on site
- Networking events including Collective Intelligence Dinner and On the Tip
- Tech Night Demos and Reception at SAP Labs North America Headquarters
- Presenters' and Conference Bookstore

FutureAcademy Tutorials

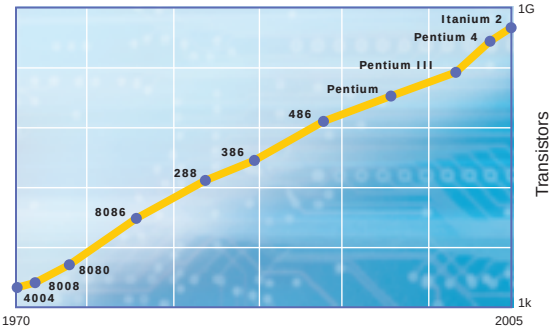
ASF proudly debuts our Future Academy professional development tutorials at *Accelerating Change* 2005.

Our Friday pre-conference tutorials provide skill-building experience for our entrepreneurial, technology-adept, future-minded, and innovation-oriented attendees. They are led by successful, forward-thinking experts, good at helping you gain high-value ideas and processes in a small group setting.

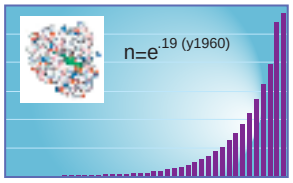
How Does Computation Affect Our Environment?

Moore's Law

In 1964, **Gordon Moore** of Intel noted that CMOS transistor density doubles reliably every 18-24 months. In 1999, **Ray Kurzweil** noted this doubling trend has held for at least 110 years. What new products and services will this enable in 2015? 2025?



Dickerson's Law



In 1977, **Richard Dickerson**, a professor of physical chemistry at Caltech, noted that solved protein crystal structures had risen from one in 1961 to 23. He published a simple exponential formula which predicted that by March 2001 scientists would have solved 3-D structures for more than 12,000 proteins. He was only 57 short of the actual number. How many physical processes are so computation-dependent?

Smith's Law

Alvy Ray Smith, Microsoft graphics guru and co-founder of Pixar has said, "Reality begins at 80 million polygons per second." **Joi Ito** notes *Toy Story* had 5-6 million polygons per frame. *Toy Story 2* had twice that. Our best digital faces today have 100 motion control points. The actual Reality Transition may be 800 million polygons/frame and thousands of control points. We are rapidly approaching this threshold. What then?

Speakers

Change Leader
Philip Rosedale
CEO, Linden Lab, creators of *Second Life*

Change Leader
Beth Noveck
Associate Professor of Law Director, New York Law School Institute for Information Law and Policy; Director, Democracy Design Workshop; Founder, State of Play conferences on law and virtual worlds

Change Leader
Joichi Ito
Blogger; CEO and Founder, Neoteny Co., Ltd.; VP International and Mobility, Technorati; Chairman, Six Apart Japan

Change Leader
David Fogel
CEO, Natural Selection, Inc.; Author, *Blondie 24: Playing at the Edge of AI*; Founding Editor-in-Chief, *IEEE Transactions on Evolutionary Computing*

Change Leader
Steve Jurvetson
Managing Director, Draper Fisher Jurvetson; "The Valley's sharpest VC," *Business 2.0*

Change Leader
Jon Udell
Lead Analyst, InfoWorld; Software Developer

Change Leader
Harold Morowitz
Biophysicist; Robinson Professor of Biology and Natural Philosophy, George Mason University; Author, *The Emergence of Everything*

Change Leader
Ruzena Bajcsy
Director, CITRIS (Center for Information Technology Research in the Interest of Society); Former Assistant Director, National Science Foundation, CISE; Former Director, GRASP, U Penn

Emcee
Cecily Sommers
Strategic Principal, Unit 1; Founder and President, The PUSH Institute, producers of the annual PUSH Conference

Change Leader
Marcos Guillen
Founder and CEO, Artificial Development; Developers of CCortex

Change Leader
Robin Raskin
Consultant and author on family life in a digital world, robinraskin.com; TV Personality; Former Editor of PC Magazine

Emcee
Mark Finnern
Collaboration Manager, SAP Developer Network; Blogger, O'Reilly Network; Board Member, ASF; Founder and Host, Bay Area Future Salon; Co-Producer, Accelerating Change Conferences

Change Leader
Terry Winograd
Professor and Director, Human-Computer Interaction programs, Stanford University; Principal Investigator, Stanford Digital Libraries Project and Interactive Workspaces Project

Change Leader
T. Colin Campbell
Professor Emeritus, Division of Nutritional Sciences, Cornell University; Author, *The China Study: The Most Comprehensive Study of Nutrition Ever Conducted.*

Emcee
Sonia Arrison
Director of Technology Studies, Pacific Research Institute (PRI)

Change Leader
David A. Smith
Principal Architect, Croquet project; CTO, 3Dsolve; Co-founder, Red Storm Entertainment (w/ Tom Clancy) and Timeline Computer Entertainment (w/ Michael Crichton)

Change Leader
Peter Barrett
CTO and General Manager, Microsoft TV, IPTV Platform

Special Host
Moira Gunn
President and CEO, The Tech Nation Group; Host, Tech Nation and BioTech Nation

Change Leader
Jamais Cascio
Senior Contributing Editor, WorldChanging; Writer and foresight consultant

Change Leader
Eric Boehnisch-Volkmann
President, DEVONtechnologies, creators of DEVONthink; Former Editor, Macworld (Germany); Editor-in-Chief, Publishing Praxis (Germany)

Change Leader
Peter Thiel
President, Clarium Capital; Co-Founder and Former CEO, PayPal; Author, *The Diversity Myth: Multiculturalism and Political Intolerance*

Change Leader
Scott Rafer
President and CEO, Feedster

Change Leader
(Live via Video)
Robert Hecht-Nielsen
Computational Neurobiologist, Institute for Neural Computation; Professor, Electrical and Computer Engineering, UC-San Diego; Founder, HNC Software (now Fair Isaac)

Change Leader
Peter Norvig
Director of Search Quality, Google; Author, *Artificial Intelligence: A Modern Approach* (the world's leading texbook in AI)

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American Cancer Society
Croquet

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For information on sponsorship benefits, visit **accelerating.org/ac2005/sponsorship.html**

Conference Schedule

Visit **accelerating.org** for the most current schedule.

Friday September 16

Tutorial Registration (check in 8am +)

Future Academy Tutorials at Stanford University (each running concurrently, 9am - 4:30pm)

Foresight Consulting Tutorial

Futuring 101: Successful Models in Foresight Consulting

Dr. Peter Bishop, Chair, Studies of the Future M.S. Program, University of Houston
Tom Conger, CEO, Social Technologies

Investment Tutorial

Making the Future Work for You: How to Safely and Profitably Manage Your Own Account

Mike Korns, Founder and Chairman of the Board, Korns Associates; CEO, InvestByAgent

***Second Life* Tutorial**

Building the Dream: Creating and Profiting in Virtual Worlds

Presented by: **Linden Lab**
Cory Ondrejka, Vice President of Product Development, Linden Lab

General Conference Registration (check in 6pm +)

Friday Evening Reception and **Tech Night Demos** at SAP Labs, Palo Alto (6 - 9pm)

Optional No-Host Dinners Near Stanford

Saturday September 17

John Smart, ASF
Introduction to Accelerating Change

Artificial Intelligence - Keynotes

Vernor Vinge, Mathematician-Author, *A Fire Upon the Deep*
AI and IA: Signs of Accelerating Change

Ray Kurzweil, Kurzweil Technologies; Author, *The Singularity is Near*
AI and IA: Where We Are and Where We Can Be

Artificial Intelligence - Panel

Patrick Lincoln, Director, Computer Science Lab, SRI International
Peter Norvig, Director of Search, Google; Author, *AI: A Modern Approach*
(Others TBA)

AI - *Future Maker* Breakout Panels

Educating Our Machines
Marcos Guillen, Artificial Development
Erik Boehnisch-Volkmann, Devon Technologies

Shrinking the Planet
Peter Barrett, Microsoft IPTV
Scott Rafer, Feedster

Artificial Intelligence - Breakout 1

Harold Morowitz, Author
Living Cells and Self-Replicating Bots: Nanoscience and Biology

Robert Hecht-Nielsen, Computational Neurobiologist (via videoconf)
Associational AI

Artificial Intelligence - Breakout 2

David Fogel, Natural Selection, Inc.
Evolutionary Computation

John Udell, InfoWorld
Google Maps as Expert Systems

Artificial Intelligence - Breakout 3

Esther Dyson, CNET
The Accountable Net

Terry Winograd, Stanford Univ.
Interface Intelligence

Q&A with Ray

Q&A with **Ray Kurzweil**, Moderated by **Moira Gunn** of *Tech Nation*

Artificial Intelligence - Debate

Progress in Search: A Conversational User Interface by 2015?
Tim Sibley, StreamSage (Moderator)
Ron Kaplan, Fellow, ISTL, PARC; Principal, CSLI, Stanford
Jay Wilpon, AT&T Research Labs (tentative)

COLLECTIVE INTELLIGENCE DINNER (Provided)

On The Tip: Audience Issues, Projects, Solutions

Jerry Paffendorf, ASF, *Intro to Explorations: Brave New Virtual Worlds*

Explorations I - On the Crest

Joichi Ito, Neoteny, *Future of Blogging*
Cory Ondrejka, Linden Lab, *A Message to the World About Video Games*

Explorations II - On the Horizon

Jamais Cascio, WorldChanging, *Personal Memory Assistants*
John Smart, ASF, *How to Be a Tech Futurist*

Sunday September 18

Mark Finnern, ASF
Introduction to Intelligence Amplification

Intelligence Amplification - Keynotes

Tom Malone, MIT Sloan School of Business
The Future of Work

Nils Herzberg, SAP (tentative)
World Wide Workspace

Daniel Amen, MD, Amen Clinic
SPECT and the Future of Mental Health

Intelligence Amplification - Panel

Education: Rebuilding or Bypassing our Institutions?
Ruzena Bajcszy, CITRIS
Robin Raskin, Digital Mom; Author, *Raising Digital Kids*
(Others TBA)

Intelligence Amplification - Breakout 1

T. Colin Campbell, Cornell Univ.
Future of Nutritional Sciences

Beth Noveck, NYU Law
Ethics and Political Intelligence

"*How to Start a Future Salon*" (optional during lunch)

IA - *Future Maker* Breakout Panels

Educating Ourselves
Philip Rosedale, Linden Lab/*Second Life*
David Smith, Croquet

Small, Smart, Open
Steve Jurvetson, DFJ
Blake Ross, Firefox

Intelligence Amplification - Breakout 2

Peter Thiel, Clarium Capital
Financial & Social Innovation

TBA

Plenary Semicircle - Closing Discussion

Joichi Ito, Neoteny
Steve Jurvetson, DFJ
Peter Thiel, Clarium Capital
(Others TBA)

John Smart and **Iveta Brigis**, ASF
Closing Remarks

Lounge, Optional No-Host Dinners Off Campus

> Innovation occurs for many reasons including greed, ambition, conviction, happenstance, acts of nature, mistakes, and desperation. But one force above all seems to facilitate the process. The easier it is to communicate, the faster change happens.
>
> James Burke

Registration Accelerating Change 2005

Register Online:
accelerating.org/register

Payment
Registration may be done by check, PayPal or credit card. Please make checks payable to **ASF**, enclose this registration form, and send to the following address:

Mail: ASF
2227 Amirante
San Pedro, CA 90732-4104

Phone: (310) 831-4191
Fax: (310) 732-2285
Email: mail@accelerating.org

PayPal payment requires creating a PayPal account, a simple, quick, and secure process. To pay by PayPal, please visit **accelerating.org/register**.

Confirmation and Cancellation
All registrants will receive an email acknowledging enrollment. Approximately one month prior to AC2005, attendees will receive a confirmation letter with further details regarding conference program and directions. Registration refunds can only be made upon receipt of a written request, dated no later than August 10, 2005. All refunds subject to a $100 administration fee.

Special Needs
Registrants with special needs should notify the organizers at least one month in advance. Please contact **(310) 831-4191** or **mail@accelerating.org**.

Hotel
The conference hotel for AC2005 attendees is the **Sheraton Palo Alto**, 625 El Camino Real. AAA 3 diamond rated. Outdoor heated pool, Poolside Grill, fitness center, 24-hour business center, wireless Internet.

Mention AC2005 for the special $99 room rate (ask for "in house registration").

Phone: (650) 328-2800 **Fax:** (650) 327-7362

The Sheraton is 0.8 miles from Tressider Union, a 15-20 minute walk or three minute drive. Free parking at Stanford after 4pm M-F and weekends, $9/day parking at the Sheraton.

Name (Mr,/Ms,/Dr.)

Email Address

Website

Address

City, State, ZIP

Phone

Organizational Affiliation (for your badge)

Position/Title

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Conference Rates: (check one)	**Price:**
☐ Early Bird Rate (deadline July 31, 2005)	$450.00
☐ Regular Rate (deadline Sept 12, 2005)	$500.00
☐ Student Rate*	$150.00
☐ Academic, Govt, Retired, Unemployed Rate**	$250.00
Door Rate (after Sept 12, 2005)	$600.00
Friday Tutorial Rates: (check one)	
☐ Futuring 101 (Foresight Consulting)	$100.00
☐ Investment (Personal Investment Management)	$150.00
☐ *Second Life* (Creating & Profiting in Virtual Worlds)	$200.00

* Call (310) 831-4191 first, limited Student Rate spaces. Fax a copy of your current university student ID to **(310) 732-2285**, or the regular conference rate will apply.

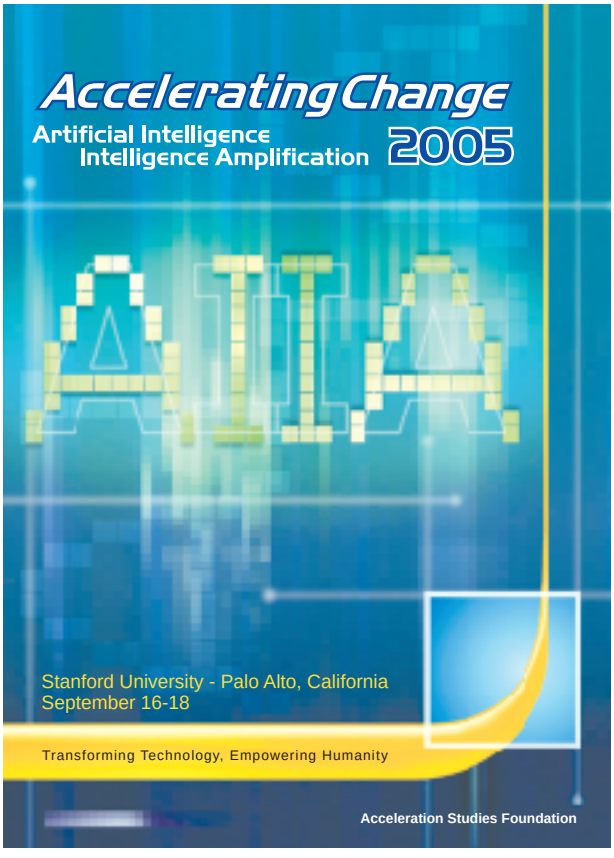
** Call (310) 831-4191 first, limited AGRU Rate spaces. Proof of status required.

Do you wish to be listed in the print Attendee Roster? ☐ Yes ☐ No

Subscription to our free monthly newsletter, *Accelerating Times*? ☐ Yes ☐ No

Accelerating Change 2005
Artificial Intelligence and Intelligence Amplification
September 16-18 (Friday - Sunday)
Tresidder Union at Stanford University

Conference Hours:
Tutorials
Friday 9 AM - 4:30 PM
General Conference
Friday 6 PM - 9:00 PM
Saturday 8:30 AM - 11 PM
Sunday 8:00 AM - 5:30 PM



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