

Caltech Innovation and Technology Leadership

Executive Education Courses for Technology-based Companies

Business growth through sound innovation strategy, smart technology management, and faster new product development

**Courses in June and July 2009
Caltech Campus, Pasadena, CA**

Management of Technology and Innovation	June 16-18
Technology Strategy for R&D and Product Development	July 14-15
Intellectual Property for Technology & Business Development	July 16-17
Competitive Technical Intelligence	July 20-21
Acquiring External Technology to Drive Innovation	July 23-24

Innovation and Technology Leadership

Solutions

Competitively manage your technology resources, build sound strategy, develop innovative organizations, and accelerate new product development. Increase productive innovation in preparation for market expansion:

- Build **technology roadmaps** to link technical investments to future needs
- **Acquire technology** from others to drive and augment internal innovation processes
- **Build IP portfolios** that align technology development with business goals and generate licensing revenue
- Design a **product development strategy** that increases speed and productivity
- Effectively **collect and assess the intelligence** required to make sound technology investment decisions and understand competitors' actions
- **Distinguish yourself as an innovation and technology leader** by earning the California Institute of Technology Industrial Relations Center Technology Management Certificate

The Caltech Industrial Relations Center specializes in helping you develop a focused competency base for **managing technology**. We offer:

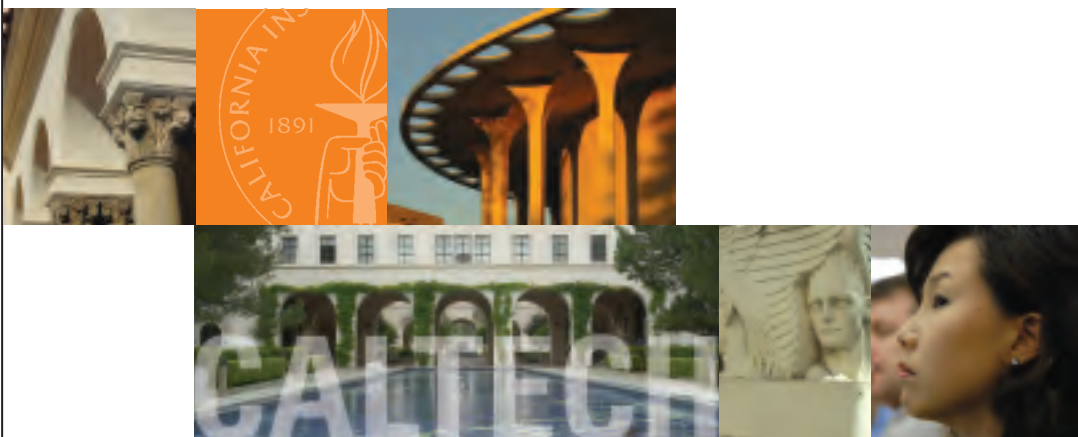
- Back-to-back courses for time and travel savings
- Multiple course curriculum for practical mastery of technology management and strategy development
- High-level peer group to share experiences and discuss issues
- Individual courses to meet your most critical needs

Who should attend:

Senior executives and managers in engineering, R&D, business development, product planning, strategic planning, alliance management, general management, and senior technical professionals.

We recommend team participation for maximum company benefit.

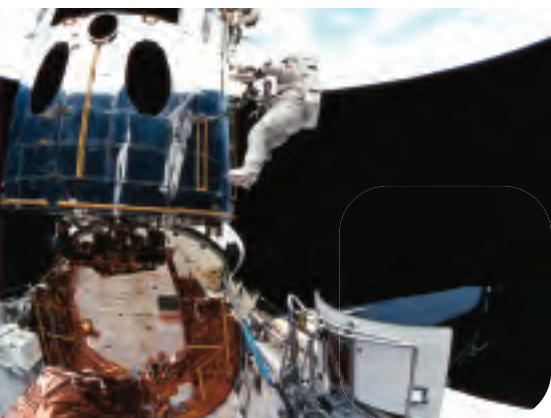
Caltech stands for **world leadership** in **teaching**,
research, and **technological innovation**.



innovate > integrate > accelerate

Management of Technology and Innovation

For senior technology executives—one of the most comprehensive and practical courses today that focuses on the key problems in managing innovative enterprises and deploying technical resources.



Course Leaders

Thomas J. Allen, PhD and Ralph Katz, PhD

Key Benefits

- Lead more effective, motivated entrepreneurial team efforts
- Commercialize your technical advances and leverage innovative ideas rapidly
- Improve innovation and exercise decision making under technological and market uncertainty
- Allocate technical resources in changing environments

Key Topics

Leading and Motivating Technical Professionals

- Understanding how professionals' motivations change over time
- Improving the integration and long-term vitality of technical professionals

Managing Uncertainty

- Understanding how motivation, innovation, and uncertainty are interrelated
- Leveraging the creative tension between generation and reduction of uncertainty

Managing Technology Transfer and Communication

- Understanding the role and making effective use of the technology gatekeeper
- Overcoming the barriers to transferring technology
- Dealing with the effects of physical location and organizational architecture on technical communications and innovation

Staffing the Innovation Process

- Moving technical professionals into leadership roles
- Recognizing and balancing the critical functions for carrying out innovation
- Developing critical skills for reducing new product development cycle time

Commercializing Technical Capabilities

- Linking technology with market strategy for successful marketplace innovation
- Maintaining creativity in long term technical efforts
- Improving transfer of technical knowledge into new products and services

Managing the Decision Making Process

- Managing the tensions between development efforts and schedule pressure
- Structuring decision making processes

Creating and Maintaining High Performing Technical Organizations

- Building collaborative cross-functional teams, sustaining motivation and innovation over time
- Balancing short- and long-term technical efforts
- Managing streams of innovation across technology cycles

Comments From Past Participants

"Working with technical leaders, we are keenly interested in cultivating a scientific community where ideas flow, data is exchanged across departments/levels, and inventive thoughts spark productive innovation. These otherwise abstract topics were made pragmatically accessible throughout the great case studies and interactive exercises chosen in this course. Well done!"

Wai Poc

*Senior Manager of HR in R&D
Genentech, Inc.*

"I found the discussions on managing innovation and change, reducing uncertainty, and motivating technical professionals excellent. The materials, presentation, the instructors' knowledge and the cases were outstanding."

Tom Wagner

*Chief Technology Officer, R&D
MedPlus, Inc.*

Course Schedule 2009

Schedule	Continental Breakfast	Course	Dinner
First Day	8:00–8:30 a.m.	8:30 a.m.–5:00 p.m.	5:00 p.m.
Second Day	8:00–8:30 a.m.	8:00 a.m.–5:00 p.m.	
Third Day	7:30–8:00 a.m.	8:00 a.m.–4:00 p.m.	

Course Dates	Course Fee
June 16-18	\$3,595
October 28-30	

REGISTER TODAY: WWW.IRC.CALTECH.EDU 866.632.9809 Bring this course to your company

Technology Strategy for R&D and Product Development

Build technology roadmaps that guide innovation and growth with customer focused technology investments



Course Leader: Jay E. Paap, PhD

Key Benefits

- Uncover current and future customer needs
- Anticipate potentially disruptive technologies
- Identify innovative customer focused projects
- Develop strategies to guide project selection
- Build technology roadmaps to direct innovation
- Use 'corporate venturing' and 'open innovation' to manage risk and resources

Key Topics

Make Technology Relevant to Your Business

- Create value by linking technologies to customer needs
- Focus on leverage, not importance, to unlock the power of customer needs
- Keys to effective technology planning and strategy processes

Assess the Competitive Environment With Landscape Roadmaps

- Understand the use of two types of roadmaps: landscape maps and route maps
- Build landscape maps to reflect the key dimensions of innovation: needs, technologies, and competitors
- Use the Customer Focused Technology Planning® framework to stimulate innovative thinking by linking technologies to needs

Use Technology Route Maps to Guide Selection and Execution

- Factors affecting roadmaps: strategy, landscape maps, experience, and judgment
- Build a four part technology strategy: core technologies, an innovation strategy, a sourcing strategy, and a balancing strategy

- Select projects with a strategic focus – the importance of portfolios
- Five questions to ensure all projects have a sound business base: NOMMAR (need, options, market, model, approach, and relevance)
- Reduce resistance to innovative projects by managing exposure
- Keys to protecting long-term projects

Avoid Surprises by Anticipating Customer Needs and Disruptive Technologies

- Anticipate demand through techniques providing customer insight
- Anticipate technological obsolescence and 'disruptive technologies'

Managing Risk and Speeding Development Through Open Innovation and Corporate Venturing

- Overcome the three R's (resources, risk, and resistance)
- Manage the risk of developing and commercializing innovative products through corporate venturing
- Form internal ventures and spin-offs to accelerate innovation

Special Feature

Participants receive a planning guide that walks them through the steps of a typical technology planning activity.

Comments From Past Participants

"This course is excellent. In particular, I found the ideas and concepts related to Customer Focused Technology Planning® very valuable. The IRC provides a very comfortable and friendly environment in which to learn."

Ron Koehler

*Director, Next Generation Products
Yaskawa Electric America*

"This course provides an excellent summary of R&D and product development risk assessment and management that we will use immediately. The content is very relevant for senior managers at technology companies, especially the insight into the decision making process. The instructor is energetic and engaging, and was very effective in driving the class."

David Turner

*Managing Director, Fibers Division
Techmer PM*

Course Schedule 2009

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First Day	8:00–8:30 a.m.	8:30 a.m.–5:00 p.m.	5:00 p.m.
Second Day	7:30–8:00 a.m.	8:00 a.m.–4:00 p.m.	

Course Dates	Course Fee
July 14-15	\$2,595
October 8-9	

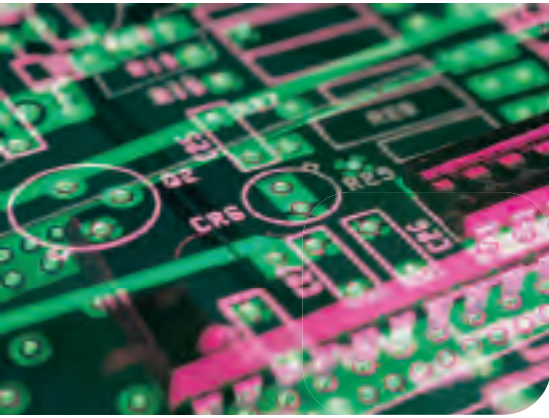
REGISTER TODAY: WWW.IRC.CALTECH.EDU 866.632.9809 Bring this course to your company

Competitive Technical Intelligence

Driving Innovation While Anticipating Competitors' Actions

Anticipate disruptive technologies, emerging drivers, and competitor actions.

Stay ahead of your competitors by learning how to effectively collect, assess, and act on intelligence required to make sound technology investment decisions.



Course Leader: Jay E. Paap, PhD

Key Benefits

- Make better technical decisions
- Minimize surprises about competitors or potentially disruptive technologies
- Develop actionable intelligence from raw data
- Protect your own information from other firms' intelligence efforts
- Set up a program to direct your intelligence effort

Key Topics

Technical Competitive Intelligence and the Management of Technology

- CTI defined—organized information to drive innovation
- A four-step 'decision based' intelligence process
- Improving technical decisions: Case studies of CTI in action
- Ethical issues in collecting intelligence

Focusing the Search

- Defining where technical intelligence provides value
- Clarifying the assumptions and unknowns affecting decisions
- Developing Key Intelligence Topics (KITs)
- Lessons from technical scouting
- Forming actionable intelligence questions to guide the collection effort

Sources of Technical Information

- Selecting internal and external intelligence sources
- Organizing and utilizing internal sources of intelligence

- Developing a comprehensive search strategy
- Collecting intelligence at conferences—steps to take before, during, and after the meeting
- Anticipating emerging business drivers—techniques for identifying unarticulated customer needs
- Using the Internet, World Wide Web, and portals
- Protecting your information—basics of counter-intelligence

Analyzing Technical Intelligence: Converting Raw Data Into Actionable Intelligence

- Guidelines for selecting the right analytical framework
- Traditional approaches: profiling, trending, maturity, and substitution curves
- Technology forecasting fundamentals
- Anticipating disruptive or breakthrough technologies
- Techniques for analyzing patents
- Computer aided pattern assessment techniques

Using Technical Intelligence Strategically

- Translating intelligence into action
- Getting started with CTI: the 'Virtual CTI' model
- Building buy-in and commitment to action
- Putting it all together—keys to success

Comments From Past Participants

"I really liked how Jay Paap showed us how to use technology and interviewing to gather data on just about everything. The course had great overall content and organization."

Brandon Varnau

*Vice President of Quality
Bayer HealthCare Pharmaceuticals Inc.*

"Learning about the new tools to use for competitive intelligence and ways to approach my work will improve our ability to focus our products. Jay set a great pace, is an excellent speaker, and is extremely knowledgeable."

Joseph LaConte

*General Manager, Applied Instrument Technologies
Hamilton Sundstrand*

Course Schedule 2009

Schedule	Continental Breakfast	Course	Dinner
First Day	8:00–8:30 a.m.	8:30 a.m.–5:00 p.m.	5:00 p.m.
Second Day	7:30–8:00 a.m.	8:00 a.m.–4:00 p.m.	

Course Dates	Course Fee
July 20-21	\$2,595
October 26-27	

REGISTER TODAY: WWW.IRC.CALTECH.EDU 866.632.9809 Bring this course to your company

Accelerating New Product Development

How Leading Companies Drive Development Speed and Productivity

Accelerate new product development by using a comprehensive roadmap to go beyond engineering solutions to engage all stakeholders.



Course Leader: Christopher Meyer, PhD

Key Benefits

- Identify and fix the most critical barriers to achieving faster product development and improved productivity
- Design a product development strategy that increases speed and productivity
- Use metric dashboards to guide your project portfolio strategy
- Get your product to market faster within existing resource constraints

Key Topics

Building a Foundation for Faster Product Development

- Building your business case for increasing product development speed
- Surfacing the forces driving or inhibiting change in your firm
- Making faster product development and customer satisfaction inseparable
- Using best product development practices for operational and strategic speed

Tuning Product Development Portfolio Content and Processes for Speed

- Designing 'minimum viable' portfolio and project governance structures
- Using portfolio measurement tools to avoid developing near duplicate products
- Building a framework and product architecture for re-use
- Identifying and coping with disruptive technologies and change requirements
- Using partner-based development/collaboration principles

Redefining the Development Process

- Accelerating the traditional phase-gate process
- Determining when to apply the phase-gate process
- Using a flexible product development process
- Creating time-effective program management processes
- Focusing the program manager role on speed
- Creating development plans that accelerate clear program definition

Building a High Performance Development Community

- Designing the right team for the job
- Transforming functional-silo thinking into team work
- Designing reward and recognition systems

Metrics: Putting a Speedometer on Your Company's Scorecard

- Understanding the difference between business, and research and development metric issues
- Defining the measures that support speed and customer satisfaction
- Designing and using predictive measures
- Building and updating development team dashboards

Implementation: How Product Development Leaders Do It

- Implementation models and plan reviews
- Case studies
- Best practices for rapid progress

Comments From Past Participants

"I gained insights into business challenges for projects that I am working on now. The presentation was well-balanced, the instructor drew on his personal experience in a credible manner."

David Scheirman

*Vice President, Tour Sound
JBL Professional
A division of Harman International*

"The course content and the instructor's expertise for Caltech IRC's *Accelerating New Product Development* are very strong. I found the knowledge I gained about how to measure research and development performance and how to effectively implement product development models most valuable."

Steven Grisct

*Vice President Research & Development
Sybase 365*

Course Schedule 2009

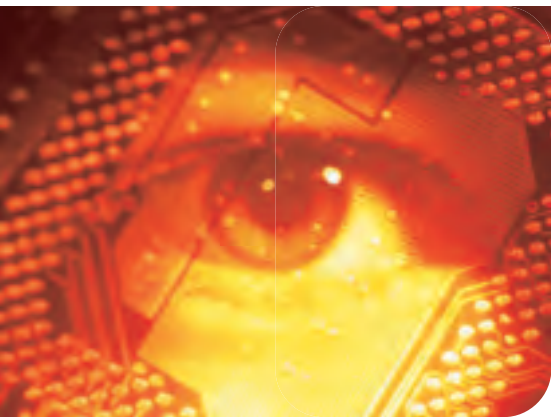
Schedule	Continental Breakfast	Course
First Day	8:00–8:30 a.m.	8:30 a.m.–4:30 p.m.
Second Day	7:00–7:30 a.m.	7:30 a.m.–3:30 p.m.

Course Dates	Course Fee
April 30–May 1 September 17–18	\$2,595

REGISTER TODAY: WWW.IRC.CALTECH.EDU 866.632.9809 Bring this course to your company

Acquiring External Technology to Drive Innovation

Looking Outside to Accelerate Growth and Build Value



Course Leader: Ora Smith, JD

Business Issues Addressed

Innovate rapidly by scouting and acquiring external technology. Obtain the tools to manage the acquisition process. Learn how to structure successful deals and manage the relationships. Integrate external technology sourcing into your business processes.

Key Benefits

Identify when outside technology is needed, how to find what you need, and how to manage the integration process.

Key Topics

Accelerating Innovation Through External Technology

- Becoming more innovative by moving to an 'open innovation' business model
- Accelerating the product development cycle using limited technical resources
- Managing risks and controlling costs

Balancing External and Internal Development Efforts

- Using the WFGMSM model of technology acquisition: determining **W**hat you need; **F**inding it; **G**etting it; **M**anaging relationships
- Developing a comprehensive technology strategy that involves acquisition, cross-supply, and co-development

Determining Your External Technology Acquisition Goals

- Candidate criteria: seeking value, filling gaps, managing complexity, addressing competitors, reducing costs, and hedging your bets (the portfolio concept)

- Incorporating technology roadmaps
- Establishing priorities among technology acquisition needs

Finding What You're Looking for

- Looking in other companies
- Searching in start-up companies
- Working with university faculty and tech transfer offices
- Going global: problems and considerations

Structuring the Deal

- Transitioning from one-on-one arrangements to alliance networks
- Moving from cost and supply chain management to more strategic integrated external networks
- Considering the open innovation model

Integrating External Technology Sourcing Into Your Business Processes and Managing Resulting Relationships

- Using the external technology sourcing concept to overcome traditional corporate boundaries
- Making it work: top management involvement
- Risk management

Impact of Intellectual Property Law on External Technology Sourcing

- Structuring relationships with intellectual property in mind
- Understanding the role of patent and copyright in enhancing/impeding external innovation acquisition
- Assessing the impact of IP law on external sourcing

WFGM is a service mark of Alliance Management Group, Inc.

Comments From Past Participants

"I will now be able to better structure a deal for external acquisitions. Ora also provided a good summary of technology scouting tools. Interacting with the other participants in class provided additional valuable information."

Dr. Ping Zhong

*Director New Technology Assessment
Givaudan Flavors Corporation*

"The course provided me with a lot of different ideas to acquire technology . . . The case examples discussed in class are very insightful."

Chris Roger

*Director, Corporate and External Research
Arkema Inc.*

Course Schedule 2009

Schedule	Continental Breakfast	Course	Dinner
First Day	8:00–8:30 a.m.	8:30 a.m.–5:00 p.m.	5:00 p.m.
Second Day	7:30–8:00 a.m.	8:00 a.m.–4:30 p.m.	

Course Dates	Course Fee
July 23-24	\$2,595
November 9-10	

REGISTER TODAY: WWW.IRC.CALTECH.EDU 866.632.9809 Bring this course to your company

Intellectual Property for Technology & Business Development

Strategies and Tools for Creating and Leveraging Your IP Portfolio



Course Leader: Paul Germeraad, PhD

Select R&D projects and build IP portfolios that generate higher profits and licensing revenues, protect business unit profits, and contain costs. You'll get the tools necessary for:

- Directing technical investments
- Leveraging the results to achieve your organization's strategic objectives

Key Benefits

- Select breakthrough development projects using the highest leverage IP information
- Build IP portfolios that create maximum financial value
- Develop alternative strategies for extracting value from past development efforts
- Manage IP to align with your business strategy

Key Topics

Aligning Technical Development With Business and Licensing Processes

- Metrics to evaluate your company's IP
- How to manage a technical project to gain advantaged positions from patents, trade secrets, trademarks, copyrights, and know-how, versus key competitors

Building High-Value IP Portfolios

- Segmenting a portfolio to show investment benefits
- Weeding out patents not providing value
- Selecting the best development options
- Practical models for IP valuation
- Assessing your true strengths and weaknesses

Competitive Assessment of a New Corporate Initiative

- Distinguishing innovations from known prior art
- Leveraging opportunities within and outside your company
- Identifying IP 'sharks' around your new initiatives

Making Good Technology Investment Decisions

- Integrating business, technical and IP strategies and tactics
- Using IP to support open innovation
- Using key patent information to support break-through development programs
- Balancing your IP portfolio
- Identifying sources of new or complementary technology
- Assessing competitors' capabilities and intentions
- Anticipating technical shifts

Impact of Intellectual Property Opportunities Abroad

- Assessing your foreign filing strategy
- Investing in developing countries using your competitors' best technology

Comments From Past Participants

"This course is very relevant to the increasing focus and appetite for innovation. The construct of 'technology business IP' is a good one for companies trying to innovate. Paul uses real-world stories and data to highlight important points. Great presenter and instructor!"

Pete Swenson

*Director, Technology and Advanced Products
Tennant Company*

"I found the value extraction and managing the IP portfolio very helpful for my projects. I will be applying these tools and processes to the technology project I'm involved in. The course is very well presented with great case examples."

Dr. Paul Patel

*Principle Scientist/Project Leader Concept Incubator –
Palo Alto
Roche Diagnostics Operations, Inc.*

Course Schedule 2009

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First Day	8:00–8:30 a.m.	8:30 a.m.–5:00 p.m.	5:00 p.m.
Second Day	7:30–8:00 a.m.	8:00 a.m.–4:00 p.m.	

Course Dates	Course Fee
July 16-17	\$2,595
November 11-12	

REGISTER TODAY: WWW.IRC.CALTECH.EDU 866.632.9809 Bring this course to your company

Meet our Caltech IRC Technology and Innovation Management Instructors

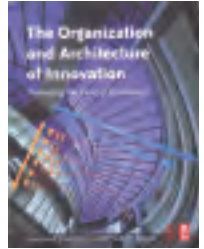
Management of Technology and Innovation



Thomas J. Allen, PhD, is Howard W. Johnson Professor of Management and Professor of Engineering Systems, Emeritus at Massachusetts Institute of Technology, and is co-director of MIT's Leaders for Manufacturing and System Design and Management Programs. He was director of MIT's International Center for Research on the Management of Technology. Dr. Allen is currently studying organization design and architecture, and communication within clusters of new venture technology firms.

Dr. Allen is well known for his groundbreaking studies on the problem solving and communication behaviors of engineers and scientists and the role of the technology gatekeeper for effective knowledge and information transfer.

Dr. Allen is the author of *Managing the Flow of Technology* and the co-author of *The Organization and Architecture of Innovation*. He received his SM and PhD in electrical engineering and management from MIT and a BS in physics from Uppsala College. Dr. Allen is the recipient of Honoris Causa doctoral degrees from four European universities.



Participants receive a complimentary copy of Dr. Allen's book.



Ralph Katz, PhD, is senior lecturer at MIT's Sloan School's Management of Technology Group and professor of management at Northeastern University's College of Business. He has carried out extensive management research and consulting on technology-based innovation with emphasis in the management of technical professionals and project teams.

The National Academy of Management awarded Dr. Katz the 'New Concept Award' for his significant contribution to the field of organizational behavior. He is also a recipient of *R&D Management's* 'Best Paper' award. Dr. Katz received the IRI Maurice Holland Award for his article, 'Anticipating Disruptive Innovation,' published in *Research Technology Management*.

Dr. Katz's most recent book publication is *The Human Side of Managing Technological Innovation*. For over 10 years, he was the R&D/innovation and entrepreneurship departmental editor for *Management Science*. He has consulted with numerous organizations on problems and issues related to the management of their innovation processes and personnel for the past 35 years. He received his PhD and MBA from the University of Pennsylvania's Wharton Graduate School and a BS in mathematics from Carnegie Mellon University.



Participants receive a complimentary copy of Dr. Katz's book.

Intellectual Property for Technology & Business Development



Paul Germeraad, PhD, is president of Intellectual Assets, Inc., specializing in the development of leading edge IP assessment tools, ensuring clients create and obtain maximum value from their intellectual property.

As chief operating officer for Aurigin Systems, Inc., Dr. Germeraad focused on the commercialization of the company's intellectual asset management software for the competitive intelligence, licensing, and R&D communities.

He served as vice president, corporate research, at Avery Dennison. Previously, Dr. Germeraad was director of James River Corporation's flexible packaging technical center. Earlier, he held R&D and management positions at Raychem Corporation.

Dr. Germeraad is past chairman of the board of the Industrial Research Institute. He also served as a Licensing Executive Society (U.S.A. and Canada), Inc. trustee and vice president of education.

Dr. Germeraad holds 10 U.S. patents and 12 foreign counterparts. His articles have been published in *les Nouvelles* and *Research Technology Management*. He is a contributing author to two books, has authored refereed articles, and addressed the Society of Competitive Intelligence Professionals (SCIP).

Dr. Germeraad received his PhD in chemistry from the University of California, Irvine. He holds an LLB degree, and earned his BA in chemistry from the University of California, San Diego.

Accelerating New Product Development



Christopher Meyer, PhD, is chairman of the Strategic Alignment Group, Incorporated, and an academic affiliate of Pittiglio, Rabin, Todd & McGrath (PRTM). Dr. Meyer specializes in helping companies drive growth through rapid innovation in strategy, portfolio optimization and customer experience management. Dr. Meyer has designed and helped implement cycle time programs for Cisco Systems, Daimler-Chrysler, Emerson Electric, Ericsson, ExxonMobil, Genzyme Corporation, Hewlett-Packard, Honeywell, Johnson & Johnson, Procter & Gamble, Silicon Valley Bank, and Texas Instruments.

Blending over 30 years experience as an executive, consultant, and researcher, Dr. Meyer is the author of *Fast Cycle Time*. His latest *Harvard Business Review* article, "Understanding Customer Experience," (February 2007) shows how leaders harness customer experience to innovate and grow faster than competitors. Dr. Meyer's executive experience includes serving as vice president for human resources at Silicon Graphics Computer Systems and organizational effectiveness advisor at Zilog, Incorporated.

He served on the faculty of the University of Southern California and the University of Minnesota. Dr. Meyer received his PhD and masters in organization strategy and design from the University of Southern California. He holds a BS in economics from the Wharton School of Finance and Commerce.



Participants receive a complimentary copy of Dr. Meyer's book.

Competitive Technical Intelligence, Technology Strategy for R&D and Product Development



Jay E. Paap, PhD, is president of Paap Associates, a Fellow of the Society of Competitive Intelligence Professionals (SCIP), and a PDMA Certified New Product Development Professional. For over 35 years, he has helped organizations leverage technology to promote their growth and strategy objectives by linking technical and product developments to current and future customer needs. He has helped design, launch, and support initiatives dealing with product and technology planning, competitive intelligence, R&D organization, technology transfer, corporate venturing, strategic alliances, technological innovation, and new

product development.

Dr. Paap's clients include 3M, Abbott, Apple, AstraZeneca, AT&T, Baxter, Boeing, British Telecom, Dow Corning, DuPont, ExxonMobil, Ford, Gillette, Hewlett-Packard, IBM, Johnson & Johnson, Kellogg, Kimberly-Clark, Kobe Steel, Kraft, Lockheed-Martin, Mars, Motorola, National Research Council (Canada), Novell, Procter & Gamble, Sandia National Laboratories, SC Johnson, Shell, Steelcase, Unilever, and Xerox.

He has presented at programs sponsored by MIT, *Business Week*, Cal Berkeley, the Industrial Research Institute (IRI), the Nomura Research Institute (NRI), Nihon University, SCIP, and the Product Development and Management Association (PDMA).

Dr. Paap served on the editorial boards of the *Journal of Competitive Intelligence and Management*, *Competitive Intelligence Review*, and *Technology Management*. He co-authored "Anticipating Disruptive Innovation," which won the annual IRI Maurice Holland Award as best article published in *Research Technology Management*. He received his PhD from MIT's Sloan School of Management and has held faculty positions at the Sloan School and Indiana University.

Acquiring External Technology to Drive Innovation



Ora Smith, JD, consults on projects in the technology sector. His clients include companies, organizations, and universities engaged in technology development, commercialization, and transfer. Previously, he was CEO of Illinois Superconductor Corporation, (now ISCO International) a leader in using external innovation to bring high temperature superconductors into the commercial wireless equipment marketplace.

Mr. Smith served as vice president and chief marketing officer at Conductus. Both ISCO and Conductus were cited in the April 2005 Spectrum magazine as among the top seven most innovative IPO's out of 823 companies that went public from 1993-2002.

At Rockwell International, Mr. Smith was a corporate R&D lab director and the company's corporate director of external technology development. He also served as the Industrial Research Institute (IRI) Fellow in the White House Science Office while at Rockwell.

Mr. Smith was president of the Science and Technology Campus Corporation for over five years. This organization operates a research park and provides technology commercialization functions in affiliation with Ohio State University. He has served on various boards of directors and advisory boards.

Mr. Smith received his SB and SM degrees in mechanical engineering from MIT and his JD from Harvard Law School.

Certificate Program in Innovation and Technology Management

Designed for technical executives on a career path to senior positions in research, engineering, or development.

The California Institute of Technology Industrial Relations Center Technology Management Certificate consists of three required core courses and two elective courses. Three core courses examine approaches and practical frameworks to:

- Develop technology strategy
- Manage technological innovation and creative professionals
- Anticipate changes in competitor's technology position

Earn your Technology Management Certificate from an institution with a world-wide reputation for technology innovation. Complete courses on your timeline and in the order that works for you. The average completion time for the Technology Management Certificate is nine months. Additional Technology Management Certificate details are available on our website, (see certificate programs) or call us at 626.395.4043. You'll receive certificate credit for applicable courses already completed with us.



Certificate Planner 2009

Enroll now: www.irc.caltech.edu

Required Core Courses	April	May	June	July	August	September	October
Management of Technology and Innovation			16-18				28-30
Technology Strategy for R&D and Product Development				14-15			8-9
Competitive Technical Intelligence				20-21			26-27
Elective Courses							
Accelerating New Product Development	30-May 1					17-18	
Acquiring External Technology to Drive Innovation				23-24			
Intellectual Property for Technology & Business Development				16-17			
Integrated Strategic Planning				27-28			
Successful Project Management			1-3			9-11	

REGISTER ME TODAY!

Fax: 626.795.7174
Mail: California Institute of Technology
Industrial Relations Center, 1-90
Pasadena, California 91125-9000
Phone: 626.395.4043 or 866.632.9809
Email: excedu@caltech.edu
Internet: www.irc.caltech.edu

Registrants will immediately receive an enrollment acknowledgment. Approximately one month prior to the course, participants will receive a confirmation letter containing further details regarding the course schedule, location, and directions to hotels and the Center. Attire is business casual. **Wireless Internet access is available.**

Course Location: California Institute of Technology Industrial Relations Center, 383 South Hill Avenue, Pasadena, California 91106-3405

Hotel Accommodations: (Hotel rates are subject to change and availability.)
Caltech Athenaeum (Faculty Club) 626.395.8200 (\$144)
Old Pasadena Courtyard by Marriott 626.403.7600 (\$159)
Pasadena Hilton Hotel 626.577.1000 (\$165)
The Langham Huntington Hotel & Spa 626.568.3900 (\$205)
Sheraton Pasadena Hotel 626.449.4000 (\$144)
Westin Hotel 626.792.2727 (\$169)

Please request the California Institute of Technology/Caltech rate indicated. To ensure your reservation, guarantee for late arrival. Hotels listed are within 3 miles of the Industrial Relations Center.

Travel Savings: Protravel International, Gina Robles, grobles@protravelinc.com or Gloria Lopez, glopez@protravelinc.com, call 800.481.7774 or 626.796.4448. Fax 626.844.3055. Request the Caltech Industrial Relations Center participant rate.

Bring a colleague...duplicate this form for multiple registrations.

Register online at www.irc.caltech.edu

Register me for the following 2009 course(s)

<input type="checkbox"/> Management of Technology and Innovation	<input type="checkbox"/> June 16-18 <input type="checkbox"/> October 28-30	\$3595
<input type="checkbox"/> Technology Strategy for R&D and Product Development	<input type="checkbox"/> July 14-15 <input type="checkbox"/> October 8-9	\$2595
<input type="checkbox"/> Intellectual Property for Technology & Business Development	<input type="checkbox"/> July 16-17 <input type="checkbox"/> November 11-12	\$2595
<input type="checkbox"/> Competitive Technical Intelligence	<input type="checkbox"/> July 20-21 <input type="checkbox"/> October 26-27	\$2595
<input type="checkbox"/> Acquiring External Technology to Drive Innovation	<input type="checkbox"/> July 23-24 <input type="checkbox"/> November 9-10	\$2595
<input type="checkbox"/> Accelerating New Product Development	<input type="checkbox"/> April 30-May 1 <input type="checkbox"/> September 17-18	\$2595
<input type="checkbox"/> Technology Management Certificate	Please enroll me	

Payment: To pay by credit card, complete this form. Please make checks payable to Caltech Industrial Relations Center, enclose the registration form, and send to the mailing address. The California Institute of Technology's tax identification number is 95-1643307.

Course Fee: The fee includes the course, instructional materials, adjacent parking, continental breakfasts, lunches, and a dinner. The fee is due four weeks prior to the course. Each course has a limited number of participants. If the course is not held for any reason, California Institute of Technology's liability is limited to refund of the course fee.

Transfers/Cancellations: We offer the registrant an opportunity to either:
1) send a substitute to the original course or
2) transfer **once** to a later session.

Please notify us at least 11 business days prior to the course date to receive a full refund. If a cancellation is made within 10 business days prior to the course date, one-half of the course fee will be refunded. **Refunds cannot be granted for cancellations made the day of the course or following a transfer.**

Fax Enrollment Form

Name (Mr./Ms./Dr.) _____

Title _____ Function _____

Company _____

Address _____ Mail Code _____

City _____ State _____ ZIP + 4 _____

Telephone _____ Fax _____

Email _____

Credit Card Payment Please charge: Visa MasterCard American Express

Name As It Appears On Card _____

Billing Address/ZIP _____

Card Number _____ Expiration Date _____

Cardholder's Signature _____

California Institute of Technology
Industrial Relations Center
1200 East California Boulevard
Pasadena, CA 91125-9000

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