

# Micro-Macro Customization

## From Custom Genes to the Personalized City: Emerging Strategies and Technologies for the Personal Economy

### Micro-Macro Customization — The MIT Smart Customization Seminar (Twitter: #SCG12)

The MIT Smart Customization Seminar 2012 is a unique opportunity for a deep dive into one of the most intriguing trends shaping our economy today: the move towards personalization and the customization of products, services, health care, mobility, and urban infrastructure. The seminar's foremost idea is to connect CEOs, new business developers, consultants, corporate entrepreneurs, innovators, the investment community, and researchers from MIT and other leading institutions in peer-to-peer interactions to foster intense discussions and to co-create an agenda for the Personal Economy. This year's event will kick off with keynote presentations by world-renowned representatives from consulting, academia and industry:



**B. Joseph Pine II**  
*Strategic Horizons, LLP*

Internationally acclaimed author, speaker and management adviser. A Visiting Scholar with the Design Lab at MIT, he co-founded Strategic

Horizons LLP to help businesses conceive and design new ways of adding value to their economic offerings.



**Alex 'Sandy' Pentland**  
*MIT Media Lab Human Dynamics Group*

Professor Pentland is a pioneer in organizational engineering, mobile information systems, and computational social science. His research

focus is on harnessing information flows and incentives within social networks, the big data revolution, and converting this technology into real-world ventures.



**Marco Mattiacci**  
*President and CEO, Ferrari North America*

Marco Mattiacci was appointed Chief Executive Officer of Ferrari North America, Inc. in January 2010. He oversees the largest market of Ferrari,

which beyond the US included Canada and all Central and South America. Mr. Mattiacci, originally from Rome, Italy, has been with Ferrari for over 10 years.

Conventionally, mass customization has been seen as the efficient creation of products and services to meet the demands of each individual customer. But this still emerging development on the **micro level** – the level of the individual firm-customer relationship – has recently been supplemented by a strong application of customization and personalization principles on the **macro level**. Enabled by new methods of imaging and analytic testing, personalized medicine is replacing the blockbuster approach that has dominated the health industry. Anonymous cities with mass scale infrastructures are becoming personal by real-time data apps, personal mobility, and the stronger participation of citizens in the planning process. Mass production is being supplemented by a distributed and local infrastructure of digital manufacturing and open hardware.

The 2012 agenda will present divergent and complementary voices along four of the core areas where personalization today is shaping our economy and society most: Consumables, Health Care and Medicine, Urban Living and the City, and the new production system based on digital technologies and easy access to hardware and data.

**For more information and for assistance with registrations, please contact Ms. Betty Lou McClanahan at [blm@mit.edu](mailto:blm@mit.edu), or head to <http://scg.mit.edu/>. This event is co-hosted by**



# Preliminary Program

(subject to change, as of 11/26/2012)

## Monday, December 3<sup>rd</sup>, 2012

**5:00pm Registration and Networking Reception**, MIT Media Lab, 6<sup>th</sup> Floor, Skyline Room

**5:45pm Welcome**

[Kent L. Larson](#), Director, Changing Places Group, MIT Media Lab

**6:15pm Reflections on Personalization**

[Marvin Minsky](#), pioneer of AI, cognitive psychology and neural networks, MIT

**6:30pm Corse Clienti**

[Marco Mattiacci](#), President and CEO, Ferrari North America

**7:00pm Q&A initiated by Reflections of Frank Piller**

[Frank T. Piller](#), Professor, Technology and Innovation Management Group, RWTH Aachen University



## Tuesday, December 4<sup>th</sup>, 2012

**8:00am Registration and Breakfast**, MIT Stratton Student Center, 3<sup>rd</sup> Floor, Twenty Chimneys Room

**8:30am Introduction: From Micro to Macro Customization**

[Frank T. Piller](#), Professor, Technology and Innovation Management Group, RWTH Aachen University

**9:00am Personalization Using Big Data**

[Alex P. 'Sandy' Pentland](#), Director, Human Dynamics group and Entrepreneurship Program, MIT Media Lab

**9:30am The Multiverse: Finding the Next Opportunities in Mass Customization**

[B. Joseph Pine II](#), Author, Infinite Possibility: Creating Customer-Unique Value on the Digital Frontier



## 10:00am Why Going Green Means Going Custom

[Anthony Flynn and Emily Vencat](#), Entrepreneurs and Authors, Custom Nation: Why Customization Is the Future of Business and How to Profit From It

## 10:15am Exhibition and Networking

### 10:30am Session 1: Responsive Consumption from Personalized Hedonism to Sustainable Choice

In this session we explore how personalization and customization is changing our understanding of consumer choice and behavior. Consider the example of apparel: over one third of the value of textile industries is wasted on traditional mass production processes including warehousing, shipping, and retailing. Mass customization offers the potential to not only reduce waste in back-end processes, but also to help consumers make more informed and sustainable decisions. At the same time, real-time data tracking and new devices for self-measurement are becoming the foundation of new business models and retail formats.

Keynote presentation by

[Ryan C. C. Chin](#), Managing Director, MIT City Science Initiative

Followed by a panel discussion with industry representatives moderated by

[Fabrizio Salvador](#), Professor of Operations Management, IE Business School, Spain

## 11:45am Discussion Break

### 12:00pm Session 2: Digital Biology and Personalized Medicine

Personalization and customization have a long-standing tradition in health care, where treatments and prescriptions have always been tailored to individual patients' needs. Over the last decade, further personalization efforts were made by offering customized implants and diagnostics that adapt to physical features of patients. New technologies will extend this much further by building on an individual's genetic predispositions to better predict treatment outcomes. In addition, selective control over specific areas of neural circuits for the first time enables a thorough analysis of how behavior patterns and experience come about. On the other hand, from a more practical perspective, those behavioral patterns and underlying neural circuits can be readjusted using advanced mental techniques, ensuring optimum performance in critical situations. In this session, we will explore both new technical developments as well as the surrounding ethical debate and its implications for technology.

Keynote presentations by

[Edward S. Boyden](#), Associate Professor, MIT Media Lab and McGovern Institute

[John Moore](#), MD and Research Assistant, New Media Medicine Group, MIT Media Lab

Interactive discussion initiated by reflections of

[Marvin Minsky](#), pioneer of AI, cognitive psychology and neural networks, MIT

## 1:15pm Lunch



### 2:15pm Session 3: Personalized Cities

In the future, cities will account for nearly 90% of global population growth, 80% of wealth creation, and 60% of total energy consumption. Developing better strategies for the creation of new cities is therefore a global imperative. Our need to improve our understanding of cities, however, is driven not only by the social relevance of urban environments, but also by the availability of new strategies for city-scale interventions that are enabled by emerging technologies, taking a holistic approach over all of a city's functions – water, food, waste, transport, education, energy. This session will explore new data-driven approaches to urban design and planning with the ultimate goal of a 100x reduction in CO2 emissions, a 10x reduction in traffic congestion, a 5x improvement in livability and a 2x improvement in creativity.

Keynote presentations by

[Kent L. Larson](#), Director, Changing Places Group, MIT Media Lab

[Fabrizio Salvador](#), Professor of Operations Management, IE Business School, Spain

[Jarmo Suominen](#), Professor of Architecture, Aalto University, Finland

Interactive discussion initiated by reflections of

[Marco Mattiacci](#), President and CEO, Ferrari North America

### 3:30pm Exhibition and Networking

### 4:00pm Session 4: Making, Open Hardware, User Entrepreneurship

Designing and making is no longer only done by experts with years of training. Many of the digital design tools that were once available to professionals are now in the hands of consumers. Desktop 3D printers are popping up everywhere, sophisticated design software is freely available online, and the boundary between the physical and the digital is quickly blurring. What is being made by these non-experts? How are they designing and making it? What new design processes are we finding with such easily accessible design tools? From the bottom up – including start-ups, DIY fabricators and at-home designers; and from the top down – software behemoths and construction giants, we are seeing dramatic transformations in design technologies and platforms that enable mass customized products like never before.

Keynote presentations by

[Eric von Hippel](#), Professor of Management of Innovation and Engineering Systems, MIT Sloan School of Management

[Kaustuv DeBiswas](#), CEO and Founder, sunglass.io

[Scott Harmon](#), VP of Corporate Development, 3D Systems

Discussions in topical groups with the speakers, moderated by

[Daniel J. Smithwick](#), Research Assistant, MIT Department of Architecture

### 5:00pm Takeaways: What to do the Morning After?

[Frank T. Piller](#), Professor, Technology and Innovation Management Group, RWTH Aachen University

### 6:00pm Boston Mass Customization Community Meeting (optional)

Meet with the local Mass Customization Community in a relaxed atmosphere over dinner (on your own) and exchange experiences and ideas



## Travel and Accommodations

The seminar takes place on December 4, 2012, in the Twenty Chimneys Room (3rd floor) of the MIT Stratton Student Center, [77 Massachusetts Avenue, Cambridge, MA 02139](#), right in the center of the MIT Campus. The building is opposite the main MIT Entrance at 77 Massachusetts Avenue.

The [Marriott Hotel Boston-Cambridge](#) is within walking distance, as is [Le Meridien Cambridge](#). A room block has been reserved at the Marriott Hotel Boston-Cambridge for this event until November 16, 2012 at the rate of \$209/night. Please contact Ms. Betty Lou McClanahan at [blm@mit.edu](mailto:blm@mit.edu) for a reservation in the Marriott room block.

Links to other hotels and more travel information can be found on the [MIT Media Lab website](#).

## Registration

This exclusive event is an MIT engagement with executives and space in the seminar is limited, so reserve your seat today using the [online registration system](#) to enjoy the early registration discount.

**Special MIT SCG Scholarships are available for start-ups.** For members of start-ups focusing on areas addressed in the conference, a limited number of MIT SCG Seminar Scholarships are available: If you qualify, your participation will be co-sponsored by the MIT SCG and will be \$490 only! If you are interested in this opportunity, please send a brief e-mail describing your company to Professor Frank T. Piller ([piller@iimcp.org](mailto:piller@iimcp.org)).

In the event that you cannot participate at the main conference, you also can book just the Monday evening conference and networking at the [MIT Media Lab](#) ... an evening of great opportunities to meet likeminded peers.

	<b>Full Conference</b> <i>Includes full proceedings, breakfast and lunch on Dec. 4, and the Networking Reception on Dec. 3</i>	<b>An Evening at the Media Lab Only</b> <i>Mon, Dec. 3</i>	<b>Conference Proceedings and Materials Only</b> <i>Delivery about 2 weeks after the event</i>
<b>Early Bird</b> (On/before Nov 14)	\$995.00	\$125.00	\$395.00
<b>Standard</b> (Nov. 15 – Dec 1)	\$1,200.00	\$125.00	\$395.00
<b>Onsite</b>	\$1,495.00	\$125.00	\$395.00

## About the Organizers

The MIT Smart Customization Group is an MIT-Industry collaboration devoted to improving the ability of companies to efficiently mass customize products and services in various industries and for diverse customer groups. This industry interest group aggregates the key players in the area of mass customization and strives to become a vital community of practice in this field. <http://scg.mit.edu/>

**micro | macro | customization**

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December 3 & 4, 2012  
MIT Media Lab  
registration: [scg.mit.edu](http://scg.mit.edu)

## Participants of past SCG seminars were very enthusiastic

**88%** of participants evaluated the overall event experience as “outstanding” or “beyond expectations.”

**73%** of participants evaluated the networking opportunities in the domain as “much better than in comparable events.”

**85%** of participants will “definitely consider coming again” or “are looking forward to the next event.”

*I really enjoyed the conference and I look forward to attending again in the future.*

Jody Kalmbach, VP of Product Development  
Ezprints, Inc, USA

*It was great to meet you at the MIT Smart Customization Seminar in Cambridge back in May. The content was phenomenal and extremely helpful for us. Thank you for your generosity in helping us attend.*

Jessa McIntosh, CEO  
HomeStudio, USA

*I enjoyed being part of the seminar ... the opening as well as the speeches were very practically oriented and opened up for great discussions and thoughts on how customization can be scaled.*

Hanne T. Odegaard, Director Customization  
LEGO, Billund, Denmark

*I enjoyed meeting and hearing so many other innovative and entrepreneurial people. I will recommend it to others for the future.*

Dorrie Krueger, Managing Director  
Build a Bear Workshop, Inc., USA

*Thank you for organizing a fantastic conference, and for allowing me to participate. It was an incredible experience.*

Ted Acworth, Founder and CEO  
Artaic.com, USA

*I wanted to tell you personally how much I have enjoyed meeting you and watching you interact with everyone at the seminar. As Mass Customization is in its infancy, a cheerleader like you will help us all.*

Rob Langstaff, CEO, RYZshoes.com  
and former CEO, Adidas, USA

*Das MIT SCS 2010 war eine wirklich aufregende, inspirierende und äußerst gelungene Veranstaltung. Für Ihre Organisation und Einladung möchte ich mich hiermit nochmals herzlich bedanken.*

Martin Meuser, CEO  
Customate, Aachen, Germany

*Thank you again for this great conference in MIT. As I was on my way back to Shanghai, I was reflecting that this was probably one of the most interesting conferences I have been to. What I appreciated the most was the mix between the participants: large and small players in MC, academics, tech people and marketing people. A really good mix!*

Gabrielle Chou, CEO  
Ocreativ, Shanghai, China

