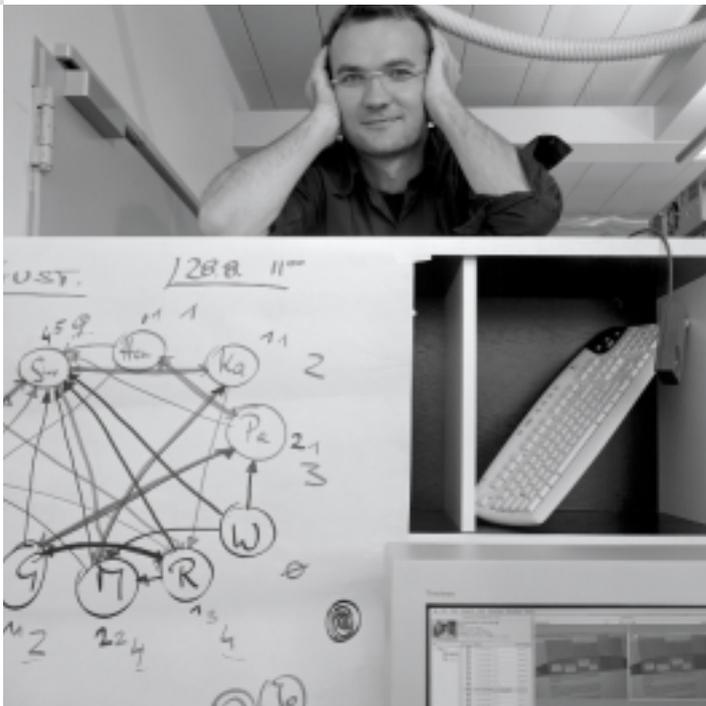




THE MASTERS COURSE





Masters in Interaction design

Interaction Design Institute Ivrea provides a two-year post-graduate programme of study. The year one curriculum covers the basics of interaction design; year two is based mainly on projects. Emphasis is on learning by doing. Leading practitioners come to lecture and run workshops.

Students have a range of different backgrounds, including art and design, computer science and electronics, and the human sciences, and come from all over the world. The faculty also comes from different backgrounds, and have played leading roles in industry and universities. Teaching is in English.

Interaction-Ivrea is a new kind of institute that combines research, design, and business. The teaching method systematically alternates between theory and practical experiment by involving the students in real-world design projects.

Interaction-Ivrea graduates will be experts in the design of communication products and services that are technically feasible, culturally desirable, and economically sustainable. They will learn to view technology as an important component of everyday culture and explore the common ground between design, culture, economy and technology. At the end of the course they will have obtained a specific training in technologies and their potential for influencing all aspects of daily life.



Teaching Programme for the Academic Year 2001-2002

First trimester: Basics of Interaction Design

The autumn term, focused on the basics of interaction design, began with an **introductory week**, where the students got to know each other and presented their visions of interaction design.

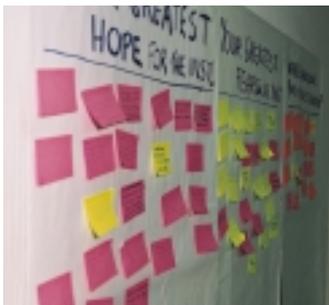
This was followed by a **crash course**, which introduced this group with all its different backgrounds to the field of interaction design. Students were made aware of the importance of including the user and the environment in the design process and started immediately with a practical assignment: the design of a shopping experience. The design brief was to focus on how a Palm-like shopping assistant could augment the shopping experience.

The **interaction+visual** week started off with lectures on philosophy, photographic composition and the physiology of vision. Each student created a visual design that explored the basic elements of interaction and the connection between physical and virtual space. The lectures aimed to provide students with the conceptual tools to design an interactive experience.

The third week was devoted to **sound**. The lectures explored the physical and psycho-acoustic qualities of sound, the way sound influences the environment, and those characteristics of sound one has to take into account when designing an acoustic experience. Students learned to generate sounds in interaction processes, going beyond the simple effects that interfaces often produce. Instead they focused on sounds that convey ideas and do this in a graceful yet intriguing way.

During the **user focus** week, Jan-Christoph Zoels and visiting professors Joy Mountford (IDBias) and Mark Burrell (Director of User Experience, Sapient) introduced the students to the main methods, processes and tools to create designs focused on a person and his/her needs: experience modelling, participatory design, and user experience assessment. During this week, students focused on how to: observe and analyse user behaviour; create a series of user profiles; participate in a conceptual design session of possible prototypes; decide on the appropriateness of various evaluation methods; and test the effectiveness of a new design. The project assignment was to study the use of the mobile phone in the office.

During **travel** week, small groups of students travelled for two to four days to various parts of Italy. The trips were organised as learning experiences: students immersed themselves in real Italian society, rather than the image by which Italy sells itself abroad. They focused on the production processes of the entrepreneurial reality of this country



(from the arms industry to the night-club business along the coast of Emilia-Romagna), rather than the products of these industries. The eight trips focused on car production around Turin ('Italy is a land of drivers'), industrial design around Milan ('Italy is a land of poets'), the food industry in the Alba and Langhe regions ('Italy is a land of food'), the entertainment industry in Rimini ('Italy is a land of fun'), the political system in Rome ('Italy is a land of politics'), the art world ('Italy is a land of art'), immigration ('Italy is a land of immigrants') and the weapons industry ('Italy is a land of guns').

It was now time to take a step back and **reflection** week allowed students to reflect on the first part of the course, confront themselves, and read and write about what they had learned during their first months in Ivrea.

The following two weeks were dedicated to **physical computing**. Our faculty and Stanford University professor Bill Verplank provided students with a series of basic concepts on the history, theory and practice of tangible user interfaces and ubiquitous computing. During the lectures, students learned the basics of electronics through BasicStamp programming, and approached conceptual and mental models for physical computing. The practical assignment required students to make a small interactive system for dimming lights.

The **environment** week focused on how design is determined by aesthetic and programmatic requirements. Casey Reas and Stefano Mirti asked students to develop proposals to design the experience of moving through the Institute's building, so that it functions as an interface itself, explains to visitors some of the meaning of interaction design, conveys what goes on inside, and even allows the visitors some feedback.

Director Gillian Crampton Smith and the Italian expert Franco Berardi ran the last week of the 2001 trimester devoted to **narrative**. The week's starting point was simple: until now the process of convergence between the web and other media has been basic, yet the web has some features that make it unique: connectivity, immersion and interactivity. As TV has generated specific formats with its own characteristics, the web also needs to become an author and a voice, and develop its own discourse and narrative. With this in mind, students had afternoon workshops on how to develop a narrative in a connected environment. They worked on the creating of 'net-fiction' and developed a scenario for its use on the internet.



Second trimester: 'Designing Desires' and 'Harnessing Technology'

The second trimester of the academic year 2001–02, featured three key components: two five-week projects—Designing Desire and Harnessing Technology—and a study trip to Japan.

The goal of the first project, **Designing Desire**, was to learn about the potential of interactive media in designing desirable user experiences in two contexts: one the private space of our homes ('The Connected Home'), the other when we go out in public, taking our technology with us in the form of wearable computing. The project had one week of workshops and four of project work.

A preliminary weeklong conference brought together designers, technologists, economists and fashion experts to set the scene. Lectures and workshops surveyed the history and current context, providing insights into the fashion and consumer durables industries, and inspiring discussions about the technology required for producing these artefacts. Visiting professors included: Joanna Berzowska, Chief Creative Officer of a fashion technology company; Anthony Dunne and Fiona Raby, Senior Research Fellows in Computer Related Design at the Royal College of Art in London; Richard Eisermann, Design Director of Whirlpool Europe Studio; David Gessel, partner in PicoStar, a California-based technological incubator; Francesco Morace, sociologist, writer and journalist; and Ted Polhemus, American anthropologist, author, lecturer and photographer.

The students were asked to design interactions with products and services that are not only functional but also aesthetically satisfying. They focused on prototypes that can be worn or used in the home.

Wearable computers: from the mobile phone to the PDA, computers are getting smaller. How to merge fashion and function?

The connected home: now that we no longer have to have all our devices tethered to the wall, how to use this freedom?

Harnessing Technology was the next project, developed in collaboration with Bill Verplank. It explored the space and boundaries certain new technologies can offer.

Many interesting technologies never left the research labs because nobody saw adequate applications. One reason for this is that designers, product developers, marketing experts and managers have problems understanding new technologies at a level sufficient to reveal their potential. The engineers, on the other hand, are rarely able to place their inventions in context, and often produce banal and simplified scenarios, which turn out





to be counter-productive. One way of overcoming this communication problem is for designers to learn to ask the right questions, to the right people, and in the right language. They also need to learn how to identify the level of understanding required to work creatively with a new technology. The project combined a scientific search for a new technology's basic elements and rules of composition, and an artistic exploration of its potential for use, through a case study and theory input (patents, scientific documents, experiments and contacts with

engineers and suppliers, for instance). Three technologies were explored in depth: streaming videos on handheld devices, contact and contact-less ID tags, and interactive haptics (tactile tools that work through force feedback). Workshops helped students get close to these technologies, understand their features and constraints, and pick one on which to concentrate for in-depth analysis of its future potential.

Harnessing technology: RF tags, broadband and streaming video, haptic displays

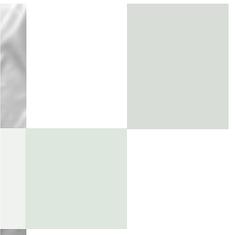
In the spring of 2002, the Institute organised a **study trip to Japan** to observe and analyse the Japanese approach to information and communication technology. Tokyo can be considered to be the 'interactive city' par excellence. Man-machine interactions of all types constantly intervene in the lives of the Japanese and in their transport systems, free time and social relationships. The trip focused on third-generation mobile phones, I-fashions, and metro tickets that incorporate a Radio-Frequency tag, as well as on how these approaches could be used or adapted to European and Italian markets. Students and faculty met key designers and researchers at major companies, including the Sony Interaction Lab, Hitachi, NTT ICC, and IDEO and exchanged ideas and information with interaction designers who were involved in research and development processes. The Institute also gave presentations at universities and Japanese training centres such as Tama and IAMAS, and in the studios of local interaction designers.

Third trimester: "Tomorrow's Services"

During the third trimester, 'Tomorrow's Services', students developed interaction design solutions within a much wider social and economic context.

This project series was based on a given context (the city of Ivrea, Olivetti Tecnost and the Institute itself) and used their inherent social and economic structures as a starting point to develop opportunities and visions for interaction design.





The project aimed to stimulate entrepreneurial qualities in the students and offer experience in designing something socially valuable and economically sustainable.

The students were able to:

- Learn about the context they are working in, conduct interviews and analyse the situation.
- Create ideas, both realistic and extreme, thinking about utopias as well as dystopias.
- Focus and define opportunities for a particular aspect they want to develop further.
- Integrate business models into their interaction design work and try to understand what lessons can be learned from the ‘new economy’.

In the final design stage the following results were produced: a clear discussion of the subject of the student’s project, including a vision and a mission statement, a plan for how the design could turn into sustainable business and, just as important, a 1:1 model or working prototype of a particular aspect of the system they were designing, at product or service level.

During this third trimester the students concentrated on one of three project contexts: ‘Fast technology for slow cities’, ‘From product to services’ and ‘The building as interface’.

The third trimester started off with a one-day professional workshop, held on 16 April in Ivrea, about sustainable business models for interactive products and services. Not only Interaction students participated in the workshop but also senior managers in industry who had responsibility for the innovation of new services based on information and communication technologies.

Fast technology and slow cities: cities are fast becoming unliveable.

How could we use ITC to improve the quality of life?

From product to services: when the fridge talks to the microwave, what will it say? Increasingly companies are turning to services rather than products to make their living. But a service needs to be designed just as a product does. What does it mean to design a service?

The building as interface: how can we use new technology to make our building express more of what goes on inside it?



Other courses

- Basics of computer science
- Prototyping techniques
- Complementary studies:
The Anthropology of Fashion;
Design Issues in Italy;
History of Technology
- Introduction to Electronics
- Italian and English lessons