

IHM 2009 Tutorial: Patterns of Design, Design Theory of Patterns

The success of interactive software services can be attributed to many technical and human factors working in harmony. Designing a new interactive service is a complex undertaking that must carefully consider this “harmony”. Because this harmony is hard to predict before a system is actually put to work, extensive design experience and collaboration are crucial. For additional support, interaction design patterns have been proposed as a means to discover, encapsulate, and disseminate design knowledge and best practices, hence improving the chances of success of new systems. An Interaction design pattern¹ is generally defined as a solution to a usability problem which occurs in different contexts of use. The concept of patterns was inspired by the work of Christopher Alexander in towns and building architecture. Interaction design patterns are a means to transfer experience from Human Computer Interaction (HCI) experts to software developer. This half day tutorial introduces first design patterns and interaction patterns languages as a way to derive and validate a conceptual design. Conceptual design is seen as a combination of patterns. Then, it grounds the design of patterns in design theories while contrasting pattern-oriented design, the work of Christopher Alexander and Influential proponents’ research on design methodologies in academia including people like Brenda Laurel, Terry Winograd, Bill Buxton and Pelle Ehn. The "shaping of design patterns" is an instance of design work, which broadly shares several characteristics across design disciplines.

CV

Dr. Ahmed Seffah completed his master and doctoral studies in software engineering at the Ecole Centrale de Lyon (France). Before joining the Lausanne Hospitality School (EHL) as a professor of software and information technology, he was for 10 years an associate professor and the Concordia research chair on human-centered software engineering at Concordia University, department of computer science and software engineering. Currently, he is also a visiting professor at HEC-University of Lausanne and other universities where he is teaching several graduate courses on customer-centric information service management and engineering as well as interactive services design and evaluation. Dr. Seffah is the author of more than 100 publications including five books. His research interests are at the intersection of human systems interfaces and software engineering including design theories and tools, usability and quality in use measures, user-centered design, human concerns in software development and management, customer experiences modeling and cost-benefits studies. As an area of applications, he is investigating the design of customer experiences-based *e.service (software as a service) in the context of tourism, leisure* and sustainable development.

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¹ Within this tutorial, we will interchangeably use the term interaction design pattern with HCI pattern as well as UI design pattern, design pattern, pattern, UCD pattern, user experience pattern, usability pattern to refer to the large variety of patterns used to make any type interactive system usable. This includes Web, GUIs, mobile and other highly interactive applications.