Matthias Ehmann

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Matthias Ehmann is a lecturer in computer science education in the Faculty of Mathematics, Physics and Computer Science at the University of Bayreuth, Germany. He received his PhD from the University of Bayreuth in 2004. His interdisciplinary thesis was entitled "GEONExT: Integration of Algebraic Objects and Internationalization".

One of his main research interests covers the field of e-learning. He is focused on the meaningful use of technology in the learning process and on the development of e-learning tools and environments. As a member of the eEE (electronic Education Environment) Group at the University of Bayreuth he is a co-developer and architect of this platform, which aims to bridge the gap between blended learning and pure e-learning in online tutorials. He has published several papers describing the necessary changes in the learning process to achieve a more student centered, self-dependent and cooperative way of e-learning. These concepts were implemented in eEE and successfully evaluated in a three year study with German high-school students in computer science courses. Meanwhile the eEE project is the base for a more general approach of a cooperation and communication platform with applications in e-learning, e-conferencing and e-customer support.

Matthias Ehmann has participated in numerous conferences and published various papers in international journals on e-learning. He played an active role in several IARIA conferences as author, presenter and session chair. Since 2009 he is one of the chairs of the program committee of the VEWAeL (Virtual Environments and Web Applications for e-Learning), which is meanwhile an inherent part of the International Conference on Internet and Web Applications (ICIW). He is member of the editorial board of the International Journal on Advances in Internet Technology and of the International Journal on Advances in Networks and Services.

In the field of visualization Matthias Ehmann is one of the developers of the open source dynamic mathematics software GEONExT and member of the developer team of the free visualization library JSXGraph.

His future work will be focused on the technical and didactical challenges of time- and location-independent cooperative e-learning and the seamless integration of e-learning in traditional learning scenarios.

Publications (selection):

Manuel Goetz, Michael Igler, Stephanie Meerkamm, Tobias Reithmeier, Stefan Jablonski and Matthias Ehmann. **Online Communication and Collaboration - A General Approach.** Fifth International Conference on Internet and Web Applications and Services, Barcelona, Spain, 2010.

Matthias Ehmann, Manuel Götz, Stephanie Meerkamm, Michael Igler and Stefan Jablonski. **Online Teaching in an Electronic Education Environment.** Fourth International Conference on Internet and Web Applications and Services, Venice, Italy, 2009.

Manuel Götz, Stephanie Meerkamm, Michael Igler, Stefan Jablonski and Matthias Ehmann. **Online Teaching and Learning – Developing and Using an eEducation Environment**. International Journal On Advances in Intelligent Systems, ISSN 1942-2679, vol. 2, no. 1, year 2009,139:151.

Matthias Ehmann, Manuel Götz, Michael Igler and Stefan Jablonski**. Experiences in Online Teaching and Learning.** Third International Conference on Internet and Web Applications and Services, Athens, Greece, 2008.

Doris Bocka, Carsten Miller, Matthias Ehmann. **Teaching Mathematics with GEONExT and Dynamic Worksheets.** International Journal of Continuing Engineering Education and Life-Long Learning (IJCEELL), ISSN 1560-4624, vol. 18, issue 5/6, 2008, 510:519.