

Introduction to Advances in Teaching and Learning Technologies Mini-track

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The Advances in Teaching and Learning Technologies Mini-track has a history at HICSS that spans more than seventeen years. Various incarnations of this mini-track have served as an outlet for researchers who investigate the collaborative aspects of teaching, learning, and technologies that help to facilitate the teaching or learning process. The mini-track originally focused on collaborative software and technologies that operated in LAN-based environments. In more recent years, there has been a shift toward exploring social computing applications as well as various mobile computing devices across a variety of contexts.

Consistent with past years, we received a large number of submissions to the Advances in Teaching and Learning Technologies Mini-track. Researchers from around the globe submitted 28 papers exploring a wide variety of themes and applications of collaborative learning-based technologies. It is encouraging to see the sustained efforts of so many scholars actively exploring this topic. This year, we are pleased to feature 14 papers that are organized into three major themes and distributed across four discussion sessions.

The first session contains three papers that explore the first theme: the application of technology to improve the teaching process. These papers include:

- “Feature-Driven Adoption Patterns of Online Learning Environments – The Instructors’ Perspective” by Margit Kastner, Bernd Simon, and Michael Schraml,
- “Networks of Change: Learning from Peers about Science Teaching” by Caroline Haythornthwaite, Wei Gao, and Fouad Abd-El-Khalick, and
- “Evaluating the Role of Face-to-Face Residencies in Cross-National, Accessible Cyberlearning” by Jennifer Ellis, Marilyn Arnone, Nanette Levinson, and Derrick L. Cogburn.

The second session features four papers on the theme of improving student learning through technology. These papers include:

- “Designing a Peer Support System for Computer Programming Courses using Online Social Networking Software” by Brian Thoms, Evren Eryilmaz, and Steve Gerbino,,
- “Supporting Problem-Solving in Mathematics with a Conversational Agent Capable of

Representing Gifted Students’ Knowledge” by Eliane Vigneron, Barreto Aguiar, Liane M. Rockenbach Tarouco, and Eliseo Reategui,

- “Hand-held Mobile Augmented Reality for Collaborative Problem Solving: A Case Study with Sorting” by Adrian Shatte, Jason Holdsworth, and Ickjai Lee, and
- “Sign Language Writing Acquisition – Technology for a Writing System” by Cayley Guimarães, Jeferson F. Guardezi, and Sueli Fernandes.

The third session returns to the theme of application of technology to improve the teaching process and contains three papers:

- “Effective Teacher Training for Tablet Integration in K-12 Classrooms” by Pimpaka Prasertsilp and Lorne Olfman
- “Generation Alpha at the intersection of technology, play and motivation” by Holly Tootell, Mark Freeman, and Alison Freeman, and
- “Acquiring IS Skill through Habitual Use” by David Eargle, Russ Taylor, Lane Sawyer, and James Gaskin

The final session introduces the theme of social media and collaboration in education and contains four papers:

- “Crowd-Sourced Peer Feedback (CPF) for Learning Community Engagement: Results and Reflections from a Pilot Study” by Nigel P. Melville
- “Anchoring for Self-Efficacy and Success” by Nimer Alrushiedat and Lorne Olfman
- “Attention Guidance in Online Learning Conversations” by Evren Eryilmaz, Brian Thoms, Justin Mary, Rosemary Kim, and Jakko Van der Pol, and
- “Perceptions of Effectiveness of Instructional Uses of Technology in Higher Education in an Era of Web 2.0” by Vivek Venkatesh, Anne-Marie Croteau, and Jihan Rabah.

As always, we would like to extend our sincere appreciation to the authors whose tireless research efforts continue to support this vibrant mini-track at HICSS as well as the many, many reviewers who selflessly dedicate their time to furthering the research of our contributors.