**Digital Didactic Designs for Group Cognition**

Gerry Stahl

www.GerryStahl.net

*Abstract*. Designing digital didactics involves multiple dimensions of innovation, including the collaboration technology, the domain-specific curriculum, the social practices for collaborative learning. Such design requires iterative cycles of theorizing, development, usage trials and formative evaluation. The Virtual Math Teams (VMT) Project has pursued this in an extended attempt to introduce students to collaborative dynamic geometry. Students work together virtually on laptops or tablets to explore GeoGebra figures and to construct their own objects with desired dependencies. This symposium presentation will look closely at project data to see how students engage in group cognition, how it differs from individual learning and how it can be analyzed. This will suggest how group cognition may be an appropriate goal for digital didactic design.

**Gerry Stahl** is Professor Emeritus in Informatics at Drexel University in Philadelphia, USA. He has doctorates in philosophy (the phenomenological and critical-theory traditions) and computer science (AI, CSCL, CSCW, HCI).

He is the founding Editor-in-Chief of the *International Journal of Computer-Supported Collaborative Learning* and was Program Chair of the CSCL 2002 conference and co-Chair of CSCL 2011. He developed the theory of group cognition and directed the Virtual Math Teams Project, supported from 2003-2016 by federal grants.

His books include:

- *Group Cognition: Computer Support for Building Collaborative Knowledge.* (MIT Press, 2006)
- *Studying Virtual Math Teams.* (Springer, 2009)
- *Translating Euclid: Designing a Human-centered Mathematics.* (Morgan & Claypool, 2013)
- *Constructing Triangles Together: The Development of Mathematical Group Cognition.* (Forthcoming)

He has 350 publications and presentations available on his website. See especially the e-library of his collected writings.