



Wintersemester 2007/08



Kolloquium zur Geschichte der
Naturwissenschaften, Mathematik und Technik

Montags 18.00 - 19.30 Uhr,
Geomatikum (Bundesstr. 55), Hörsaal 6 (Erdgeschoß)

7. Januar 2008

Dr. Shu-Chiu Liu (Universität Oldenburg)

**Historical models and science instruction:
A cross-cultural analysis based on students' view**

The paper is an extended work from a previous study on Taiwanese and German students' conceptions of the universe (Liu 2005). The study revealed that students discuss astronomical events and entities based on a mental model of universe and their models of the universe seem to have similar underlying principles with historical ones. Most evident is that the earth or the sun is often believed to be in the center of, or have a controlling power over, the universe. Moreover, further interrogation discovered that their universe frequently denotes a confined space where the earth and obvious sky objects, such as the sun, moon and stars, are located, and that beyond this space is infinite cosmos with unknown things or nothing. In view of history of science, these ideas are no novel. In present paper, the author seeks to go further from the empirical results as such to locate the historical material in science instruction. Historical ideas and models regarding the conceptions of the universe will be analyzed cross-culturally, and the instructional use of these historical materials based on students' view will be elaborated.

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<http://www.math.uni-hamburg.de/spag/ign/kolloq/koll.htm>