

VISUALISATION IN TEACHING AND LEARNING MATHEMATICS

6 – 13 March 2017

Prof Marc Schäfer, Rhodes University, South Africa

Matthias Ludwig, Goethe University

Hilbert Raum (R302) 10:00-12:00

SESSION @1.5 hrs	DETAILS	TASKS	READINGS
1 Monday 6 March	Welcome Introduction to visualisation What are visualisation processes? What are visualisation objects?	Analysis of various visualisation object in Mathematics	Presmeg, N. (2014). Contemplating visualization as an epistemological learning tool in mathematics. Rivera, F.D., Steinbring, H., Arcavi, A. (2014). Visualization as an epistemological learning tool: an introduction
2 Tuesday 7 March	A broader perspective of visualisation. Film 1 Film 2	Presentation and analysis of one visualisation object from recent teaching	Alper Cihan Konyaliog˘ lu, Zeki Aksu, Esma O˘ zge S enel. (2012). The preference of visualization in teaching and learning absolute value
3 Wednesday 8 March	Introduction to the VITALmaths project Analysis and discussion of some videos. Pedagogic implications and values	First design of flow chart and possible video clip	Presmeg, N. (1988). Research on visualization in learning and Teaching mathematics: Emergence from psychology
4 Thursday 9 March	Workshop on production of video clip Design Flow chart Technicalities – production of prototype	Refinement of first design of flow chart and possible video clip. Design and production of video clip.	
5 Friday 10 March	Production of video clip	Production of video clip	
6 Monday 13 March	Presentation of video clips Consolidation Way forward		