

Thursday 2nd February 4pm – Maynooth University Psychology Department

Dr. Silke Goebel (Department of Psychology, University of York)

What counts? Symbols, space and language: factors influencing number processing and arithmetic.



Silke Goebel is Senior Lecturer in the Dept. of Psychology, University of York. Her main research interests are within the area of numerical/mathematical cognition and she heads the Numerical Cognition Lab. She is interested in the role of space in numerical cognition as well as cultural differences. She is also interested in the development of this skill and the difficulties that arise in dyslexia and dycalculia. She investigates the role of the parietal cortex and the functional anatomy of subregions of this area. Her lab employs

behavioural, TMS, and fMRI techniques. https://www.researchgate.net/profile/Silke_Goebel

Abstract:

In this talk, I will present recent research on number processing and arithmetic in children and adults. First, several studies on the association between number and space will be discussed and I will suggest that one potential causal mechanism underlying this association is the predominant reading direction in a culture. Then I will present studies showing that the linguistic structure of number words influences number processing and symbolic arithmetic. Finally, in the last part of the talk I will present a longitudinal study showing that the knowledge of Arabic digits at age 6 is a strong predictor of children's growth in arithmetic over the next two years.