

# DSV Seminars

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UNIVERSITÀ  
DEGLI STUDI DI TRIESTE



DIPARTIMENTO DI  
SCIENZE DELLA VITA

## ***PhD Program in Neural and Cognitive Sciences***

**Wednesday, 26 April 2017 - 14:30**

Room 3A, H3 Building – Via Valerio, 12/2

### **Kinga MORSANYI**

Queen's University Belfast

*Invited by Prof. Maria Chiara Passolunghi*

### **The role of ordering abilities in early mathematics development and developmental dyscalculia**

Recent evidence has highlighted the important role that number ordering skills play in arithmetic abilities. It has also been shown that memory for both arbitrary and familiar non-numerical sequences is linked to arithmetic skills. Nevertheless, most studies that investigated the relationship between ordering and arithmetic skills were conducted with adults, and, thus, little is known about the role of ordering abilities in early mathematical development. This talk presents new findings that demonstrate the important role that ordering abilities play in typical numeracy development at the start of formal education. Specifically, in a group of ninety children (43 females; mean age at first testing = 4 years 11 months), ordering ability at the start of the first school year was the best predictor of formal maths abilities at the end of the second school year, when other relevant skills were also taken into account. In Study 2, 20 children with developmental dyscalculia (DD), and 20 children without mathematical difficulties participated (mean age = 9 years 6 months). The results showed that children with developmental dyscalculia have order processing deficits (among other difficulties). Taken together, the novelty of these findings is to highlight the important role that non-numerical ordering abilities play in early mathematics development in the case of both typically developing children and in children with DD.

