

Department of Education presents

## **DR. PERCIVAL MATTHEWS**

POSTDOCTORAL ASSOCIATE  
DEPARTMENT OF PSYCHOLOGY  
UNIVERSITY OF NOTRE DAME



**THURSDAY, JANUARY 12, 2012**

**12 NOON—1:15 P.M.**

**CONFERENCE ROOM 2024, EDUCATION BUILDING**

### ***A SENSE OF PROPORTION: USING PERCEPTION TO GROUND NUMBER SYMBOLS***

THE ACQUISITION OF A ROBUST SENSE OF NUMBER IS AN ESSENTIAL FIRST STEP ON THE ROAD TO MATHEMATICAL COMPETENCE. THUS, IT IS OF FUNDAMENTAL IMPORTANCE THAT WE ANSWER THE QUESTION OF HOW NUMERICAL SYMBOLS COME TO BE MEANINGFUL IN THE FIRST PLACE. THAT IS, HOW IS IT THAT SYMBOLIC NUMBERS AND NUMBER WORDS COME TO BE ASSOCIATED WITH CONCEPTIONS OF SPECIFIC MAGNITUDES?

OFTEN, WE RESORT TO USING COLLECTIONS OF COUNTABLE OBJECTS TO SOLVE THIS PROBLEM. IN THIS TALK, I WILL PRESENT A SECOND OPTION FOR GROUNDING NUMBER SYMBOLS – ONE THAT RESTS ON OUR PERCEPTUAL ABILITIES TO JUDGE PROPORTIONS BETWEEN CONTINUOUS STIMULI OF VARIOUS SIZES. I WILL PROVIDE CLEAR EVIDENCE THAT THIS “SENSE” OF PROPORTION EXISTS AND DISCUSS THE POTENTIAL APPLICATIONS FOR PEDAGOGY.

**THE UNIVERSITY OF  
CALIFORNIA, IRVINE**

Department of Education  
3200 Education Building  
Irvine, CA 92697-5500

Phone: 949-824-5118  
Fax: 949-824-9103  
E-mail: [gseinfo@uci.edu](mailto:gseinfo@uci.edu)