

Friday 9<sup>th</sup> August, 4pm  
Wallace Wurth, LG02

## Prof Branka Spehar

(School of Psychology, UNSW Sydney)

### *Fractals, Sensory Coding and Aesthetics*



Branka Spehar is a Professor of Psychology at the School of Psychology, University of New South Wales in Sydney, Australia. She completed her undergraduate degree and M.Sc. in Psychology at Zagreb University, Croatia and went on to obtain her PhD in Experimental Psychology at Rutgers University, New Jersey, USA. She carried out post-doctoral research at the SUNY School of Optometry in New York before accepting a faculty appointment at UNSW. Her research interests include lightness and color perception, perceptual organisation, attention and, most recently, the perceptual foundations of aesthetic experience. She is interested in the neural mechanisms underlying these processes, how are they affected by varying spatial and temporal context, how they develop in infants and children and how are they are tuned to the statistics and characteristics of natural images.

**Synopsis:** Referred to as nature's fingerprints and ubiquitous across sensory environments, fractals are scale invariant patterns with structural variations recurring on finer and finer spatial or temporal scales. Despite their high ecological validity, the perceptual processing of fractal scaling variations in vision and other sensory modalities is not yet fully understood. In this talk I present studies that have revealed close coupling between neural tuning, visual sensitivity and higher-level attributes such as affective pleasure in response to fractal scaling variations. Moreover, the perceptual and aesthetic evaluation of fractal-scaling variations is remarkably similar in vision, touch and audition, suggesting a direct link between fractal scaling statistics and the perception of dynamic, expressive and affective aspects of sensory stimulation in different modalities.

All welcome. Drinks and nibbles from 3:30pm, seminar starts at 4pm.

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