

# Preface

This book of proceedings collects papers referring to three key events celebrated at the University of Trieste on 27th and 28th November, 2014:

- (1) the sixtieth anniversary of the Kanizsa triangle;
- (2) the twenty-second *Kanizsa Lecture*;
- (3) the *Trieste Symposium on Perception and Cognition*, TSPC2014.

The volume opens with the English translation of Kanizsa's report included in the proceedings of the tenth meeting of Italian psychologists in Chianciano Terme (10-14 October 1954), which features the first published version of the illusory triangle that would have become an icon of vision science. The key aspects of this short but dense report are outlined by Walter Gerbino, the translator, in his foreword.

As a second contribution, the volume includes the speaker notes of the twenty-second *Kanizsa Lecture*, held by the 2014 invited speaker Barbara Gillam, University of New South Wales, Sydney, Australia, on Thursday 27 November. The notes drive the reader through the lecture and provide a rich set of demonstrations on how perceptual grouping affects different levels of vision: from low (e.g., disparity coding) to mid level (e.g., subjective contour formation). Importantly, the talk delivered by Barbara Gillam fits into a long tradition of *Kanizsa Lectures* specifically focused on perception, opened in 1993 by Irvin Rock, because of three major reasons: (1) it shares Kanizsa's approach to science, being grounded on visual phenomenology and oriented towards the refinement of fundamental concepts like "perceptual grouping"; (2) it provides new insights on factors that support the formation of illusory occluding surfaces, an effect whose theoretical relevance was first recognized by Kanizsa in 1954; (3) it makes explicit the link between visual perception and visual art.

The third part of the volume collects talks and posters presented at TSPC2014, organized by the Psychology Unit of the Department of Life Sciences, University of Trieste. The symposium included two oral sessions (on 27th and 28th November) and a poster session (November 28th). Each paper published in the proceedings has been evaluated by an anonymous expert reviewer and by the organizers.

More than 50 active participants gathered at TSPC2014, coming from Italy and other European countries (Hungary 4, Serbia 3, Croatia 2, Malta 1, The Netherlands 1, Spain 1, United Kingdom 1). It featured 17 talks and 32 posters. The book of proceedings includes written reports of 16 out of 17 talks, and 27 out of 32 posters. Several areas of cognitive science were covered, including: perception (talks 1, 3, 4, 5, 6, 8, 9, 10, 13, 14, 15, 16; posters 1, 5, 19, 20, 25); action and perception (talks 11, 12, 16); attention (posters 3, 16, 19, 20); memory (poster 7), learning (posters 14, 21, 25, 27); development (talks 12, 13; posters 11, 15, 23); language (posters 9, 11, 12, 14); problem solving and reasoning (posters 2, 22, 27); personality (posters 6, 8); decision-making (posters 13, 22); concepts and categorization (posters 2, 9, 14, 23, 26, 27); social cognition (talks 7, 15; posters 16, 17); animal cognition (talks 6, 7); embodied cognition (talk 16; poster 1); mental imagery (posters 10, 21); neurorehabilitation (talk 11); emotion and cognition (talks 14, 16; poster 6); human computer interaction (posters 19, 24); ergonomics (poster 18); art (posters 4, 5) and sport (talk 2) psychology. In terms of disciplines, contributions included modeling, behavioral experiments with adults and children, cognitive neuroscience, linguistics, philosophy, and ophthalmology.

We are grateful to Barbara Gillam who accepted the invitation to deliver the twenty-second *Kanizsa Lecture* and to enrich this book of proceedings with her notes, to all authors who –for the first time in the long history of TSPC –submitted an extended contribution to be included in the proceedings, and to the anonymous reviewers who supported the editorial process with their fast and constructive reactions, and to Silvia Kanizsa who kindly agreed to the use of images from paintings of her father.

Finally, we thank our sponsors: the Department of Life Sciences of the University of Trieste, the Trieste Province and the Experimental Division of the Italian Association of Psychology (AIP).

Paolo Bernardis  
Carlo Fantoni  
Walter Gerbino  
*organizers and editors*

## The Kanizsa Lectures

- 1993 IRVIN ROCK "The Legacy of Gestalt Psychology"
- 1994 KEN NAKAYAMA "Visual Surface Representation: A Missing Link Between Early and High Level Vision"
- 1995 VILAYANUR S. RAMACHANDRAN "A Critique of Pure Vision"
- 1996 PHILIP N. JOHNSON-LAIRD "Illusions in Reasoning"
- 1997 ALAN GILCHRIST "Visual Structure and Surface Color"
- 1998 HEINRICH H. BÜLTHOFF "Perception and Action: Controlling the Loop Using Virtual Realities"
- 1999 RICHARD L. GREGORY "The Phenomenal Science and Art of Perception"
- 2000 STEPHEN E. PALMER "Rethinking Perceptual Organization"
- 2001 ENNIO MINGOLLA "The Units of Vision"
- 2002 PATRICK CAVANAGH "Art and the Language of Vision"
- 2003 MICHAEL KUBOVY "Regular Patterns in Visual, Auditory and Aesthetic Perception"
- 2004 ELIZABETH S. SPELKE "What Makes Humans Smart"
- 2005 ALAN M. LESLIE "How the Brain Thinks About the Mind"
- 2006 MELVYN A. GOODALE "Visual Duplicity: Action without Perception in the Human Visual System"
- 2007 LOTHAR SPILLMANN "Perceptual Research for Beginners. A Journey Through the Vision Sciences"
- 2008 ANNE CUTLER "Native Listening"
- 2009 JAN J. KOENDERINK "Mind into Space"
- 2010 JOHAN WAGEMANS "The Kanizsa Triangle as a Cornerstone of Vision Science"
- 2011 JAMES R. POMERANTZ "The Perception of Visual Configurations and Their Parts: A Theory of Basic Gestalts"
- 2012 ALFONSO CARAMAZZA "Objects, Actions, Words, and Brain"
- 2013 DEJAN TODOROVIĆ "Reality and Illusions: Effects of Context and Vantage Point in Visual Perception"
- 2014 BARBARA GILLAM "Grouping and Occlusion in Perception and Art"