

# Contents

## Participants and Contributors

## Preface

## PART I: INFANT AND DEVELOPING MECHANISMS

I.1	<b>Eye Movements and Form Perception in Human Infants</b> <i>Louise Hainline</i> .....	3
I.2	<b>The Influence of Peripheral Stimuli on Infant's Eye Movements</b> <i>Daphne Maurer</i> <i>Terri L. Lewis</i> .....	21
I.3	<b>Development of Smooth Pursuit in Human Infants</b> <i>Richard N. Aslin</i> .....	31
I.4	<b>Development of Optokinetic Nystagmus in Infants: An Indicator of Cortical Binocularity?</b> <i>Janette Atkinson</i> <i>Oliver Braddick</i> .....	53

**PART II: ILLUSIONS AND AFTEREFFECTS**

<b>II.1</b>	<b>The Interaction Between Eye Movements and Visual Illusions</b>	<b>67</b>
	<i>Stanley Coren .....</i>	
<b>II.2</b>	<b>Hysteresis Effects in the Vergence Control System: Perceptual Implications</b>	<b>83</b>
	<i>Sheldon M. Ebenholtz .....</i>	
<b>II.3</b>	<b>Visual Direction Illusions in Everyday Situations: Implications for Sensorimotor and Ecological Theories</b>	<b>95</b>
	<i>Wayne Shebilske .....</i>	
<b>II.4</b>	<b>How Pursuit Eye Movements Can Convert Temporal Into Spatial Information</b>	<b>111</b>
	<i>M. J. Morgan.....</i>	

**PART III: PICTURES AND PICTORIAL PROCESSING**

<b>III.1</b>	<b>On the Time Course of Viewing Pictures with a View Towards Remembering</b>	<b>137</b>
	<i>Alinda Friedman</i>	
	<i>Linda S. Liebelt .....</i>	
<b>III.2</b>	<b>Picture Context Effects on Eye Movement Patterns</b>	<b>157</b>
	<i>James R. Antes</i>	
	<i>James G. Penland .....</i>	
<b>III.3</b>	<b>Local and Global Influences on Saccadic Eye Movements</b>	<b>171</b>
	<i>John M. Findlay .....</i>	
<b>III.4</b>	<b>Identification and Processing of Briefly Glimpsed Visual Scenes</b>	<b>181</b>
	<i>Helene Intraub .....</i>	

**PART IV: THEORY AND METHOD**

<b>IV.1</b>	<b>Scanpaths Revisited: Cognitive Models Direct Active Looking</b>	
	<i>Lawrence Stark</i>	
	<i>Stephen R. Ellis .....</i>	
		<b>193</b>

<b>IV.2</b>	<b>Small Involuntary Eye Movements: Solved and Unsolved Problems</b>	
	<i>R. W. Ditchburn</i> .....	<b>227</b>
<b>IV.3</b>	<b>Oculomotor Procrastination</b>	
	<i>R. H. S. Carpenter</i> .....	<b>237</b>
<b>IV.4</b>	<b>Digital Filters for Saccade and Fixation Detection</b>	
	<i>J. R. Tole</i>	
	<i>L. R. Young</i> .....	<b>247</b>
<b>IV.5</b>	<b>Compensation for Some Second Order Effects to Improve Eye Position Measurements</b>	
	<i>David Sheena</i>	
	<i>Joshua Borah</i> .....	<b>257</b>
 <b>PART V: SEARCH AND SCANNING</b>		
<b>V.1</b>	<b>The Development of Strategies of Visual Search</b>	
	<i>Karen M. Cohen</i> .....	<b>271</b>
<b>V.2</b>	<b>The "Convenient Viewing Position" Hypothesis</b>	
	<i>Kevin O'Regan</i> .....	<b>289</b>
<b>V.3</b>	<b>Flexible and/or Rigid Control of Oculomotor Scanning Behavior</b>	
	<i>A. Levy-Schoen</i> .....	<b>299</b>
 <b>PART VI: CAN EYE MOVEMENTS SAVE THE EARTH?</b>		
<b>VI.1</b>	<b>"Can Eye Movements Save the Earth?"</b>	
	<i>E. Llewellyn-Thomas</i> .....	<b>317</b>
 <b>PART VII: REFERENCES</b>		
	<b>Author Index</b> .....	<b>349</b>
	<b>Subject Index</b> .....	<b>357</b>