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Spatio-temporal integration properties of the human visual system

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university of
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Spatio-temporal Integration Properties of the Human Visual System

Theoretical Models and Clinical Applications

PhD thesis

to obtain the degree of PhD at the
 University of Groningen
 on the authority of the
 Rector Magnificus Prof. C. Wijmenga
 and in accordance with
 the decision by the College of Deans.

This thesis will be defended in public on
 Wednesday 11 November 2020 at 9.00 hours

by

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born on 1 August 1990
 in Prato, Italy

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"We all have obstacles, all of us. You know what i consider the worst disabilities of all? Procrastination and laziness. Give me blindness over that any day of the week. "

Richard Turner, blind magician

"There are no mistakes, just happy little accidents."

Bob Ross, painter

"However beautiful the strategy, you should occasionally look at the results."

Sir Winston Churchill

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List of Abbreviations

AFC	Alternative Forced Choice
CCG	Cross-correlogram
CNS	Central Nervous System
CS	Contrast Sensitivity
DT	Decision Tree
EMC	Eye Movement Cross-correlogram
FBA	Feature-Based Attention
FDT	Frequency Doubling Technology
MRI	Functional Magnetic Resonance Imaging
FWHM	Full Width (at) Half-Maximum
GDI	Gini's Diversity Index
GRU	Gated Recurrent Unit
HFA	Humphrey Field Analyzer
INO	Inter Nuclear Ophthalmoplegia
JND	Just Noticeable Difference
MD	Mean Deviation
MS	Multiple Sclerosis
PCD	Percentage (of) Coherently-moving Dots
PD	Parkinson's Disease
PDD	Positional Deviations Distribution
POAG	Primary Open Angle Glaucoma
RDK	Random Dot Kinematogram
RNN	Recurrent Neural Network
ROI	Region Of Interest
SA	Spatial Attention
SAP	Standard Automated Perimetry
STP	Spatio-Temporal Properties
TFCE	Threshold Free Cluster Enhancement
t-SNE	t-distributed Stochastic Neighbor Embedding
TNR	True Negative Rate
TPR	True Positive Rate
VA	Visual Acuity
VFD	Visual Field Defect

