# CURRICULUM VITAE

| NAME | POSITION TITLE |
|---|---|
| Tyler, Christopher W. | Senior Scientist |

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

| INSTITUTION AND LOCATION | DEGREE | YEAR(s) | FIELD OF STUDY |
|---|---|---|---|
| University of Leicester, UK | B.A. | 1966 | Psychology |
| University of Aston, UK | M.Sc. | 1967 | Applied Psychology |
| University of Keele, UK | Ph.D. | 1970 | Neurocommunication |
| University of Keele, UK | D.Sc. | 2004 | Visual Processing |
| Royal Geographical Society | Fellow | 2024 | Cartography |

## Personal Statement

Christopher Tyler is an internationally known and acclaimed vision scientist who is currently Head of the Brain Imaging Center of the Smith-Kettlewell Eye Research Institute in San Francisco, which specializes in visual, cognitive and rehabilitation research. His research career is in visual neuroscience and computational vision with emphasis on form, symmetry, flicker, motion, color, and stereoscopic depth perception in adults and tests for the diagnosis of eye diseases in infants and of retinal and optic nerve diseases in adults. An area of particular interest is the cortical mechanisms involved in the stereoscopic processing of 3D images to extract the depth signal from the binocular disparity between the two images, including his origination of the algorithm for the random-dot autostereogram, a method of presenting 3D information in a single image rather than a stereopair. He developed a rapid method of recording brain responses across a wide range of conditions (the "sweep VEP"), which allows measurement of visual development with great accuracy. He has recently been developing advanced non-invasive methods for estimating the neural signal dynamics underlying the BOLD fMRI signal and bringing these capabilities to bear on evaluating deficits of the electroretinogram and motor control of eye movements in individuals with Traumatic Brain Injury, with a view to determining strategies for their rehabilitation. He has received support for his research on functional vision through many federal agencies, including the National Eye Institute (NEI), the National Institute of Mental Health (NIMH), the National Science Foundation (NSF), the Air Force Office of Scientific Research (AFOSR) and the Congressionally directed Medical Research Program (CDMRP), and has served on a wide range of federal review boards. He is also involved in international research collaborations as far afield as the UK, France, Australia, Germany, Israel, India and Taiwan.

## Professional Experience

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| 1970-1972 | Research Fellow, Northeastern University, Boston, MA. |
| 1972-1973 | Adjunct Assistant Professor, Northeastern University, Boston, MA. |
| 1973-1974 | Research Fellow, Dept. of Psychology, University of Bristol, UK. |
| 1974-1975 | Research Fellow, Dept. of Sensory & Perceptual Processes, Bell Laboratories, NJ. |
| 1975-1980 | Associate Scientist, The Smith-Kettlewell Eye Research Institute, San Francisco, CA. |
| 1976-1980 | External Doctoral Thesis Advisor, Dept. of Psychology, Stanford University. |

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| 1978-1982 | Honorary Research Associate, Institute of Ophthalmology, London, UK. |
| 1978-present | External Doctoral Thesis Advisor, Depts. of Psychology & Optometry, UC, Berkeley. |
| 1980-1982 | Scientist, The Smith-Kettlewell Eye Research Institute, San Francisco, CA. |
| 1985-1988 | Visiting Professor, UCLA Medical Center, Jules Stein Institute. |
| 1986-1987 | Adjunct Professor, UC, Berkeley, School of Optometry. |
| 1982-present | Senior Scientist, The Smith-Kettlewell Eye Research Institute, San Francisco, CA. |
| 1990-2003 | Associate Director, The Smith-Kettlewell Eye Research Institute, San Francisco, CA. |
| 2002-present | Head, Smith-Kettlewell Brain Imaging Center, San Francisco, CA. |
| 2007 (April) | Visiting Professor, Université René Descartes, Paris, France. |
| 2007-present | Adjunct Professor, UC San Francisco |
| 2008 (Sept) | Visiting Professor, National University of Taiwan, Taipei, Taiwan. |
| 2013-present | Professor, Division of Optometry and Vision Sciences, City-St Georges, University of London, London, UK (part-time). |

**Honors**

The W.A. Kettlewell Chair of Research in Visual Science, 1984-85.
Garland Clay Award, American Association of Optometry (with P. Apkarian and D. Levi).
Member and Chair, Optical Society Topical Meeting on Visual Science and Its Applications, 1993-98.
Chair, Noninvasive Assessment of the Visual System, OSA Topical Meeting, 1994-95.
The Catherine D. Kettlewell Chair of Research in Visual Science, 1995-96.
Keynote Speaker, European Conference on Visual Perception, 2007.
Invited Panelist, World Science Festival, 2009.
Keynote Speaker, Asian Visual Processing Conference, 2010
Invited Panelist, World Science Festival, 2010.
Keynote Speaker, Computational Vision Summer School, U Tuebingen, 2012
Keynote Speaker, Eye Research Institute and the Center for Visual Cultures, U Wisconsin, 2012
Keynote Speaker, European Conference on Visual Image Processing, 2013
Keynote Speaker, AAAS Forum, Washington, DC, 2013
Keynote Speaker, David Rumsey Map Center, Stanford Univerity, 2019
Keynote Speaker, Fondazione Cassa di Risparmio di Lucca, Lucca, Italy 2021
Keynote Speaker, Psychonomic Society Meeting, San Francisco, 2023

**Grant Review Panels**

NSF Project Review Panel, 1985-6, 1994-6, 2007-10, 2020-21
VA Project Review Panel, 2020-21
NIH Core Grant Review Panel, 2004-8
NSF Center Review Panel, 2008-10
COBRE Review Panel, State University of North Dakota, 2005-present
CRCNS Review Panel, 2010

**Editorial Appointments**

Editor-in-Chief, ***Open Medical Imaging Journal***, 2008-2018
Feature Editor, and member of Editorial Board, ***Symmetry***, 2009-present
Feature Editor, ***Frontiers in Systems Neuroscience***, 2014
Member of Editorial Board, ***Perception***, 2009-present
Executive Editor, ***Perception***, 1998-2008
Feature Editor, ***Spatial Vision***, 1996
Member of Editorial Board, ***Vision Research***, 2001-2010
Member of Editorial Board, ***Clinical Ophthalmology***, 2006-present
Member of Editorial Board, ***Chinese Journal of Psychology***, 2010-present

**Festschrift Participations**

Stuart Anstis
Matt Alpern
Martin Banks
Bruce Bridgeman
Fergus Campbell
Carter Collins
Russell DeValois
Jay Enoch
Richard Gregory
Andrei Gorea
Geoff Henry
Arthur Jampolsky
Richard Jung
Bela Julesz
Ivo Kohler
Ken Nakayama
Martin Regan
Brian Rogers
Cliff Schor
George Sperling
Henry Stapp
Gerald Westheimer

**Research Students and Fellows**

Jean Torres, Ph.D.
Marsha Kaitz, Ph.D.
George Timberlake, Ph.D.
Patricia Apkarian, Ph.D.
Anthony Norcia, Ph.D.
Robert Schumer, Ph.D., M.D.
Andrei Gorea, Ph.D.
Evanne Casson, Ph.D.
Chien-Chung Chen, Ph.D.
Dale Allen, O.D., Ph.D.
Scott Stevenson, Ph.D.
Peter Howarth, Ph.D.
Lenny Kontsevich, Ph.D.
Lauren Barghout, Ph.D.
Hoover Chan, Ph.D.
Lei Liu, Ph.D.
Heidi Baseler, Ph.D.
Lora Likova, Ph.D.
Yuri Polat, Ph.D.
Alex Wade, Ph.D.
Jason Samonds, Ph.D.
Xintong Li, M.D.
Navdeep Gill
Anas Elsaid, M.D.
Mark Schira, Ph.D.
Pi-Chun Huang, Ph.D.
Ajay Gopi
Yingxin Jia, Ph.D.
Bruno Fidalgo, O.D., Ph.D.
Pei-Yin Chen, Ph.D.
Paul Linton, Ph.D.
Chandrika Ravisankar, M.O.
Preetirupa Devi, Ph.D.

**Google Scholar Profile (Christopher W. Tyler)**

| | |
|---|---|
| Citations | 15805 |
| h-index | 71 |
| i10-index | 197 |

**Publications**

The impact of induced optical blur on monocular and binocular depth-related visuomotor task performance
Jarkum T., Devi P., Solomon, J. A., Tyler C.W. & Bharadwaj, S. R.
Investigative Ophthalmology & Visual Science 66 (15), 8-8, 2025

Visual perception of longitudinal waves: Theory and observations
Tyler , C.W., Solomon, J.A., & Anstis, S. M.
Prepublication 2025

Visual-memory-guided drawing: Investigating cerebellar cognitive architecture and cerebro-cerebellar interactions
Likova, L.T., Zhou, Z.,Tyler, C.W., Mineff, K.N.
Journal of Vision 25 (9), 2635-2635, 2025

Native components analysis of the spectral electroretinogram.
Tyler C.W.
Vision Research 235, 108661, 2025

Pulfrich's stereo curtain.
Anstis, S. M., Solomon, J.A., & Tyler , C.W.
iPerception 16 (3), 20416695251338727, 2025

Spatiomotor dynamics of arm movements during the drawing of memory-defined trajectories without visual feedback.
Likova, L.T., Mineff, K.N., Liang, M., & Tyler, C.W.
J Neurophysiology 133 (6), 1665-1674, 2025

Plasticity of the cortical motion complex under cognitive-kinesthetic training in blindness and low vision.
Likova, L.T., Mineff, K.N., Zhou Z., & Tyler, C.W.
Electronic Imaging Conference Proceedings, 2025.

Evidence that attentional stance shift is learned rapidly, and reliably induces mindfulness and constitutes a distinctive marker of cognitive process.
Hartelius, G., Likova, L. T., Haldeman, D. D., Sester, M., Elfers, J., & Tyler, C. W.
Mindfulness 1-15, 2025

Depth-related visuomotor performance in keratoconus and its relationship to stereopsis.
Devi, P., Bhengra, C. M., Kumar, D., Deshmukh, R., Vaddavalli, P. K., Solomon, J. A., Tyler C.W., & Bharadwaj, S. R.
Investigative Ophthalmology & Visual Science, 66(4), 31-, 2025

The canonical deep neural network as a model for human symmetry processing.
Y Bonneh, CW Tyler,
iScience 28(1), 2024

Spatial summation for motion detection.
JA Solomon, F Nagle, CW Tyler.
Vision Research.;221, 108422, 2024

Success rates, near-response patterns, and learning trends with free-fusion stereograms.
C Ravisankar, CW Tyler, CM Schor, SR Bharadwaj
Vision Research 214, 108329 2024

Advanced computational model of rod ERG kinetics.
CW Tyler
Documenta Ophthalmologica 149(1) 1-10, 2024

Suprathreshold length summation.

CC Chen, CH Chien, CW Tyler
Journal of Vision. 23(7) 17, 2023

Critical analysis of theories of consciousness
CW Tyler
PsyArXiv 2023

Self-regulation of attentional stance facilitates induction of meditative states
G Hartelius, LT Likova, CW Tyler
Electronic Imaging 35, 1-8 2023

The nature of illusions: A new synthesis based on verifiability
CW Tyler
Frontiers in Human Neuroscience 16, 875829 2022

On the power and legitimacy of follow-up testing
C Tyler
Perception 51 (4), 225-229 2022

Non-visual virtual-reality system for navigation training and assessment
LT Likova, CW Tyler, ZK Minev
US Patent App. 17/8353781 2022

Multi-level control of adaptive camouflage by European cuttlefish
D Osorio, F Ménager, CW Tyler, AS Darmaillacq
Current Biology 32 (11), 2556-2562. e210 2022

Brain trauma impacts retinal processing: photoreceptor pathway interactions in traumatic light sensitivity
CW Tyler, LT Likova
Documenta Ophthalmologica 144 (3), 179-190 2022

Francesco Rosselli, Renaissance cartographer extraordinaire
CW Tyler
Calafia Journal 7-9 2022

Self-regulation of seat of attention into various attentional stances facilitates access to cognitive and emotional resources: An EEG study
G Hartelius, LT Likova, CW Tyler
Frontiers in Psychology 13, 8107-8010 2022

The interstitial pathways as the substrate of consciousness: a new synthesis
CW Tyler
Entropy 23 (11), 14 434 2021

Visual evoked potentials: Isolation of cortical sub-populations narrowly tuned to spatial frequency
K Nakayama, P Apkarian, M Mackeben, CW Tyler
Neurophysiology and Psychophysiology, Routledge 91-101 2021

A gain-control disparity energy model for perceived depth from disparity
PY Chen, CC Chen, CW Tyler
Vision Research 181, 38-46 2021

A live experience of four-dimensional structure
CW Tyler
Perception 50 (2), 165-169 2021

Multipurpose spatiomotor capture system for haptic and visual training and testing in the blind and sighted
LT Likova, KN Mineff, CW Tyler
IS&T International Symposium on Electronic Imaging 33 (11) 2021

Cartography as spatial representation: A new assessment of the competing advantages and drawbacks across fields of science
CW Tyler
Journal of Perceptual Imaging, 156, 1–10 2021

The checkered history of the naming of America: Early 16th century forays
CW Tyler
Calafia Journal 17-20 2021

The intersection of visual science and art in Renaissance Italy
CW Tyler
Perception 49(12), 1265-1282 2020

Did Tim Paint a Vermeer?
DG Stork, CW Tyler, SJ Schechner
Journal of Imaging Science and Technology 64(6), 1-12 2020

The chthonic roots of Leonardo da Vinci's youthful iconography
CW Tyler
Journal of Arts and Humanities 9(2), 46-62 2020

Ten testable properties of consciousness
CW Tyler
Frontiers in Psychology, 11 448 2020

An accelerated cue combination principle accounts for multi-cue depth perception
CW Tyler
Journal of Perceptual Imaging 3(1), 1-9 2020

Dynamic amodal completion through the magic wand illusion
CW Tyler
i-Perception 10 (6), 20416695198950282 2019

Color perception in natural images
CW Tyler, JA Solomon
Current Opinion in Behavioral Sciences 30, 8-14 2019

Leonardo da Vinci Probably Did Not Have Strabismus—Reply
CW Tyler
JAMA Ophthalmology 137(11), 1332-1333 2019

Measurement of saccadic eye movements by electrooculography for simultaneous EEG recording
YX Jia, CW Tyler
Behavior Research Methods 51, 2139-2151 2019

Depth cue combination: A quantitative critique
CW Tyler
Perception 48 (9), 765-7681 2019

Eye centring in selfies posted on Instagram
N Bruno, M Bertamini, CW Tyler
PLoS One 14 (7), e02186639 2019

Points of contact between the Stappian philosophy and Emergent Aspect Dualism
CW Tyler
Activitas Nervosa Superior 61 (1-2), 6-11 2019

Expanding universe illusion

D Phillips, P Heard, CW Tyler
i-Perception 10 (3), 2041669519853848 2019

Was Leonardo da Vinci's world map the first to name America? A quincentennial reappraisal
CW Tyler
Calafia Journal, 7-12 2019

Evidence that Leonardo da Vinci had strabismus
CW Tyler
JAMA Ophthalmology 137 (1), 82-86 2019

Development and validation of a new glaucoma screening test using temporally modulated flicker
BR Fidalgo, A Jindal, CW Tyler, I Ctori, JG Lawrenson
Ophthalmic and Physiological Optics 38 (6), 617-628 2018

A Brücke–Bartley effect for contrast
JA Solomon, CW Tyler
Royal Society Open Science 5 (8), 1801716 2018

Absolute distance from perspective
CW Tyler
Perception 47 (6), 581-584 2018

Does colour filling-in account for colour perception in natural images?
CW Tyler, JA Solomon
i-Perception 9 (3), 20416695187688294 2018

When light hurts: comparative morphometry of human brainstem in traumatic photalgia
LT Likova, CW Tyler
Scientific Reports 8 (1), 6256 2018

Rational approaches to correcting for multiple tests
CW Tyler
Electronic Imaging 2018 (14), 1-8 2018

Does colour filling-in account for colour perception in natural images?
CW Tyler, JA Solomon
i-Perception 9(3), 2041669518768829 2018

The emergent aspect dualism view of quantum physics: a new ontology to resolve the complementarity conundrum
CW Tyler
Journal for Research in Philosophy and History 1, 166-182 2018

Binocular eye tracking from video frame sequences
CW Tyler, SC Nicholas, LT Likova
US Patent 9,775,51211 2017

Improvement of contrast sensitivity with practice is not compatible with a sensory threshold account
JA Solomon, CW Tyler
Journal of the Optical Society of America A 34 (6), 870-880 2017

Studying the retinal source of photophobia by facial electroretinography
CW Tyler, LT Likova
Optometry and Vision Science 94 (4), 511-518 2017

Evidence of stereoscopic surface disambiguation in the responses of V1 neurons
JM Samonds, CW Tyler, TS Lee
Cerebral Cortex 27 (3), 2260-2275 2017

Computational estimation of scene structure through texture gradient cues
CW Tyler, A Gopi
IS&T International Symposium on Electronic Imaging 10.2352/ISSN.2470-1173.2017.14.HVEI-138 2017

Leonardo da Vinci's world map
CW Tyler
Cosmos and History 13 (2), 261-280 2017

Neural signal estimation in the human brain
CW Tyler, C Howarth, LT Likova
Frontiers in Neuroscience 10, 185 2016

Peripheral color vision and motion processing
CW Tyler
Electronic Imaging 2016 (16), 1-5 2016

The cortical network for Braille writing in the blind
LT Likova, CW Tyler, L Cacciamani, K Mineff, S Nicholas
IS&T International Symposium on Electronic Imaging 2016-5 2016

Analysis of neural-BOLD coupling through four models of the neural metabolic demand
CW Tyler, LT Likova, SC Nicholas
Frontiers in Neuroscience 9, 4197 2015

Peripheral color demo
CW Tyler
i-Perception 6 (6), 204166951561367135 2015

Deficits in the activation of human oculomotor nuclei in chronic traumatic brain injury
CW Tyler, LT Likova, KN Mineff, SC Nicholas
Frontiers in Neurology 6, 17325 2015

Shading beats binocular disparity in depth from luminance gradients: Evidence against a maximum likelihood principle for cue combination
CC Chen, CW Tyler
PLoS One 10 (8), e013265846 2015

The emergent dualism view of quantum physics and consciousness
CW Tyler
Cosmos and History 11 (2), 97-11417 2015

Consequences of traumatic brain injury for human vergence dynamics
CW Tyler, LT Likova, KN Mineff, AM Elsaid, SC Nicholas
Frontiers in Neurology 5, 2827 2015

The vault of perception: Are straight lines seen as curved?
CW Tyler
Art & Perception 3 (1), 117-137 2015

The neurometabolic underpinnings of fMRI BOLD dynamics
CW Tyler, LT Likova
In: TD Papageorgiou, GI Christopoulos, SM Smirnakis (Eds) Advanced Brain Neuroimaging Topics in Health and Disease-Methods and Applications, Ch 7. Intech Open: London 2014

Autostereogram
CW Tyler
Scholarpedia 9 (4), 92293 2014

Possibilities of Perception
CW Tyler
Perception 43 (4), 353-354 2014

3D space perception as embodied cognition in the history of art images
CW Tyler
Human Vision and Electronic Imaging XIX 9014, 308-317 2014

Perceiving, measuring, and modeling materials
CW Tyler
Measuring, Modeling, and Reproducing Material Appearance 9018, 9018-02 2014

Is the mind in the head? A belated response to Koenderink (1999)
CW Tyler
Perception 43 (2-3), 103-106 2014

Bela Julesz
CW Tyler
National Academy of Sciences Online 1-11 2014

Visual function, traumatic brain injury, and posttraumatic stress disorder
GL Goodrich, GL Martinsen, HM Flyg, J Kirby, DW Garvert, CW Tyler
Journal of Rehabilitation Research and Development 51 (4), 547-558 2014

Shape processing as inherently three-dimensional
CW Tyler
In: SJ Dickinson, Z Pizlo (Eds) Shape Perception in Human and Computer Vision: An Interdisciplinary Perspective. Springer: Berlin 357-385 2013

The spatial organization of stereopsis in strabismus
C Schor, B Bridgeman, CW Tyler
In: L Spillmann, BR Wooten (Eds) Sensory Experience, Adaptation, and Perception: Festschrift for Ivo Kohler. Psychology Press 623-632 2013

Size interactions in the perception of orientation
CW Tyler, K Nakayama
Sensory experience, adaptation, and perception, 529-546 2013

Dips and bumps: On Bloch's law and the Broca-Sulzer phenomenon
A Gorea, CW Tyler
Proceedings of the National Academy of Sciences 110 (15), E1330-E1330 2013

Binocular eye movements in health and disease
CW Tyler
Human Vision and Electronic Imaging XVIII 8651, 208-222 2013

Depth structure from asymmetric shading supports face discrimination
CC Chen, CM Chen, CW Tyler
PLoS One 8 (2), e558655 2013

Recurrent connectivity can account for the dynamics of disparity processing in V1
JM Samonds, BR Potetz, CW Tyler, TS Lee
Journal of Neuroscience 33 (7), 2934-2946 2013

Analysis of human vergence dynamics
CW Tyler, AM Elsaid, LT Likova, N Gill, SC Nicholas
Journal of Vision 13 (1), 11 2013

Brain mapping: the (un)folding of striate cortex

MM Schira, CW Tyler, MGP Rosa
Current Biology 22 (24), R1051-R1053 2012

High temporal frequency visual evoked potentials to luminance and pattern stimulation in the peripheral
CW Tyler, P Apkarian, K Nakayama
In: C Barber (Ed) Evoked Potentials: Proceedings of an International Evoked Potentials Symposium. Springer: Berlin 199-204 2012

Spatial form as inherently three dimensional
CW Tyler
In: MRM Jenkin, LR Harris (Eds ) Seeing Spatial Form. Oxford University Press: Oxford 67–88 2012

In search of Leonardo: computer-based facial image analysis of Renaissance artworks for identifying Leonardo as subject
CW Tyler, WAP Smith, DG Stork
Human Vision and Electronic Imaging XVII 8291, 407-413 2012

3D discomfort from vertical and torsional disparities in natural images
CW Tyler, LT Likova, K Atanassov, V Ramachandra, S Goma
Human Vision and Electronic Imaging XVII 8291, 212-220 2012

The role of the visual arts in enhancing the learning process
CW Tyler, LT Likova
Frontiers in Human Neuroscience 6, 892 2012

Collinear facilitation over space and depth
PC Huang, CC Chen, CW Tyler
Journal of Vision 12 (2), 20-2019 2012

Chinese perspective as a rational system: relationship to Panofsky's symbolic form
CW Tyler, CC Chen
Chinese Journal of Psychology 53, 371-391 2011

Did early Renaissance painters trace optically projected images? The conclusion of independent scientists, art historians and artists.
Stork DG, Collins J, Duarte M, Furuichi Y, Kale D, Kulkarni A, Robinson M, Schechner SJ, Tyler CW, Williams NC.
Digital Imaging for Cultural Heritage Preservation: Analysis, Restoration, and Reconstruction of Ancient Artworks, 28:223-251 2011

Perceptual coding for 3D reconstruction
CW Tyler, SC Nicholas
3rd European Workshop on Visual Information Processing, 116-121 2011

Estimating neural signal dynamics in the human brain
CW Tyler, LT Likova
Frontiers in Systems Neuroscience 5, 335 2011

Visual Function and Its Management in mTBI
A Jampolsky, J Brabyn, W Good, C Tyler, G Cockerham, G Goodrich.
Smith-Kettlewell Eye Research Institute 2011

Paradoxical perception of surfaces in the Shepard tabletop illusion
CW Tyler
i-Perception 2 (2), 137-141 2011

Visual surface encoding: A neuroanalytic approach
CW Tyler, LT Likova
Computer Vision, 189-208 2011

Computer Vision: from Surfaces to 3D Objects
CW Tyler (Ed)
Chapman Hall /CRC Press 13 2011

The role of disparity interactions in perception of the 3D environment.
CW Tyler
Cambridge University Press 2011

The role of midlevel surface representation in 3D object encoding
CW Tyler
In: Computer Vision: from Surfaces to 3D Objects. New York: Chapman Hall, 163-182 2011

Depth structure from shading enhances face discrimination
CC Chen, CM Chen, C Tyler
Journal of Vision 10 (7), 984-984 2010

Art versus science
CW Tyler
Perception 39 (7), 869-871 2010

Metameric intransitivity
AE Huang, AJ Hon, CW Tyler, EL Altschuler
Attention, Perception, & Psychophysics 72, 891-893 2010

An algebra for the analysis of object encoding
CW Tyler, LT Likova
NeuroImage 50 (3), 1243-1250 2010

Symmetry: Modeling the effects of masking noise, axial cueing and salience
CC Chen, CW Tyler
PLoS One 5 (4), e984020 2010

Darkness and depth in early Renaissance painting
C Tyler
Human Vision and Electronic Imaging XV 7527, 257-263 2010

How did Leonardo perceive himself? Metric iconography of da Vinci's self-portraits
CW Tyler
Human Vision and Electronic Imaging XV 7527, 409-418 2010

Modeling magnification and anisotropy in the primate foveal confluence
MM Schira, CW Tyler, B Spehar, M Breakspear
PLoS Computational Biology 6 (1), e100065180 2010

Axis cueing effects under noise masking imply that symmetry discrimination is an active two-stage process
CW Tyler
Perception 39 (2), 268-269 2010

Straightness and the sphere of vision
CW Tyler
Perception 38 (10), 1423-1427 2009

The foveal confluence in human visual cortex
MM Schira, CW Tyler, M Breakspear, B Spehar
Journal of Neuroscience 29 (28), 9050-9058 2009

Neural signal estimation through time-resolved functional imaging
CW Tyler, LT Likova

Nova Scientific Publishers, 1-31 2009

Independent components in stimulus-related BOLD signals and estimation of the underlying neural responses
CW Tyler, LL Kontsevich, TC Ferree
Brain Research 1229, 72-89 2008

Occipital network for figure/ground organization
LT Likova, CW Tyler
Experimental Brain Research 189, 257-267 2008

Final Workshop Report: NSF Symposium on Art, Creativity and Learning
CW Tyler, D Levitin, LT Likova
National Science Foundation 2008

Spectral analysis of fMRI signal and noise
CC Chen, CW Tyler
Novel Trends in Brain Science: Springer 63-76 2008

Stereomotion processing in the human occipital cortex
LT Likova, CW Tyler
Neuroimage 38 (2), 293-305 2007

Face configuration processing in the human brain: The role of symmetry
CC Chen, KLC Kao, CW Tyler
Cerebral Cortex 17 (6), 1423-1432 2007

Two-dimensional mapping of the central and parafoveal visual field to human visual cortex
MM Schira, AR Wade, CW Tyler
Journal of Neurophysiology 97 (6), 4284-4295 2007

Instantaneous stimulus paradigm: cortical network and dynamics of figure-ground organization
LT Likova, CW Tyler
Human Vision and Electronic Imaging XII 6492, 509-516 2007

Eye-centering in portraits: Reply to McManus and Thomas
CW Tyler
Perception 36 (2), 183-188 2007

Some principles of spatial organization in art
C Tyler
Spatial Vision 20 (6), 509-530 2007

Evidence for elongated receptive field structure for mechanisms subserving stereopsis
CC Chen, CW Tyler
Vision Research 46 (17), 2691-2702 2006

The structure of stereoscopic masking: Position, disparity, and size tuning
CW Tyler, LL Kontsevich
Vision Research 45 (25-26), 3096-3108 2005

Extended concepts of occipital retinotopy
CW Tyler, LT Likova, CC Chen, LL Kontsevich, MM Schira, AR Wade
Current Medical Imaging 1 (3), 319-329 2005

Roy Lichtenstein: Traversing the highwire from pop to optical
CW Tyler
PLoS Biology 3 (4), e13632005

The riches of the cyclopean paradigm

CW Tyler
Human Vision and Electronic Imaging X 5666, 62-70 2005

A horopter for two-point perspective
CW Tyler
Human Vision and Electronic Imaging X 5666, 306-315 2005

Transient-based image segmentation: top-down surround suppression in human V1
LT Likova, CW Tyler
Human Vision and Electronic Imaging X 5666, 248-257 2005

Symmetry activates extrastriate visual cortex in human and nonhuman primates
Y Sasaki, W Vanduffel, T Knutsen, C Tyler, R Tootell
Proceedings of the National Academy of Sciences 102 (8), 3159-3163 2005

Lateral modulation of BOLD activation in unstimulated regions of the human visual cortex
CC Chen, CW Tyler, CL Liu, YH Wang
Neuroimage 24 (3), 802-809 2005

Predominantly extra-retinotopic cortical response to pattern symmetry
CW Tyler, HA Baseler, LL Kontsevich, LT Likova, AR Wade, BA Wandell
Neuroimage 24 (2), 306-314 2005

Varieties of synesthetic experience
CW Tyler
Synesthesia: Perspectives from Cognitive Neuroscience, 34-44 2005

Did Lorenzo Lotto use optical projections while painting “Husband and Wife”?
CW Tyler, DG Stork
Frontiers in Optics, FWX52 2004

Rosetta Stone? Hockney, Falco and the Sources of “Opticality” in Lorenzo Lotto's Husband and Wife
CW Tyler
Leonardo 37 (5), 397-401 2004

Beyond fourth-order texture discrimination: generation of extreme-order and statistically-balanced textures
CW Tyler
Vision Research 44 (18), 2187-2199 2004

Theory of texture discrimination of based on higher-order perturbations in individual texture samples
CW Tyler
Vision Research 44 (18), 2179-2186 2004

Local channel structure of sustained peripheral vision
LL Kontsevich, CW Tyler
Human Vision and Electronic Imaging IX 5292, 26-33 2004

Is the hMT+/V5 complex in the human brain involved in stereomotion perception? an fMRI study
LT Likova, CW Tyler
Human Vision and Electronic Imaging IX 5292, 444-456 2004

What makes Mona Lisa smile?
LL Kontsevich, CW Tyler
Vision research 44 (13), 1493-1498 2004

Representation of stereoscopic structure in human and monkey cortex
CW Tyler
Trends in Neurosciences 27 (3), 116-118 2004

Neuroscience, history and the arts synesthesia: is F-sharp colored violet?
A Ione, C Tyler
Journal of the History of the Neurosciences 13 (1), 58-65 2004

Critical commentary on Hockney's 'Secret Knowledge'
CW Tyler
Leonardo On-line 37 (5)2 2004

Binocular vision
CW Tyler, AB Scott
Duane's Foundations of Clinical Ophthalmology 2, 1-29 2004

Peak localization of sparsely sampled luminance patterns is based on interpolated 3D surface representation
LT Likova, CW Tyler
Vision Research 43 (25), 2649-2657 2003

Statistical properties of BOLD magnetic resonance activity in the human brain
CC Chen, CW Tyler, HA Baseler
NeuroImage 20 (2), 1096-1109 2003

Failure of stereomotion capture in an object disappearance paradigm
LT Likova, CW Tyler
Human Vision and Electronic Imaging VIII 5007, 408-416 2003

Was Kandinsky a synesthete?
A Ione, C Tyler
Journal of the History of the Neurosciences 12(2), 223-226 2003

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