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| **CURRICULUM VITAE** |
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| NAMETyler, Christopher W. | POSITION TITLE Senior Scientist |
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| 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 |
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**Professional Experience**

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.

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 University, 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

**Grant Review Panels**

NSF Project Review Panel, 1985-6, 1994-6, 2007-10.

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

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

**Publications for the past 10 years**

1. Chen P-Y, Chen C-C, **Tyler CW.** A gain-control disparity energy model for perceived depth from disparity. Vision Research (in press)
2. **Tyler CW** (2020)An accelerated cue combination principle accounts for multi-cue depth perception J Percept Imaging. 9(9): 10501-10531.
3. **Tyler CW** (2020)Ten testable properties of consciousness. Frontiers Psychol 11:1144**.**
4. **Tyler CW** (2020) The intersection of visual science and art in Renaissance Italy. Perception 49, 1265-1282.
5. **Tyler CW** (2020) The fundamental nature of time. J Research Philos History 3:1. doi:10.22158/jrph.v3n1p40
6. **Tyler CW,** Solomon JA (2019) Color perception in natural images. Current Opinion in Behavioral Sciences 30:8-14.
7. Jia Y, **Tyler CW** (2019) Measurement of saccadic eye movements by electrooculography for simultaneous EEG recording. Behavior Research Methods 51(5):2139-51.
8. Chen CC, Yeh YC, **Tyler CW** (2019) Length summation in noise. J Vis 19:11. doi: 10.1167/19.9.11.
9. **Tyler CW** (2019) Depth cue combination: A quantitative critique. Perception. 48:765-768.
10. Bruno N, Bertamini M, **Tyler CW** (2019) Eye centring in selfies posted on Instagram. PLoS One 14(7):e0218663.
11. Jia Y, **Tyler CW** (2019) Measurement of saccadic eye movements by electrooculography for simultaneous EEG recording. Behav Res Methods. 51(5):2139-2151.
12. Phillips D, Heard P, **Tyler CW** (2019) Expanding universe illusion. iPerception. 5;10(3):2041669519853848.
13. Fidalgo BR, Jindal A, **Tyler CW,** Ctori I, Lawrenson JG. (2018) Development and validation of a new glaucoma screening test using temporally modulated flicker. Ophthal Physiol Opt 38:617-628.
14. Likova LT, **Tyler CW** (2018) When light hurts: Comparative morphometry of human brainstem in traumatic photalgia. Sci Rep 8(1):6256. doi: 10.1038/s41598-018-24386-z.
15. **Tyler CW,** Solomon JA (2018) Does colour filling-in account for colour perception in natural images? iPerception. 9(3):2041669518768829.
16. **Tyler CW** (2018) The Emergent Aspect Dualism view of quantum physics: A new ontology to resolve the complementarity conundrum. J Res Philos History 1(2):166-182.
17. **Tyler CW** (2018) Evidence that Leonardo da Vinci had strabismus. J Amer Med Assoc, Ophthalmology, 36:1209-13.
18. Solomon JA, **Tyler CW** (2017) Improvement of contrast sensitivity with practice is not compatible with a sensory threshold account. J Opt Soc Am A 34:870-880.
19. **Tyler CW,** Likova LT (2017) Studying the retinal source of photophobia by facial electroretinography. Optom Vis Sci. 94(4):511-518.
20. Samonds JM, **Tyler CW**, Lee TS (2017) Evidence of stereoscopic surface disambiguation in the responses of V1 neurons. Cereb Cortex 27(3):2260-2275.
21. **Tyler, CW** (2017) Absolute distance from perspective. Perception 47(6) 581–584.
22. **Tyler**, CW (2017) Leonardo da Vinci's world map: On the neglected scope of his global cartographic projections. J Int Map Collector’s Society. 149, 21-31.
23. **Tyler, CW** (2017) Leonardo da Vinci's world map. Cosmos and History: J Nat Soc Philos, 13, 2.
24. **Tyler CW** (2016) Peripheral color vision and motion processing. Human Vision and Electronic Imaging 138, 1-5.
25. Chen PY, Chen CC, **Tyler CW** (2016) The perceived depth from disparity as function of luminance contrast. J Vis. 16(11):20.
26. **Tyler CW** (2016) Peripheral color demo. iPerception. 6:2041669515613671.
27. **Tyler CW,** Howarth C, Likova LT (2016) Editorial: Neural signal estimation in the human brain. Front Neurosci.;10:185.
28. Chen CC, **Tyler CW** (2015) Shading beats binocular disparity in depth from luminance gradients: evidence against a maximum likelihood principle for cue combination. PLoS One.10(8):e0132658.
29. JA, May KA, **Tyler CW** (2016) Inefficiency of orientation averaging: Evidence for hybrid serial/parallel temporal integration. J Vis. 16(1):13.
30. **Tyler CW,** Likova LT, Mineff KN, Elsaid AM, Nicholas SC. (2015) Deficits in the activation of human oculomotor nuclei in chronic traumatic brain injury. Front Neurol, 6. doi: [10.3389/fneur.2015.00173](http://dx.doi.org/10.3389/fneur.2015.00173)
31. **Tyler CW,** Likova LT, Nicholas SC (2015) Analysis of neural-BOLD coupling through four models of the neural metabolic demand. Frontiers in Neuroscience 9:419. doi: 10.3389/fnins.2015.00419
32. **Tyler, CW** (2015) The Emergent Dualism view of quantum physics and consciousness. Cosmos & History 11, 97-114.
33. Goodrich GL, Martinsen GL, Flyg HM, Kirby J, Garvert DW, **Tyler CW** (2014) Visual function, traumatic brain injury, and post-traumatic stress disorder. J Rehab Res Devel 51(4):547-58. doi: 10.1682/JRRD.2013.02.0049.
34. **Tyler CW**, Likova LT, Mineff KN, Elsaid AM, Nicholas SC (2014) Consequences of traumatic brain injury for human vergence dynamics. Front Neurol. 5:282. doi: 10.3389/fneur.2014.00282
35. **Tyler, CW** (2014) Gombrich’s Vault of Perception: Do we “really” see straight lines as curved? Art & Perception, doi: 10.1163/22134913-00002028.
36. **Tyler CW** (2013) Binocular eye movements in health and disease. In Rogowitz, B.E., Pappas, T.N. Human Vision and Electronic Imaging XXV, 8651:12.
37. **Tyler CW,** Likova LT (2013) The neurometabolic underpinnings of fMRI BOLD dynamics. In Papageorgiou TD, Christopoulos GI, Smirnakis SM (Eds) Advanced Brain Neuroimaging Topics in Health and Disease - Methods and Applications.. Intech Press, Ch 2, 2014, 21-47
38. **Tyler CW** (2013) Visual function and its management in mTBI. (Ed). SKERI Press: San Francisco.
39. **Tyler CW,** Likova LT, Elsaid AM, Nicholas SC (2013) Binocular eye movements in health and disease. Human Vision Electronic Imaging XVII, 8651-34.
40. Samonds JM, Potetz BR, **Tyler CW,** Lee TS (2013) Recurrent connectivity can account for the dynamics of disparity processing in V1. J Neurosci. 33:2934-46.
41. Li X, Huang AE, Altschuler EL, **Tyler CW** (2013) Depth spreading through empty space induced by sparse disparity cues. J Vis. 13(10). doi:pii: 7. 10.1167/13.10.7.
42. Gorea A, **Tyler CW** (2013) Dips and bumps: on Bloch's law and the Broca-Sulzer phenomenon. Proc Natl Acad Sci U S A. 110(15):E1330.
43. Chen CC, Chen CM, **Tyler CW** (2013) Depth structure from asymmetric shading supports face discrimination. PLoS One. 2013;8(2):e55865.
44. Kontsevich LL, **Tyler CW** (2013) A simpler structure for local spatial channels revealed by sustained perifoveal stimuli. J Vis. 13(1):22.
45. Li X, Huang AE, Altschuler EL, **Tyler CW** (2013) Depth spreading through empty space induced by sparse disparity cues. J Vis. 13(10). doi:pii: 7. 10.1167/13.10.7.
46. **Tyler, CW** (2013) Application of face encoding to art investigations. Proc. 4th European Workshop on Visual Information Processing (EUVIP) 4, 226-231.
47. **Tyler CW,** Elsaid AM, Likova LT, Gill N, Nicholas SC (2012) Analysis of human vergence dynamics. J Vis. 12(11).
48. **Tyler CW,** Likova LT, Atanassov K, Ramachandra V, Goma S (2012) 3D discomfort from vertical and torsional disparities in natural images. Human Vision and Electronic Imaging XVII, 7529: 7529112-23.
49. Schira MM, **Tyler CW,** Rosa MG (2012) Brain mapping: the (un)folding of striate cortex. Curr Biol. 22:R1051-3.
50. Huang PC, Chen CC, **Tyler CW** (2012) Collinear facilitation over space and depth. J Vis. 12(2). pii: 20.
51. **Tyler CW**, Likova LT (2012) Estimating neural signal dynamics in the human brain. In Functional Magnetic Resonance Imaging. Front Systems Neurosci, 5:33, 10.3389/fnsys.2011.00033.
52. **Tyler, CW** (2012) Null Object: Prolegomena. In Gilchrist B, Joelson J, (Eds) NULL OBJECT: Gustav Metzger Thinks about. Black Dog Publishing: London.
53. **Tyler, CW** (2012) Chinese perspective as a rational system: relationship to Panofsky's symbolic form. Chin J Psychol 53, 7-27.
54. **Tyler CW**, Likova LT (2011) Visual surface encoding: A neuroanalytical approach. In: Computer Vision: From Surfaces to 3D Objects. Tyler CW (Ed) Chapman Hall: New York.
55. **Tyler CW** (2011) The role of midlevel surface representation in 3D object encoding. In Computer Vision: From Surfaces to 3D Objects. Tyler CW (Ed) Taylor & Francis: New York.
56. **Tyler CW** (2011) The role of disparity interactions in the perception of the 3D environment. In Vision in 3D Environments, L Harris and M Jenkins, Eds. Cambridge University Press, p 95-114.
57. **Tyler CW**, Nicholas SC (2011) Perceptual coding for 3D reconstruction. EUVIP 2011 10.1109/EuVIP.2011.604553.
58. Chen CC, **Tyler CW** (2010) Symmetry: modeling the effects of masking noise, axial cueing and salience. PLoS One. 2010 5(4):e9840.
59. Schira MM, **Tyler CW,** Spehar B, Breakspear M (2010) Modeling magnification and anisotropy in the primate foveal confluence. PLoS Comput Biol. 6(1):e1000651.
60. **Tyler CW**, Likova LT (2010) An algebra for the analysis of object encoding. NeuroImage, 50: 1243-50.
61. **Tyler, CW** (2010) How did Leonardo perceive himself? Metric iconography of da Vinci's self-portraits. Proc SPIE 7527, 1D.
62. **Tyler, CW** (2010) Darkness and depth in early Renaissance painting. Proc SPIE 7527, 0V.