



Curriculum Vitae - Steven Dakin

PERSONAL DETAILS

Date of Birth: 21st June 1967
Nationality: British

EDUCATION AND QUALIFICATIONS

1989-1994 **Department of Psychology, University of Stirling, *Stirling, UK***
Ph.D. "The visual representation of texture", supervised by Prof. Roger Watt.

1986-1989 **Department of Psychology, University of Exeter, *Exeter, UK***
B.Sc. (1st class) Computer Science & Psychology

ACADEMIC POSITIONS

1989-1994 **Department of Psychology, University of Stirling, *Stirling, UK***
As a Research Assistant I investigated face recognition, and symmetry perception. I taught on the MSc course in Neural Computation, and ran tutorials and practicals for psychology undergraduates.

1996-1998 **McGill Vision Research Unit, McGill University, *Montreal, Canada***
I worked as a post-doctoral research fellow with Prof. Robert Hess where my research focused on contour integration, symmetry, second-order vision, motion, & crowding.

10/1998-1/2001 **Institute of Ophthalmology, University College London, *UK***
I moved to London as a senior post-doctoral research fellow funded by a Career Development award from the Wellcome Trust looking at the role of visual processing in skilled reading. I developed psychophysical techniques for measuring reading speed and the effect of basic typography and word-shape distortions on reading speed. This work led to a series of collaborative projects investigating visual crowding and dyslexia.

1/2001-present I was appointed as a lecturer at the Institute of Ophthalmology in January of 2001, senior lecturer in 2003, reader in 2007 and professor in 2010. I work extensively with Dr Peter Bex at the Harvard Medical School in Boston (looking at motion perception, visual crowding and contour integration). I maintain research links with Prof. Robert Hess at McGill examining strabismic amblyopia. I also work with Dr. Patricia Carlin at the Institute of Psychiatry (KCL) on abnormal visual processing in chronic schizophrenia. Within the Institute of Ophthalmology I collaborate with Dr Roger Anderson on visual optotypes. Finally I am presently engaged in a joint study with Prof. Geraint Rees and Dr Elaine Anderson, at the Functional Imaging Lab (UCL) imaging the cortical and sub-cortical areas involved in crowding.

My present staff includes two Wellcome Trust-funded postdoctoral fellow (Dr Marc Tibber and Dr Elaine Anderson), a BMRC-funded postdoctoral fellows (Dr John Greenwood) and a BMRC-funded research optometrist (Ms Nilpa Shah).

GRANTS HELD

- 1998-2001 **The Role of Early Vision in Reading** (*Wellcome Trust*; Principal)
- The project, conducted in collaboration with Prof. Michael Morgan, consisted of a computational and psychophysical investigation of the role of visual shape coding in skilled reading. The computational aspect concentrated on how this code could be used to constrain the identity of unknown words. The psychophysical aspect looked at the role of visual word-shape information in skilled reading. £158,406
- 2003-2006 **Integration of Complex Visual Motion** (*BBSRC*; Principal)
- Examines how we combine motion information across space into global percepts of object motion. We use statistical models of motion perception to explain perceptual phenomena such as transparency. £156,812
- 2006-2009 **Perceptual Reorganisation in Macular Disease** (*Wellcome Trust*; Co-applicant with Peter Bex)
- We are examining perceptual reorganisation following retinal damage in macular disease, and in particular whether significant remapping occurs with central visual impairment. We are developing a new paradigm to measure perceptual distortions and will look at whether improvement in visual function can be gained through adaptive image processing techniques to correct such distortions. £182,000
- 2006-2009 **Visual Crowding** (*Wellcome Trust*; Principal)
- This project uses equivalent noise analysis to examine the nature of visual crowding. We are looking at the role of positional and orientation uncertainty in crowding and whether attention plays any significant role. We will also be examining the nature of crowding within natural scenes. £145,000
- 2007-2008 **International visiting research fellowship** (*University of Sydney*; Principal)
- In 2007 I was awarded a travelling fellowship to work with Dr. David Alais in the University of Sydney studying the temporal filtering of natural images in the human visual system. £8,500
- 2009-2010 **Separating neural and optical lossess of vision using high-pass filtered targets** (*NIHR Biomedical Research Centre for Ophthalmology*; Co-applicant with Roger Anderson)
- We are using filtered letters to probe which areas of the normal retina are limited by retinal ganglion cell-density, with a view to using these stimuli to detect changes in visual function due to e.g. glaucoma. £15,000
- 2009-2010 **Local and global motion processing in glaucoma: Separating the effects of cell dysfunction and death** (*NIHR Biomedical Research Centre for Ophthalmology*; Principal)
- We are developing novel psychophysical tasks based on motion perception to compare the functional consequences of glaucoma in its early and late stages. £61,500
- 2010-2011 **Binocularity and crowding: A new test for assessing visual function in young children** (*Special Trustees of Moorfields & NIHR Biomedical Research Centre for Ophthalmology*; Principal)
- This project involves the development of a new means of quantifying visual crowding in infants using modified video games. £55,000

2009-2012 **Deficits in processing of sensory context associated with schizophrenia** (*Wellcome Trust*; Principal)

People with schizophrenia are consistently less affected by the context a sensory stimulus arises within. This project uses a combination of psychophysics and fMRI to probe the neural underpinnings of this phenomenon. £280,000

2010-2011 **Local & global motion processing in glaucoma** (*Fight for Sight Dr Hans & Mrs Gertrude Hirsch Award*; Principal)

We are examining the consequences of the early stages of glaucoma on perceptual processing of motion. £15,000

TEACHING ACTIVITY

Course lecturer: ANAT C3045 *Eye and Brain*.

Module coordinator: “Advanced Visual Neuroscience”, MSc *Biology of Vision*.

ENABLING ACTIVITY

Editor: *Journal of Vision*

Reviewing: *Nature, Nature Neuroscience, PNAS, Current Biology, Proceeding of the Royal Society of London, Journal of Vision, Vision Research, Spatial Vision, Attention, Perception and Psychophysics, Perception, Spatial Vision.*

Meetings: Organiser of *From Cooperative Processes to Global Motion* a two-day meeting held at UCL in November 2008.

Committees: Chair of *Joint Library Committee*, UCL IoO.

CURRENT RESEARCH INTERESTS

1. Motion perception: direction and speed integration. Applications in diagnosis of glaucoma.
2. Natural scene statistics: Brightness coding, motion perception (predictive coding) and contour perception
3. Contextual interactions; weak surround suppression in certain forms of mental illness.
4. Psychophysical reverse correlation, particularly applications using dynamic stimuli
5. Gaze contingent image enhancement for people with low vision.
6. Crowding.
7. Image registration of retinal imagery, face synthesis, image enhancement, simulated distortion.

CITATION METRICS

H-index: 22. Average cites/article: 18. Highest cited: 284. (<http://www.researcherid.com/rid/B-7610-2008>)

Citation 56 was the most downloaded article from the *Journal of Vision* in 2009

(<http://newsmanager.commpartners.com/arvo/issues/2010-01-08/2.html>).

PUBLICATIONS: JOURNALS (IN PRESS (*PRESS*), SUBMITTED (*SUB*) , IN PREPARATION (*PREP*))

77. *Prep.* Corlett P.R., Gardner, J.M., Piggot, J.S., Dakin, S.C., Turner, D.C., Everitt, J., Arana, F.S., Morgan, H.L., Milton, A.L. , Lee J.L., Aitken, M.R.F., Dickinson, A., Everitt, B.J., Absalom A.R., Adapa, R., Taylor J.R, Krystal, J.H., Fletcher, P.C. Support for the prediction error model of psychosis: Using error signal in the brain to predict the cognitive and pro-psychotic effects of ketamine, *Biological Psychiatry*
76. *Prep.* Dakin, S.C., Tibber M., Greenwood, J.A., Kingdom, F.A. and Morgan, M.J. A common metric supports human estimation of number and density
75. *Prep.* Dakin, S.C., Greenwood, J.A., and Bex, P.J. Illusory (not physical) position determines crowding
74. *Sub.* Tavassoli, T., Latham, K., Bach, M., Dakin, S.C., Vincente-Grabovetsky A. & Baron-Cohen, S. Comparing psychophysical and questionnaire-based measures of visual function in Autism Spectrum Conditions, *Vision Research*
73. *Press.* Shah, N., Dakin, S.C., Redmond, T. & Anderson, R.S. Vanishing optotype letter acuity: Repeatability and effect of the number of alternatives, *Ophthalmic and Physiological Optics*
72. *Press* Kane, D., Bex, P.J. and Dakin, S.C. Quantifying “the aperture problem” for judgments of motion direction in natural scenes, *Journal of Vision*
71. 2010 Goffaux, V & Dakin, S.C. Horizontal information drives the specific signatures of face processing, *Frontiers in Perception Science*, **1**:143, 1-14.
70. 2010 Dakin, S.C., Apthorp, A., and Alais, D. Anisotropies in judging the direction of moving natural scenes, *Journal of Vision*, **10**(11):5, 1-19.
69. 2010. Dakin, S.C., Greenwood, J.A., Bex, P.J. and Cass, J.R. Probabilistic, positional averaging predicts object-level crowding effects with letter-like stimuli, *Journal of Vision*, **10**(10):14, 1-16.
68. 2010. Greenwood, J.A., Bex, P.J. and Dakin, S.C. Crowding changes appearance, *Current Biology* , **20**, 496-501.
67. 2010. Watt, R.J. and Dakin, S.C. Author’s response to commentaries. *British Journal of Psychology*, **101**, 41-46.
66. 2010. Watt, R.J. and Dakin, S.C. The utility of image descriptions in the initial stages of vision: a case study of printed text. *British Journal of Psychology*, **101**, 1-26.
65. 2009. Anderson, E., Dakin, S.C. and Rees, G. Monocular signals in human lateral geniculate nucleus support brightness filling-in, *Journal of Vision*, **9**(12):14, 1-18.
64. 2009. Dakin, S.C., Bex, P.J., Cass, J. and Watt, R.J. Dissociable effects of attention and crowding on orientation averaging *Journal of Vision*, **9**(11):1, 1-28.
63. 2009. Bach, M. and Dakin, S.C. “Commentary on ‘Eagle-Eyed Visual Acuity: An Experimental Investigation of Enhanced Perception in Autism’”, *Biological Psychiatry*, **66**(10), 19-20.
62. 2009 Kane, D., Bex, P.J. and Dakin, S.C. The “aperture problem” in contoured stimuli *Journal of Vision*, **9**(10):13, 1-17.
61. 2009 Dakin, S.C. Vision: Thinking globally, acting locally *Current Biology*, **19**, R851-4
60. 2009 Bex, P.J., Solomon, S.G. and Dakin, S.C. Contrast sensitivity in natural scenes depends on edge as well as spatial frequency structure *Journal of Vision*, **9**(10):1, 1-19.

59. 2009 Greenwood, J.A., Bex, P.J. and Dakin, S.C. Positional averaging explains crowding with letter-like stimuli, *Proceedings of the National Academy of Science USA*, **106**, 13130-5.
58. 2009 Dakin, S.C. and Omigie, D. Psychophysical evidence for a nonlinear representation of faces. *Vision Research*, **49**, 2285-2296.
57. 2009 Neveu, M.M., Jeffrey, G., Moore, A.T. & Dakin, S.C. Deficits in local and global motion perception arising from abnormal eye movements *Journal of Vision*, **9**(4):9, 1-15
56. 2009. Dakin, S.C. and Watt, R.J. Biological “bar-codes” from human faces *Journal of Vision*, **9**(4):2, 1-10 (Press coverage: [Daily Express](#), [BBC](#), [The Scotsman](#)).
55. 2009 Dakin, S.C. and Baruch, N. Context affects contour integration *Journal of Vision*, **9**(2):13, 1-13
54. 2008 Johnston, A., Bruno, A., Watanabe, J., Quansah, B., Patel, N., Dakin, S.C. and Nishida, S. Visually-based temporal distortion in dyslexia *Vision Research*, **48**, 1852-1858.
53. 2008 Watt, R.J., Ledgeway, T., and Dakin, S.C. Families of models for gabor paths demonstrate the importance of spatial adjacency. *Journal of Vision*, **8** (7):23, 1-19.
52. 2008 Mareschal, I., Bex, P.J. and Dakin, S.C. Local motion processing limits fine direction discrimination in the periphery, *Vision Research*, **48**, 1719-1725
51. 2008 Butler, P.D., Silverstein, S.M. and Dakin, S.C. Visual perception and its impairment in schizophrenia, *Biological Psychiatry*, **64**, 40-47
50. 2008 Dumoulin, S.O., Dakin, S.C. & Hess, R.F. Sparsely distributed contours dominate extra-striate response to natural scenes, *NeuroImage*, **42**, 890-901
49. 2008 Crossland, M.D., Legge, G.E. and Dakin, S.C., The development of an automated sentence generator for the assessment of reading speed *Behaviour and Brain Function*, **4**, 14.
48. 2007 Crossland, M.D., Dakin, S.C. and Bex, P.J., Illusory stimuli can be used to identify retinal blind spots *PLoS ONE*, **2**, e1060.
47. 2007 Bex, P.J., Mareschal, I. and Dakin, S.C., Contrast gain control in natural scenes *Journal of Vision*, **7**, 1-12.
46. 2006 Huang, P.-C., Hess, R.F. and Dakin, S.C. Flank facilitation and contour integration: Different sites, *Vision Research*, **46**, 3699-3706
45. 2006 Hess, R.F., Mansouri, B., Dakin, S.C. and Allen, H.A. Integration of local motion is normal in amblyopia. *Journal of the Optical Society of America A*, **23**, 986-992.
44. 2006. Mareschal, I.M., Dakin, S.C., and Bex, P.J. Dynamics of psychophysically measured orientation mechanisms *Proceedings of the National Academy of Science, USA*, **103**, 5131-5136.
43. 2005 Bex, P.J., Dakin, S.C. and Mareschal, I. Critical band masking in optic flow *Network: Comp. in Neural System*, **16**, 261-284
42. 2005 Dakin, S.C., Mareschal, I.M. and Bex, P.J. An oblique effect for local motion: Psychophysics and natural movie statistics, *Journal of Vision*, **5**, p878-887.
41. 2005 Dakin, S.C. and Frith, U. Vagaries of visual perception in autism. *Neuron*, **48**, 497-507
40. 2005 Dakin, S.C., Carlin, P. and Hemsley, D. Weak suppression of visual context in chronic schizophrenia, *Current Biology*, **15**, R822-824. (Press coverage: *Science* (**310**, p773), *Economist* (Oct 27th 2005), [BBC News](#), *Scientific American* (Oct 26th 2005)).

39. 2005 Dakin, S.C., Mareschal, I.M. and Bex, P.J.. Local and global limitations on direction integration assessed using equivalent noise analysis *Vision Research*, **45**, 3027-3049.
38. 2005 Bex, P.J. and Dakin, S.C. Spatial interference among moving targets *Vision Research*, **45**, 1385-98.
37. 2005 Mansouri, B., Hess, R.F., Allen, H.A., and Dakin, S.C. Integration, segregation and binocular combination. *Journal of the Optical Society of America A*, **22**, 38-48.
36. 2004 Mansouri, B., Allen, H.A., Hess, R.F., Dakin, S.C., and Ehrt, O. Integration of orientation information in amblyopia. *Vision Research*, **44**, 2955-2969.
35. 2003 Dakin, S.C., and Bex, P.J. Natural image statistics mediate brightness “filling-in”. *Proceedings of the Royal Society of London*, **270**, 2341-2348.
34. 2003 Bex, P.J., Dakin, S.C., and Simmers, A.J. The shape and size of crowding for moving targets. *Vision Research*, **43**, 2895-2904.
33. 2003 Allen, H.A., Hess, R.F., Mansouri, B., and Dakin, S.C. Integration of first- and second-order orientation information. *Journal of the Optical Society of America A*, **20**, 974-986
32. 2003 Bex, P.J. & Dakin, S.C. Motion detection and the coincidence of structure at high and low spatial frequencies *Vision Research*, **43**, 371-383.
31. 2003 Bex, P.J., Simmers, A.J. and Dakin, S.C. Grouping local directional signals into moving contours. *Vision Research*, **43**, 2141-2153
30. 2003 Hess, R.F., Barnes, G., Dumoulin and Dakin, S.C. How many positions can we encode, one or many? *Vision Research*, **43**, 1575-1587.
29. 2003 Dakin, S.C. & Bex, P.J. Reply to Wilson & Wilkinson: Evidence for global processing but no evidence for specialised detectors in the visual processing of Glass patterns *Vision Research*, **43**, 565-566
28. 2003 Ramus, F., Rosen, S., Dakin, S.C., Day, S., Castellote, J.M., White, S. & Frith, U. Theories of developmental dyslexia: Insights from a multiple case study, *Brain*, **126**, 841-865.
27. 2002 Dakin, S.C. & Bex, P.J. Summation of global orientation structure: Seeing the Glass or the window?, *Vision Research*, **42**, 2013-2020.
26. 2002 Dakin, S.C., Hess, R.F., Ledgeway, T. and Achtman, R.L. What causes non-monotonic tuning of fMRI response to noisy images? *Current Biology*, **12**, R476-477.
25. 2002 Bex, P.J. & Dakin, S.C. Comparison of the spatial-frequency selectivity of local and global motion detectors, *Journal of the Optical Society of America*, **19**, 670-677.
24. 2002 Dakin, S.C. & Bex, P.J. Role of synchrony in contour binding: Some transient doubts sustained, *Journal of the Optical Society of America*, **19**, 678-686.
23. 2001 Dakin, S.C. & Bex, P.J.. Local and global visual grouping: Tuning for spatial frequency and contrast *Journal of Vision* **1**, 99-111
22. 2001 Bex, P.J., Simmers, A. and Dakin, S.C. Snakes and ladders: the role of temporal modulation in visual contour integration, *Vision Research*, **41**, 3775-82
21. 2001 Hess, R.F., Dakin, S.C., Tewfick, M. & Brown, B. Contour interaction in amblyopia: scale selection *Vision Research*, **41**, pp2285-2296.
20. 2001 Dakin, S.C. Information limit on the spatial integration of local orientation signals, *Journal of the Optical Society of America*, **18**, pp1016-1026.

19. 2000 Hess, R.F., Dakin, S.C., Kapoor, N. and Tewfik, M. Contour interaction in fovea and periphery. *Journal of the Optical Society of America*, **17**, 1516-1524
18. 2000 Hess, R.F., Ledgeway, T. & Dakin, S.C. Impoverished second-order input to global processing *Vision Research*, **40**, 3309-3318.
17. 2000 Dakin, S.C. & Mareschal, I.M. The role of relative motion computation in 'direction repulsion'. *Vision Research*, **40**, pp833-841.
16. 2000 Hess, R.F., Dakin, S.C. & Kapoor, N. 'The foveal "crowding" effect: physics or physiology?' *Vision Research*, **40**, pp365-370.
15. 2000 Dakin, S.C. & Mareschal, I.M. Sensitivity to contrast modulation depends on carrier orientation and spatial frequency. *Vision Research*, **40**, pp311-329.
14. 1999 Wang, Y-Z, Hess, R.F., & Dakin, S.C. Are judgements of circularity local or global? *Vision Research*, **39**, pp4354-4360.
13. 1999 Dakin, S.C. & Hess, R.F. Contour integration and scale combination processes in visual edge detection. *Spatial Vision*, **12**, pp309-328.
12. 1999 Dakin, S.C., Williams, C.B., & Hess, R.F. The interaction of first- and second-order cues to orientation. *Vision Research*, **39**, pp2867-2884.
11. 1999 Dakin, S.C. Orientation variance as a quantifier of structure in texture. *Spatial Vision* **12**, p1-30.
10. 1999 Hess, R.F. & Dakin, S.C. Contour integration in the peripheral field. *Vision Research* **39**, p947-959.
9. 1998 Dakin, S.C. & Hess, R.F. Spatial frequency tuning of visual contour integration. *Journal of the Optical Society of America* **A15**, pp1486-1499.
8. 1998 Dakin, S.C. & Herbert, A.M. The spatial region of integration for visual symmetry detection. *Proceedings of the Royal Society of London* **B265**, pp659-664.
7. 1998 Hess, R.F., Dakin, S.C. & Field, D.J. The role of "contrast enhancement" in the detection and appearance of visual contours. *Vision Research* **38**, pp783-787.
6. 1997 Hess, R.F. & Dakin, S.C. Absence of contour linking in peripheral vision. *Nature* **390**, pp3181-3192.
5. 1997 Dakin, S.C. & Watt, R.J. The computation of orientation statistics from visual texture. *Vision Research* **37**, pp2227-2246.
4. 1997 Dakin, S.C. & Hess, R.F. The spatial mechanisms mediating symmetry detection. *Vision Research* **37**, pp2915-30.
3. 1997 Dakin, S.C. Glass patterns: Some contrast effects re-evaluated. *Perception* **26**, pp253-268.
2. 1997 Dakin, S.C. The detection of structure in Glass patterns: Psychophysics and computational models. *Vision Research* **37**, pp2227-2246.
1. 1994 Dakin, S.C. & Watt, R.J. Detection of bilateral symmetry using spatial filters. *Spatial Vision* **8**, p393-413.

PUBLICATIONS: BOOK CHAPTERS

1. 1996 Dakin, S.C. & Watt, R.J. Detection of bilateral symmetry using spatial filters. In *Human Symmetry Perception and Its Computational Analysis*, C.W. Tyler (Ed.), VSP Publishing: BV Zeist, The Netherlands. pp197-207.

INVITED TALKS

- McDonnell-Pew Foundation, Duke University, Durham, Carolina
- NIMH "Cognitive Neuroscience Treatment Research to Improve Cognition in Schizophrenia" meeting, Washington D.C. (2007)
- Rank Prize meeting on self-calibrating sensory systems (2007)
- Schepens Eye Institute, Harvard University, Boston
- Department of Experimental Psychology, Oxford University
- Functional Imaging Laboratory, University College London
- Institute of Cognitive Neuroscience, University College London
- Smith Kettlewell Eye Institute, San Francisco
- The Wellcome Trust, London
- Department of Psychology, Stanford University, San Francisco
- Department of Psychology, University of California at Irvine, Los Angeles
- Department of Psychology, University of California at Los Angeles, Los Angeles
- Department of Psychology, University of California at Santa Barbara, Los Angeles
- York Vision Research, University of York, Toronto
- McGill Vision Research, McGill University, Montreal
- Department of Psychology, University College London
- Department of Optometry & Neuroscience, UMIST, Manchester
- Nijmegen Institute for Cognition and Information, Nijmegen
- Department of Visual Science, Aston University
- Department of Optometry, City University & Bradford University
- Department of Psychology: Universities of York, Birmingham (2007), Stirling, Glasgow and Sussex.
- Scottish Vision Group keynote speaker (2007)

TEACHING ACTIVITY

- MSc (Neural Computation) *Image processing techniques*
- BSc (Psychology) Practical classes and tutorials

REFEREED CONFERENCE ABSTRACTS

- 1991 Dakin, S.C. & Paterson, I.R. Representation of texture orientation information. *Perception*, **20** (Suppl.), p123.
- 1992 Paterson, I.R. & Dakin, S.C. Representing the statistics of image textures: data and modeling. *Perception*, **21** (Suppl.), p98.
- 1993 Watt, R.J. & Dakin, S.C. The integration of information from different spatial scales in faces perception. *Perception*, **22** (Suppl.), p12.
- 1994 Dakin, S.C. & Watt, R.J. The selection of spatial scale for visual grouping. *Perception*, **23** (Suppl.), p67.
- 1997 Dakin, S.C. & Hess, R.F. The effect of orientation and spatial scale on the detection of visual symmetry. *Investigative Ophthalmology and Visual Science*, **38** (Suppl.), p2982.
- 1997 Williams, C.B., Dakin, S.C. & Hess, R.F. The effect of orientation and spatial scale on the detection of visual symmetry. *Investigative Ophthalmology and Visual Science*, **38** (Suppl.), p2948.
- 1998 Dakin, S.C. & Hess, R.F. The spatial frequency tuning of contour integration. *Investigative Ophthalmology and Visual Science*, **39** (Suppl.), p2948.
- 1998 Hess, R.F. & Dakin, S.C. Absence of contour linking in the periphery. *Investigative Ophthalmology and Visual Science*, **39** (Suppl.), p205.
- 1998 Wang, Y-Z, Hess, R.F. & Dakin, S.C. Judgements of circularity: local or global? *Investigative Ophthalmology and Visual Science*, **39** (Suppl.), p847.
- 1999 Mareschal, I., Dakin, S.C. & Baker, C.L. Neuronal responses to texture borders in cat cortical area 18. *Investigative Ophthalmology and Visual Science*, **40** (Suppl.), p809.
- 1999 Hess, R.F., Dakin, S.C. & Kapoor, N. Foveal contour interaction: physics or physiology? *Investigative Ophthalmology and Visual Science*, **40** (Suppl.), p809.
- 1999 Wang, Y-Z, Hess, R.F. & Dakin, S.C. Shape discrimination: sides or corners? *Investigative Ophthalmology and Visual Science*, **40** (Suppl.), p811.
- 1999 Dakin, S.C. & Morgan, M.J. The role of visual cues to word shape in reading. *Investigative Ophthalmology and Visual Science*, **40** (Suppl.), p35.
- 2000 Dakin, S.C. An information limit on the spatial integration of orientation signals. *Investigative Ophthalmology and Visual Science*, **41** (Suppl.).
- 2000 Bex, P.J. and Dakin, S.C. Narrow-band local and broad-band global spatial frequency selectivity for visual motion perception. *Investigative Ophthalmology and Visual Science*, **41** (Suppl.).
- 2001 Simmers, A.J., Bex, P.J. and Dakin, S.C. Contour integration in dynamic stimuli. *Investigative Ophthalmology and Visual Science*, (Suppl.).
- 2001 Dakin, S.C. and Bex, P.J. The role of synchrony in contour binding: Some sustained and transient doubts. *Investigative Ophthalmology and Visual Science*, (Suppl.).
- 2002 Dakin, S.C. Orientation integration: What gets lost during attentional diversions? *Journal of Vision*, 2(7), 456a, <http://journalofvision.org/2/7/456/>.
- 2002 Bex, P., Simmers, A., & Dakin, S.C. Integration of moving contours from local directional signals. *Journal of Vision*, 2(7), 655a, <http://journalofvision.org/2/7/655/>.
- 2002 Allen, H. A., Hess, R. F., Dakin, S. C., & Mansouri, B. (2002). Spatial integration of second-order orientation. *Journal of Vision*, 2(7), 223a, <http://journalofvision.org/2/7/223/>.
- 2002 Bex, P.J. and Dakin, S.C. Motion perception and the co-incidence of spatial structure at high and low spatial frequencies. *Investigative Ophthalmology and Visual Science*, (Suppl.).

- 2002 Mansouri, B., Allen, H.A., Ehrt, O., Dakin, S.C., and Hess, R.F. Amblyopes can combine orientation across space. *Investigative Ophthalmology and Visual Science*, (Suppl.).
- 2003 Mansouri, B., Hess, R. F., Allen, H. A., Sebbag, S., & Dakin, S. C. The site of orientation integration *Journal of Vision*, 3(9), 456a, <http://journalofvision.org/3/9/456/>.
- 2004 Bex, P. & Dakin, S.C. Directional crowding. *Journal of Vision*, 4(8), 852a, <http://journalofvision.org/4/8/852/>.
- 2004 Mareschal, I., Dakin, S. C., & Bex, P. J. The role of internal noise in the oblique effect for motion *Journal of Vision*, 4(8), 854a, <http://journalofvision.org/4/8/854/>.
- 2004 Huang, P.-C., Hess, R. F., & Dakin, S. C. Different sites for lateral facilitation and contour integration. *Journal of Vision*, 4(8), 781a, <http://journalofvision.org/4/8/781/>.
- 2004 Dumoulin, S. O., Dakin, S. C., & Hess, R. F. (2004) Cortical responses to contours, texture and sparseness: an fMRI investigation. *Journal of Vision*, 4(8), 14a, <http://journalofvision.org/4/8/14/>.
- 2004 Dakin, S.C., Mareschal, I. & Bex, P.J. Equivalent noise analysis of motion integration *Journal of Vision*, 4(8), 106a, <http://journalofvision.org/4/8/106/>.
- 2004 Mareschal, I., Dakin, S. C., & Bex, P. J. Dynamics of orientation discrimination assessed with reverse correlation *Perception*, **33** (suppl), 175.
- 2004 Dakin, S.C., Mareschal, I. & Bex, P.J. Local noise (not efficiency) limits direction integration in the periphery. *Perception*, **33** (suppl), 31.
- 2004 Bex, P.J., Dakin, S.C., & Mareschal, I. Critical band masking in optic flow *Perceptio*, **33** (suppl), 34.
- 2005 Dakin, S.C., Mareschal, I. & Bex, P.J. Equivalent noise and reverse correlation analysis reveals inhibitory interactions between channels coding global direction, *Journal of Vision*, 5(8), 837a, <http://journalofvision.org/5/8/837/>.
- 2005 Bex, P.J., Mareschal, I. & Dakin, S.C. Contrast gain control in natural images, *Journal of Vision*, 5(8), 597a, <http://journalofvision.org/5/8/597/>.
- 2005 Mareschal, I., Dakin, S. C., & Bex, P. J. Dynamics of collinear facilitation assessed using classification images, *Journal of Vision*, 5(8), 175a <http://journalofvision.org/5/8/175/>.
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