Dr Peter Richard Jones *PhD, MSc, MA(oxon), BA*

Address	City, University of London C247, Tait Building London, EC1V 0HB	**Phone**	+44 7866 465 087
		Email	peter.jones@city.ac.uk
		Web	www.appliedpsychophysics.com
Date of Birth	27^{th} January 1986	**Nationality**	British

Research Interests

I am a lecturer in Vision Science at City, University of London, and hold an honorary position at UCL Institute of Ophthalmology (Child Vision Lab). My research is focused on developing and validating new ways of assessing vision outside of conventional eye clinics (telemedicine). For more, see `www.appliedpsychophysics.com`.

Key Words: *Telemedicine*, *Glaucoma*, *Clinical Trials*, *Psychophysics*, *Developmental Psychology*, *Sensory Development*, *Decision Making*, *Mathematical Psychology*, *Signal Detection Theory*, *Cognitive Neuroscience*, *Programming Tools for Psychologists*

Education

2009-2012	Ph.D. Psychology	*MRC Institute of Hearing Research, Nottingham*
2007-2008	M.Sc. Informatics (Distinction)	*University of Edinburgh*
2004-2007	B.A. Psychology & Philosophy (1^{st})	*Oxford University, St John's College*
2002-2004	A-Levels	*Aquinas College, Stockport*
1997-2002	GCSEs	*Priestnall Comprehensive, Stockport*

Employment

Mar 2023 – Present **Irida Health Ltd**
Founder, CEO
University spin-out developing technology to monitor vision outside of conventional eye clinics (telemedicine). For further details, see `www.irida.health`.

Mar 2020 – Present **City, University of London**
Lecturer (School of Health Sciences: Division of Optometry)
A joint teaching/research faculty post, lecturing in the biology of vision.

Oct 2012 – Feb 2020 **University College London**
Post-doctoral Research Fellow
Responsible for day-to-day oversight of the UCL Child Vision Lab. My research primarily concerned the development and evaluation of novel tests of infant vision, particularly for use as clinical end-points in ongoing gene-therapy trials. As part of my work I used remote eyetracking to develop the world's first fully automated test of infant visual acuity.

Nov 2016 – Sep 2019 **City, University of London** [FTE 0.8]
Post-doctoral Research Fellow
Responsible for day-to-day oversight of the Crabblab, under Prof David Crabb. My research primarily concerns the development and evaluation of a novel screening device for vision loss, using remote eye-tracking. I was also responsible for overseeing the day-to-day running of the lab, including supporting the work of 7 PhD students and 2 Postdocs.

Nov 2008 – Sep 2009 **The Scottish Arts Council**
Statistics and Reporting Officer
Responsible for producing a government report on the Youth Music Initiative: a £10M per anum scheme that provides free music tuition to all children in Scotland. As part of this work, I developed the Scottish Arts Council's first fully automated, online data-gathering tool. The written report was delivered to the Scottish Parliament on time, in August 2009.

Peer Reviewed Publications

[61] **Jones, P. R.** (2025). MEDTEG (Minimum Entropy Dynamic Test Grids): Description of a novel algorithm for adding new test locations to a perimetric test grid, *TVST*, in press.

[60] Michaelides, M. *et al.* (2025). Gene Therapy in Children with AIPL1-Associated Severe Retinal Dystrophy, *The Lancet*, in press.⋆⋆⋆⋆

[59] Rodriguez-Martinez, A. C. *et al.* (2025). Assessing contrast sensitivity function in CRB1-retinopathies: Exploring child-friendly measures of visual function, *TVST*, in press.

[58] Dave, S., Rathore, M., Campbell, P., Edgar, D. F., Crabb, D. P., Callaghan, T., & **Jones, P. R.** (2024). The views and opinions of glaucoma and age-related macular degeneration patients on vision home-monitoring: A focus group study, *BMJ Open*, 14:e080619. doi:[10.1136/bmjopen-2023-080619].

[57] Bianchi, E., Reddingius, P. F., Rathore, M., Lindfield, D., Crabb, D. P., & **Jones, P. R.** (2024). Pushing the envelope: the feasibility of using a mailed contrast sensitivity test to prioritise cataract waiting lists, *Eye*, 38:2568-2574. doi:[10.1038/s41433-024-03081-6].

[56] Taylor, D. J., Alquiza, P. J., **Jones, P. R.**, Wilson, I., Bi, W., Sim, D. A., & Crabb, D. P. (2024). Tablet-based tests of everyday visual function in a diabetic macular edema (DME) clinic waiting area: A feasibility study, *Optometry and Physiological Optics*, 44(2):388-398. doi:[[]10.1111/opo.13261]

[55] Crossland, M. D., Dekker, T. M., Dahlmann-Noor, A., & **Jones, P. R.** (2024). Can children measure their own vision? A comparison of three new contrast sensitivity tests, *Optometry and Physiological Optics*, 44(1):5-16. doi:[10.1111/opo.13230].

[54] Nixon, N., Thomas P. B. M., & **Jones, P. R.** (2023). Feasibility study of an automated Strabismus screening Test using Augmented Reality and Eye-tracking (STARE), *Eye*, 37:3609-3614. doi:[10.1038/s41433-023-02566-0].

[53] Reddingius, P., Asfaw D. S., Monter, B. M., Smith, N. D., **Jones, P. R.**, & Crabb, D. P. (2023). Data on eye movements of glaucoma patients with asymmetrical visual field loss during free viewing, *Data in Brief*, 48:109184. doi:[10.1016/j.dib.2023.109184].

[52] Crossland, M. D., Dekker T. M., **Jones, P. R.**, & Thomas, P. B. M. (2022). Comparing Home- and Clinic-Based Visual Acuity Testing, *JAMA Opthalmology*, 140(10):1021-1022. doi:[10.1001/jamaophthalmol.2022.3182].

[51] Farahbakhsh, M. *et al.* (2022). A demonstration of cone function plasticity after gene therapy in achromatopsia, *Brain*, 145(11):3803-3815. doi:[10.1093/brain/awac226].⋆⋆⋆⋆

[50] Ungewiss, Schiefer, U., J., Eichinger, P, Wörner, M, Crabb, D. P., & **Jones, P. R.** (2022). Does intraocular straylight predict night driving visual performance? Correlations between straylight levels and contrast sensitivity, halo size, and hazard recognition distance, all measured in the presence of glare, *Frontiers in Human Neuroscience*, 13(16):910620. doi:[10.3389/fnhum.2022.910620].

[49] **Jones, P. R.**, Ungewiss, J., Eichinger, P, Wörner, M, Crabb, D. P., & Schiefer, U. (2022). Contrast sensitivity and night driving in older people: Quantifying the relationship between visual acuity, contrast sensitivity, and hazard detection distance in a night-time driving simulator , *Frontiers in Human Neuroscience*, 16:914459. doi:[10.3389/fnhum.2022.914459].

[48] Rizzi, M., Powell, K., Robinson, M. R., Matsuki, T., Hoke, J., Maswood, R. N., Georgiadis, A., Georgiou, M., **Jones, P. R.**, Ripamonti, C. Nadal-Nicolás, F. M., Michaelides, M. Rubin, G. S., Smith, A. J., & Ali, R. R. (2022). Lateral gain is impaired in macular degeneration and can be targeted to restore vision in mice, *Nature Communications*, 13:2159. doi:[10.1038/s41467-022-29666-x]⋆⋆⋆⋆

[47] Ramke, J., Evans, J. R., Habtamu, E. *et al.* (2022). Grand Challenges in global eye health: a global prioritisation process using Delphi method, *The Lancet Healthy Longevity*, 3(1):e31-e41. doi:[10.1016/S2666-7568(21)00302-0].

[46] **Jones, P. R.**, Lindfield, D., & Crabb, D. P. (2021). Using an inexpensive tablet perimeter (Eyecatcher) to rapidly triage patients in a glaucoma clinic waiting area, *British Journal of Ophthalmology*, 105(5):681-686. doi:[10.1136/bjophthalmol-2020-316018].

[45] Jones, L., Callaghan, T., Campbell, P., **Jones, P. R.**, Taylor, D. T., Asfaw, D. A., Edgar, D. F., & Crabb, D. P. (2021). Acceptability of a home-based visual field test (Eyecatcher) for glaucoma home monitoring: A qualitative study of patients' views and experiences, *BMJ Open*, 11:e043130. doi:[10.1136/bmjopen-2020-043130].

[44] Dekker, T. M., Farahbakhsh, M., Atkinson, J., Braddick, O. J., & **Jones, P. R.** (2020). Development of the spatial contrast sensitivity function (CSF) during childhood: Analysis of previous findings and new psychophysical data, *Journal of Vision*, 20:4. doi:[10.1167/jov.20.13.4].

[43] **Jones, P. R.**, Campbell, P., Callaghan, T., Jones, L., Asfaw, D., Edgar, D. F., & Crabb, D. P. (2020). Glaucoma home-monitoring using a tablet-based visual field test (Eyecatcher): An assessment of accuracy and adherence over six months, *American Journal of Ophthalmology*, 223:42-52. doi:[10.1016/j.ajo.2020.08.039].

[42] Elfadaly, D., Abdelrazik, S. H., Thomas, P., Dekker, T., Dahlmann-Noor, A., & **Jones, P. R.** (2020). Can psychophysics be fun? Exploring the feasibility of a gamified Contrast Sensitivity Function measure in amblyopic children aged 4 – 9 years, *Frontiers in Medicine*, 7:469. doi:[10.3389/fmed.2020.00469].

[41] Asfaw, D., **Jones, P. R.**, & Crabb, D. P. (2020). The effects of a simulated visual scotoma on natural eye movements, *Scientific Reports*, 10:9782. doi:[10.1038/s41598-020-66196-2].

[40] **Jones, P. R.** (2020). An open-source static threshold perimetry test using remote eye-tracking (Eyecatcher): Description, validation, and normative data, *Translational Vision Science & Technology*, 9(8):18. doi:[10.1167/tvst.9.8.18].

[39] **Jones, P. R.**, Demaria, G., Tigchelaar, I., Asfaw, D. S., Edgar, D. F., Campbell, P., Callaghan, T., & Crabb, D. P. (2020). The human touch: Using a webcam to autonomously monitor compliance during visual field assessments, *Translational Vision Science & Technology*, 9(8):31. doi:[10.1167/tvst.9.8.31].

[38] Chow-Wing-Bom, H., Dekker, T. M., & **Jones, P. R.** (2020). The worse eye revisited: Quantifying the everyday impact of unilateral peripheral loss, *Vision Research*, 169:49-57. doi:[10.1016/j.visres.2019.10.012].

[37] **Jones, P. R.**, Somoskeöy, T., Chow-Wing-Bom, H., & Crabb, D. P. (2020). Seeing other perspectives: Evaluating the use of virtual and augmented reality to simulate visual impairments (OpenVisSim), *NPJ Digital Medicine*, 3(1):1-9. doi:[10.1038/s41746-020-0242-6].

[36] **Jones, P. R.**, Tigchelaar, I., Demaria, G., Wilson, I., Bi, W., Taylor, D. J., & Crabb, D. P. (2020). Refinement and preliminary evaluation of two tablet-based tests of real-world visual function, *Optometry and Physiological Optics*, 40(1):35-46. doi:[10.1111/opo.12658].

[35] Enoch, J., Jones, L., Taylor, D. J., Bronze, C., Kirwan, J. F, **Jones, P. R.**, & Crabb, D. P. (2020). How do different lighting conditions affect the vision and quality of life of people with glaucoma? A systematic review, *Eye*, 34:138-154. doi:[10.1038/s41433-019-0679-5].

[34] Kyu Han, H. & **Jones, P. R.** (2019). Plug and play perimetry: Evaluating the use of a self-calibrating digital display for screen-based threshold perimetry, *Displays*, 60:30-38. doi:[10.1016/j.displa.2019.08.006].

[33] **Jones, P. R.**, Philippin, H., Makupa, W., Burton, M., & Crabb, D. P. (2019). Severity of visual field loss at first presentation to glaucoma clinics England and Tanzania, *Ophthalmic Epidemiology*, 27(1):10-18. doi:[10.1080/09286586.2019.1661499].

[32] Enoch, J., McDonald, L., Jones, L., **Jones, P. R.**, Crabb, D. P. (2019). Sight: the most valuable sense?, *JAMA Ophthalmology*, 137(11):1317-1320. doi:[10.1001/jamaophthalmol.2019.3537].★★★★

[31] Taylor, D. J., Smith, N. D., **Jones, P. R.**, Binns, A. M., & Crabb, D. P. (2019). Measuring dynamic levels of anxiety and concern during simulated mobility tasks in people with non-neovascular age-related macular degeneration (AMD), *British Journal of Ophthalmology*, 104:529-534. doi:[10.1136/bjophthalmol-2019-313864].

[30] **Jones, P. R.**, Landin, L., McLean, A., Juni, M. Z., Maloney, L. T., Nardini, M. & Dekker, T. M. (2019). Efficient visual information sampling develops late in childhood, *Journal of Experimental Psychology: General*, 148(7):1138-1152. doi:[10.1037/xge0000629].⋆⋆⋆⋆

[29] Farahbakhsh, M., Dekker, T. M., & **Jones, P. R.** (2019). Psychophysics with children: Evaluating the use of maximum likelihood estimators in children aged 4 – 15 years (QUEST+), *Journal of Vision*, 19:22. doi:[10.1167/19.6.22].

[28] Ometto, G., Moghul, I., Montesano, G., Hunter, A., Pontikos, N., **Jones, P. R.**, Keane, P. A., Denniston, A. K., & Crabb, D. P. (2019). ReLayer: a free, online tool for measuring retinal thickness based on a new automatic method for the segmentation of layers in OCT images, *Translational Vision Science & Technology*, 8:25. doi:[10.1167/tvst.8.3.25].

[27] **Jones, P. R.** (2019). A note on detecting statistical outliers in psychophysical data, *Attention, Perception, & Psychophysics*, 81(5):1189–1196. doi:[10.3758/s13414-019-01726-3].

[26] **Jones, P. R.**, Smith, N. D., Bi, W., & Crabb, D. P. (2019). Portable perimetry using eye-tracking on a tablet computer – a feasibility assessment, *Translational Vision Science & Technology*, 8:17. doi:[10.1167/tvst.8.1.17].

[25] **Jones, P. R.** (2018). QuestPlus: a MATLAB implementation of the QUEST+ adaptive psychometric method, *Journal of Open Research Software*, 6(1):27. doi:[10.5334/jors.195].

[24] Montesano, G., Crabb D. P., **Jones, P. R.**, Fogagnolo, P., Digiuni, M., & Rossetti, L. M. (2018). Evidence for alterations in fixational eye movements in glaucoma, *BMC Ophthalmology*, 18:191. doi:[10.1186/s12886-018-0870-7].

[23] **Jones, P. R.** (2018). The development of perceptual averaging: efficiency metrics in children and adults using a multiple-observation sound-localization task, *The Journal of the Acoustical Society of America*, 144(1):228-241. doi:[10.1121/1.5043394].

[22] Asfaw, D., **Jones, P. R.**, Smith, N. D., & Crabb, D. P. (2018). Data on eye movements in people with glaucoma and peers with normal vision, *Data in Brief*, 19:1266–1273. doi:[10.1016/j.dib.2018.05.076].

[21] Asfaw, D., **Jones, P. R.**, Mönter, V. M., Smith, N. D., & Crabb, D. P. (2018). Does glaucoma alter eye movements when viewing images of natural scenes? A between-eye study, *Investigative Ophthalmology and Vision Science*, 59:3189-3198. doi:[10.1167/iovs.18-23779].

[20] **Jones, P. R.** (2018). Myex: a MATLAB interface for the Tobii EyeX eye-tracker, *Journal of Open Research Software*, doi:[10.5334/jors.196].

[19] **Jones, P. R.** (2018). Sit still and pay attention: Using the Wii Balance-Board to detect lapses in concentration in children during psychophysical testing, *Behavior Research Methods*, 51(1):28–39. doi:[10.3758/s13428-018-1045-4].

[18] **Jones, P. R.**, & Ometto, G. (2018). Degraded Reality: Using VR/AR to simulate visual impairments, *Proceedings of IEEE VR Workshop 2018*. doi:[10.1109/VAR4GOOD.2018.8576885].

[17] Manning, C., **Jones, P. R.**, Dekker, T. M. & Pellicano, E. (2018). Psychophysics with children: Investigating the effects of attentional lapses on threshold estimates, *Attention, Perception, & Psychophysics*, 80(5): 1311–1324. doi:[10.3758/s13414-018-1510-2].

[16] Montesano, G., Way., C. M., Ometto, G., Ibrahim, H., **Jones, P. R.**, Carmichael, R., Liu, X., Aslam, T., Keane, P. A., Crabb, D. P., ,& Denniston, A. K. (2018). Optimizing OCT acquisition parameters for assessments of vitreous haze for application in uveitis, *Nature Scientific Reports*, 8:1648. doi:[10.1038/s41598-018-20092-y].

[15] **Jones, P. R.**, & Dekker, T. (2018). The development of perceptual averaging: Learning what to do, not just how to do it, *Developmental Science*, 21(3):e12584. doi:[10.1111/desc.12584].

[14] Garcia, S. E., **Jones, P. R.**, Michaelides, M., Rubin, G. S., & Nardini, M. (*2017*). Multisensory Cue Combination after Sensory Loss: Audio-Visual Localization in Patients with Progressive Retinal Disease, *Journal of Experimental Psychology: Human Perception and Performance*, 43(4), 729–740. doi:[10.1037/xhp0000344].

[13] Garcia, S. E., **Jones, P. R.**, Rubin, G. S., & Nardini, M. (2017). Auditory Localisation Biases Increase with Sensory Uncertainty, *Nature Scientific Reports*, 7, 40567. doi:[10.1038/srep40567].

[12] **Jones, P. R.**, Yasoubi, N., Nardini, M., & Rubin, G. S. (2016). Feasibility of Macular Integrity Assessment (MAIA™) microperimetry in children: Sensitivity, reliability, and fixation stability in healthy observers, *Investigative Ophthalmology and Vision Science*, 57, 6349–6359. doi:[10.1167/iovs.16-20037].

[11] **Jones, P. R.** (2016). A tutorial on cue combination and Signal Detection Theory: Using changes in sensitivity to evaluate how observers integrate sensory information, *Journal of Mathematical Psychology*, 73, 117–139. doi:[10.1016/j.jmp.2016.04.006].

[10] **Jones, P. R.**, Garcia, S. E., & Nardini, M. (2015). Digital LED Pixels: Instructions for use and a characterization of their properties, *Behavioral Research Methods*, 48(4), 1266–1284. doi:[10.3758/s13428-015-0653-5].

[9] **Jones, P. R.**, Kalwarowsky, S., Braddick, O. J., Atkinson, J., & Nardini, M. (2015). Optimizing the rapid measurement of detection thresholds in infants, *Journal of Vision*, 15(11), 2–2. doi:[10.1167/15.11.2].

[8] Petrini, K., **Jones, P. R.**, & Nardini, M. (2015). Hearing where the eyes see: children use an irrelevant visual cue when localizing sound, *Child Development*, 86(5), 1449–1457. doi:[10.1111/cdev.12397].

[7] **Jones, P. R.**, Moore, D. R., Shub, D. E., & Amitay, S. (2015). The role of response bias in perceptual learning, *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 41(5), 1456–1470. doi:[10.1037/xlm0000111].

[6] **Jones, P. R.**, Moore, D. R., & Amitay, S. (2015). Development of auditory selective attention: Why children struggle to hear in noisy environments, *Developmental Psychology*, 51(3), 353–369. doi:[10.1037/a0038570].

[5] **Jones, P. R.**, Kalwarowsky, S., Atkinson, J., Braddick, O. J., & Nardini, M. (2014). Automated measurement of resolution acuity in infants using remote eye-tracking, *Investigative Ophthalmology and Vision Science*, 55(12), 8102–8110. doi:[10.1167/iovs.14-15108].

[4] Amitay, S., Zhang, Y., **Jones, P. R.**, & Moore, D. R. (2014). Perceptual learning: Top to bottom, *Vision Research*, 99, 69–77. doi:[10.1016/j.visres.2013.11.006].

[3] **Jones, P. R.**, Moore, D. Shub, D. E., & Amitay, S. (2014). Learning to detection a tone in unpredictable noise, *The Journal of the Acoustical Society of America*, 135, EL128–EL133. doi:[10.1121/1.4865267].

[2] **Jones, P. R.**, Shub, D. E., Moore, D. R. & Amitay, S. (2013). Reduction of internal noise in auditory perceptual learning, *The Journal of the Acoustical Society of America*, 133, 970–981. doi:[10.1121/1.4773864].

[1] Nardini, M., **Jones, P. R.**, Bedford, R., & Braddick, O. J. (2008). Development of cue integration in human navigation, *Current Biology*, 18, 689–693. doi:[10.1016/j.cub.2008.04.021].⋆⋆⋆⋆

Teaching & Supervision

2016 – Present **City PhD Supervisor**
Secondary supervisor for PhD students ($N = 3$), w/ Prof David Crabb
Responsible for day-to-day supervision, planning, and support.

2016 – Present **City BSc Supervisor**
Dissertation supervisor for final-year BSc Optometry undergraduate students
Responsible for supervising project students and marking dissertations.

2014 – Present **UCL Guest Lecturer**
Guest lecturer on final year undergraduate module: NEUR3045 Advanced Visual Neuroscience
Responsible for the "visual development", "aging", and "psychophysics" component: designing slides, lecturing, setting exam questions, and marking essays.

2014 – Present **UCL PhD Supervisor**
Secondary supervisor for PhD students ($N = 2$), w/ Prof Gary Rubin & Dr Tessa Dekker
Responsible for day-to-day supervision, planning, and support.

2014 – 2016 **UCL MSc Supervisor**
Dissertation supervisor for MSc Biology of Vision students
Responsible for designing projects, supervising students and marking dissertations.

2014 – 2016 **UCL BSc Supervisor**
Dissertation supervisor for final-year BSc Psychology undergraduate students
Responsible for supervising project students and marking dissertations.

2012 – 2012 **Nottingham University Demonstrator**
Demonstrator on international short-course: "Matlab for Psychology and Neuroscience"
Responsible for providing instruction and practical assistance to course attendees.

2011 – 2012 **Nottingham University Demonstrator**
Practical skills demonstrator for second year undergraduates
Responsible for developing course materials (python code), advising students on how to collect and analyse experimental data, and providing feedback on oral and written reports.

Reviewing, Examining & Editorships

***Journal Reviewer*:** Acta Ophthalmologica; Annals of Medicine; British Journal of Ophthalmology; Child Development; Child Neurology; Clinical EEG & Neuroscience; Cognition; Current Biology; Current Eye Research; Environment & Behavior; Eye; Frontiers (*various*); Hearing Research; Heliyon; International Journal of Audiology; International Journal of Human-Computer Interaction; Investigative Ophthalmology & Vision Science; Journal of Child Psychology and Psychiatry, Journal of Experimental Psychology: Human Perception and Performance; Journal of Glaucoma; Journal of Medicine Access; Journal of Speech, Language & Hearing Research; Journal of the Acoustical Society of America; Nature Medicine; Neuropsychologia; Ophthalmic Epidemiology; Ophthalmic & Physiological Optics; Ophthalmology: Glaucoma, Optometry & Vision Science; Perception; PLoS Computational Biology; PLoS One; Royal Society Open Science; Translational Vision Science & Technology.

***Grant Reviewer*:** Dunhill Medical Trust; MRC; NIHR; SBRI; UKRI

***Examiner*:** PhD (External) for Anglia Ruskin, 2023; MPhil (External) for University of Saint David (Trinity St David), 2017.

***Guest Editor*:** PLoS One.

Grants

2024 **Dunhill Medical Trust (#ARHVF2402\13)**
£381,590 *"Transforming eye care services: evaluating the feasibility and utility of performing glaucoma assessments directly within care-homes and older peoples' clinics."*
Lead applicant.

2023 **SBRI: Home glaucoma monitoring Phase 2 (funded by SHIP)**
£75,000 *"Following on Funding for Eyecatcher: Preventing avoidable blindness through smart home-monitoring of glaucoma."*
Lead applicant.

2023 **Design Age Institute: Healthy Ageing Design Fund**
£40,000 *"Providing holistic remote monitoring of glaucoma via the design of an Eyecatcher ePROMS module."*
Lead applicant.

2022 **UKRI Zinc Healthy Ageing Catalyst Award Follow-on Award**
£125,000 *"Preventing avoidable blindness through smart home-monitoring of vision: Follow-on Award."*
Lead applicant. w/ Prof David Crabb

2022 **City, University of London: Pump priming award**
£9,985 *"Precisely characterising vision in people with eye disease: Bridging the divide between basic science and clinical practise."*
Sole applicant.

2022 **SBRI: Home glaucoma monitoring Phase 1 (funded by SHIP)**
£15,000 *"Eyecatcher: Preventing avoidable blindness through smart home-monitoring of glaucoma."*
Lead applicant. w/ Callaghan, Campbell, Crabb, Edgar, & Ghosh

2021 **UKRI Zinc Healthy Ageing Catalyst Award**
£62,500 *"Preventing avoidable blindness through smart home-monitoring of vision."*
Sole applicant.

2021 **Moorfields Eye Charity Springboard Award**
£93,615 *"Evaluating automated, tablet-based vision tests as a way of home-monitoring children with chronic visual impairments (amblyopia, paediatric glaucoma)."*
Sole applicant.

2021 **UKRI Global Challenges Research Fund**
£15,000 *"Developing & piloting "Eyecatcher" in Nigeria (a portable, low cost smartphone device for glaucoma case-finding and monitoring)."*
Lead applicant.

2020 **UKRI Higher Education Impact Award**
£7,250 *"First steps towards commercialising a critically needed home-monitoring test for glaucoma."*
Sole applicant.

2021 **EPIC Games MegaGrant**
£150,000 *"Virtual and Augmented Reality for Inclusive Design (VARID)"*
Co-applicant w/ Fosters+Partners & Prof Nick Tyler (UCL).

2019 **UKRI Global Challenges Research Fund**
£10,000 *"Glaucoma Detection Study (GDS) – detecting glaucoma using a combination of low-cost, portable and easy to perform tests."*
Co-applicant w/ Prof D Crabb (PI).

2019 **International Glaucoma Association / The College of Ophthalmologists**
£94,149 *"Detecting glaucoma using a combination of low-cost, portable and easy to perform tests."*
Co-applicant w/ Dr Victor Hu (PI), Prof D Crabb, Prof M Burton, Prof W Nolan, & Dr H Philippin.

2019 **International Glaucoma Association / The College of Optometrists**
£22,738 *"Tapping into the 5000 hours - feasibility of home monitoring of visual fields."*
Co-applicant w/ Dr T Callaghan (PI), Dr P Campbell (PI), Prof D Crabb, & Prof D Edgar.

2017 **City, University of London: Industrial Strategy Seed Fund**
£4,717 *"Validating a Virtual Reality [VR] simulator of eye-disease."*
Sole applicant.

2017 **BRC 2017 Challenge Fund for Vision**
£11,815 *"Evaluating a novel Virtual Reality [VR] simulator of eye-disease."*
Sole applicant.

2016 **Moorfields Special Trustees Project Grant**
£14,708 *"To develop interactive 3D visualisations of eye-disease, suitable for mobile phone displays."*
Sole applicant.

2016 **Moorfields Special Trustees PhD Studentship**
£99,987 *"Child-friendly, clinically relevant measures of visual structure and function."*
Co-applicant w/ Dr T Dekker and Prof G Rubin (PI).

2012 **MRC Centenary Award**
£39,084 *"Ascension: Using mobile phones to improve hearing."*
NB: Award not taken up, in preference for job at UCL.

2012 **Deafness Research UK summer scholarship award**
£1,600 *"Evaluating the role of response bias in hearing threshold measurement."*

2012 **MRC Travel Award**
£1,442 *"Funding to attend ARO 2012 (San Diego)."*

2006 **Wellcome Trust Vacation Research Scholarship**
£1,280 *"Interactions between landmark and self-motion cues for navigation."*

Current Projects / Collaborations

Home monitoring of vision in children
w/ Dr Michael Crossland & Dr Tessa Dekker (UCL Institute of Ophthalmology)

Developing novel measures of visual field loss
w/ Prof David Crabb, Prof David Edgar, Dr Peter Campbell, Dr Tamsin Callaghan (City, University of London) & Peek Vision Ltd

Using virtual reality to simulate visual impairments
w/ Fosters+Partners, EPIC Games, MakeTransition Ltd, & Prof Chris Tyler (UCL Engineering)

Invited Talks

[2024] Rethinking perimetry: contemporary concepts and future possibilities. *100% Optical 2024*.

[2023] Visual Fields: Thinking outside the bowl. *NHS Lothian Ophthalmology PGT event*.

[2023] The future visual field test. *NHS Buckinghamshire Ophthalmology PGT event*.

[2023] The future visual field test. *The Royal College of Ophthalmologists (RCOphth) Annual Congress, Birmingham*.

[2023] Measuring visual function at home – does it work?. *Oxford University: Nuffield Department of Clinical Neurosciences: Clinical Ophthalmology Research Group*.

[2023] Glaucoma home monitoring. *Glaucoma UK guest speaker webinar*.

[2023] Seeing other perspectives: Using AR/VR to understand the needs of people with visual impairments . *Fosters and Partners invited speaker*.

[2022] Visual Fields: Thinking outside the bowl. *11th Glaucoma-NET DISC meeting, August 2022*.

[2019] Visual Fields: Thinking outside the bowl. *Ophthalmology Regional Study Day (Royal Surrey County Hospital)*.

[2019] The development of sensory integration in children. *Durham University Psychology Seminar*.

[2019] On the use of Virtual–/Augmented–Reality to simulate glaucoma. *Optometry Tomorrow 2019, Birmingham*.

[2018] Developing eye-tests for hard to reach populations. *Cardiff University Seminar Series: "Cornea to Cortex"*.

[2018] Novel technologies to expand diagnostic capacity in surveys. *ISER 2018 Special Interest Session: The Global Burden of Eye Disease, Belfast*.

[2018] New approaches to assessing visual function. *Moorfields Academy Meeting XXIV*.

[2017] The development of spatial averaging abilities in children. *UEL CogDev seminar series*.

[2015] Clinical Psychophysics: How and why 'real world' measures of perceptual sensitivity differ from those of the lab. *EPSRC workshop: "Visual Statistics in Humans and Machines"*.

[2014] The role of internal noise in auditory development: A cautionary tale of sound and fury. *EPS workshop: "Noisy Brains? The role of internal noise in typical and atypical development"*.

[2008] Computationally modelling the disparity span in reading. *Glenfinnan modelling workshop*.

Selected Conference Presentations

[2019] Jones PR, Lindfield, D. & Crabb D. P. "No need to press a button" – Using a portable eye movement perimeter to rapidly assess visual field loss in a glaucoma clinic. *ARVO*, Vancouver, Canada.

[2019] Enoch JNT, McDonald L, Jones L, Jones PR, & Crabb D. P. Sight: the most valuable sense? *ARVO*, Vancouver, Canada.

[2018] Jones PR, Somoskeöy T, Chow-Wing-Bom H. & Crabb D. P. Where did I leave my phone? Using virtual reality to assess the differential impact of superior and inferior visual field loss on daily living. *UKEGS*, London, UK.

[2018] Somoskeöy T, Jones PR, Chow-Wing-Bom H. & Crabb D. P. Using virtual reality to study the impact of eye disease. *BCOVS*, Cambridge, UK.

[2018] Jones PR, Somoskeöy T, Chow-Wing-Bom H. & Crabb D. P. Where did I leave my phone? Using virtual reality to assess the differential impact of superior and inferior visual field loss on daily living. *BCOVS*, Cambridge, UK.

[2018] Farahbakhsh M, Jones, PR, Dekker, TM: Development of Contrast Sensitivity in children using a novel child-friendly method. *ECVP*, Tieste, Italy.

[2018] Chow-Wing-Bom HT, Dekker, TM, Jones, PR: Virtual Reality [VR] as tool to assess the effects of asymmetric vision loss on visual search performance. *VSS*, Florida, USA.

[2018] Farahbakhsh M, Dekker, TM, Jones, PR: The Contrast Sensitivity Function in children: Bayesian adaptive estimation using QUEST+. *VSS*, Florida, USA.

[2018] Asfaw DS, Jones, PR, Crabb, D: Do scotomas in glaucoma affect eye movements? A between eye study in people with asymmetric visual field loss. *ARVO*, Hawaii, USA.

[2018] Taylor D, Jones, PR, Smith, N, Binns, A, Crabb, D: Measuring real-time anxiety during simulated mobility scenarios in people with non-neovascular age-related macular degeneration. *ARVO*, Hawaii, USA.

[2017] Jones, PR, Smith, ND, Crabb, DP: Portable perimetry using eye-tracking on a tablet computer – a feasibility assessment. *BOMG*, Cardiff, UK.

[2015] Jones PR, et al: Automated static threshold perimetry using a remote eye tracker. *ECVP*, Liverpool, UK.

[2015] Manning C, Jones PR, et al: How does inattentiveness affect threshold estimates in children? *ECVP*, Liverpool, UK.

[2015] Nardini M, Jones PR, et al: Learning efficient perceptual sampling. *VSS*, St Pete Beach, USA.

[2015] Garcia SE, Jones PR, et al: Visual-auditory localization in central and peripheral space, *VSS*, St Pete Beach, USA.

[2015] Jones PR, et al: Automated static threshold perimetry using a remote eye tracker. *ARVO*, Denver, USA.

[2014] Jones, PR, et al: Efficient strategies for measuring perceptual thresholds in infants using eye tracking. *ECVP*, Belgrade, Serbia.

[2014] Dekker, T, Jones, PR, et al: Measuring perceptual sampling efficiency in adults and children. *ECVP*, Belgrade, Serbia.

[2014] Jones, PR, et al: An automated test of visual acuity using remote eye tracking. *ICIS*, Berlin, Germany.

[2014] Jones, PR, et al: An automated test of infant visual acuity using remote eye tracking. *ARVO*, Orlando, USA.

[2013] Jones, PR, et al: Novel approaches to automated, real-time eye-movement classification in infants and adults. *CRS*, Toronto, Canada.

[2012] Jones, PR, et al: Effects of practice on informational masking. *ARO*, San Diego, USA.

[2011] Jones, PR, et al: Practice reduces informational masking by improving decision strategy and reducing lapse rates. *BSA*, Nottingham, UK.

[2010] Jones, PR, et al: Auditory perceptual learning: Noise reduction or signal gain? *BSA*, Manchester, UK.

[2007] Jones, PR, et al: Interactions between landmark and self-motion cues for navigation in adults and children. *EPS*, London, UK.

Selected Public Engagement Activities (2017+)

[2019] Article in trade magazine (The International Glaucoma Association Newsletter): "Detecting glaucoma using a combination of low-cost, portable and easy to perform tests"

[2019] Article in trade magazine (The Ophthalmologist): "Doing What Comes Naturally" (New innovations in visual field testing)
`https://theophthalmologist.com/subspecialties/doing-what-comes-naturally`

[2019] Exhibition at the WIRED Health (London): "Simulating sight loss" (on behalf of the NIHR BRC unit at Moorfields)

[2018] Article in trade magazine (ENT & Audiology News): "Facing up to the challenge of behavioural observation in infant hearing assessment"
https://entandaudiologynews.com/features/audiology-features/post/facing-up-to-the-challenge-of-behavioural-observation-in-infant-hearing-assessment

[2018] Exhibition at the Science Museum (London): "Augmented reality simulated sight loss" (as part of Special Event: "Medicine")

[2018] Article in trade magazine (The Ophthalmologist): "Personalizing Reality" (New innovations in simulating eye disease)
https://theophthalmologist.com/subspecialties/personalizing-reality

[2018] Exhibition at the Wellcome Trust Museum (London): "Augmented reality simulated sight loss" (as part of Special Event: "Your Reality Is Broken")

[2018] Exhibition at 2018 Commonwealth Heads of Government Meeting forum: "The global burden of glaucoma" (attendees incl. Theresa May & Bill Gates)

[2018] Article in trade magazine (Optician): "The Child Vision Lab"

[2017] Exhibition at See Science Festival (a public engagement event aimed at educating children from the local community about our work)

[2017] Online video for the BRC "meet our researchers" campaign

[2017] Hosted a Dagenham (Trident) work experience student: a week-long placement for a pre-university student from the local community, with an interest in pursuing a career in science

[2017] Exhibition at 2017 Mary Kitzinger Trust Workshop (an annual workshop attended by parents and professionals with an interest in children's eye health)

[2017] Created a digital artwork "Simulated Sight Loss" for the Moorfields Art Committee

[ongoing] Prepared and distributed an annual newsletter detailing the work of the Child Vision Lab, and thanking local parents/children for participating in our studies

[ongoing] Specialist moderator (Sensory Development in Children) for www.reddit.com/r/AskScience – an online science Q&A board with 15.2 million subscribers

[ongoing] Creator and moderator of www.reddit.com/r/Hearing – an online science forum with 1,192 subscribers

[ongoing] Collaboration with international artist Joey Foster Ellis (TED-fellow) to create artworks that explore patients' experiences of sight loss

Selected Community Contributions (Code Available Online)

[Unity] **OpenVisSim** *Real-time, gaze-contingent, data-driven simulations of vision loss, for use in a web browser and in VR/AR displays*.

[Matlab] **QuestPlus** *Matlab implementation of QUEST+: a highly efficient/flexible algorithm for adaptive psychophysical parameter estimation*.

[Matlab] **IVIS** *A toolbox for eye-gaze conditional psychophysical experiments. It automates the data processing and eye-movement classification*.

[Matlab] **fig-matlab** *A Matlab toolbox for producing publication-quality figures*.

[Matlab/C] **TobiiEyeX** *Matlab code to retrieve data from a Tobii Eye-X (budget) eye-tracker*.

[Matlab/C++] **EIZOSensor** *Matlab code for controlling the built-in photometer in EIZO monitors*.

[Matlab/C] **ArduinoLED** *Code for controlling Adafruit LED Pixels, via an Arduino microcontroller*.

[Matlab] **Sn** *Implementation of Rousseeuw & Croux's S_n factor (NB: a non-parametric measure of spread, useful for identifying outliers)*.

[LaTeX] **ihr-thesis** *A LaTeX class for formatting a PhD thesis*.

[LaTeX] **JASA-EL** *A LaTeX class for reproducing JASA-EL typesetting*.

[Java] **Qube** *A 'Tetris'-like auditory-training game, including a real-time ASIO audio engine*.

Awards & Scholarships

2023 Finalist: City, University of London's research project of the year (for work with Eyecatcher)

2018 1^{st} Place in 'Health's Got Talent' (competition regarding novel ways to improve undergraduate teaching)

2018 Finalist (runner-up): “Stars of Moorfields” award for commitment to public & patient engagement

2018 1^{st} Place in ‘Made@City’ (competition regarding novel technologies and innovation)

2017 1^{st} Place Poster Prize at conference: BOMG 2017, Cardiff, UK

2009 Medical Research Council Postgraduate Funding Award

2008 1^{st} Place Prize in the Edinburgh University competition to promote public understanding of Informatics

2008 Marie Curie Trust funding to attend the 4-day Glenfinnan Modelling Workshop

2007 Engineering and Physical Sciences Research Council Postgraduate Funding Award

2007 St John’s College Prize for outstanding performance in Psychology, Philosophy & Physiology

2007 Gordon Baker Prize for consistently outstanding work in Philosophy

2006 Casbard Scholarship for First Class marks in Psychology, Philosophy & Physiology Part I examinations

2005 St John’s College Prize for outstanding performance in the Preliminary Examinations in Statistics

2005 St John’s College Prize for outstanding performance in the Preliminary Examinations in Philosophy