

MATT J DUNN BSc (HONS), PHD, MCOPTOM, FHEA

Lecturer & Optometrist, CARDIFF UNIVERSITY, UK

PUBLICATIONS

Peer-reviewed journals

ROBINSON DG, MARGRAIN TH, **Dunn MJ**, BAILEY C, BINNS AM. LOW-LEVEL NIGHT-TIME LIGHT THERAPY FOR AGE-RELATED MACULAR DEGENERATION – RESULTS OF A PHASE I/II PROOF OF CONCEPT, RANDOMISED, CLINICAL TRIAL. *Ophthalmology* (Submitted)

KINATEDER M, GUALTIERI J, **Dunn MJ**, JAROSZ W, YANG X-D, COOPER EA. USING AN AUGMENTED REALITY DEVICE TO IMPROVE FUNCTIONAL VISION IN BLINDNESS – PROMISE AND LIMITATIONS. *Invest Ophthalmol Vis Sci* (Submitted)

HUANG J, KINATEDER M, **Dunn MJ**, JAROSZ W, YANG X-D, COOPER EA. SIGNAR: AN AUGMENTED REALITY WAYFINDING ASSISTANT FOR USERS WITH LIMITED VISION. *ACM Trans Comput-Hum Interact* (Submitted)

2017 ZAHIDI AA, WOODHOUSE JM, ERICHSEN JT, **Dunn MJ**. INFANTILE NYSTAGMUS: AN OPTOMETRIST'S PERSPECTIVE. *Clin Optom* 9: 123–131.

Dunn MJ, WIGGINS D, WOODHOUSE JM, MARGRAIN TH, HARRIS CM, ERICHSEN JT. THE EFFECT OF GAZE ANGLE ON VISUAL ACUITY IN INFANTILE NYSTAGMUS. *Invest Ophthalmol Vis Sci* 58: 642–650.

2016 **Dunn MJ**. VISUAL PERCEPTION IN INFANTILE NYSTAGMUS. *Optometry in Practice* 17: 19–26.

2015 **Dunn MJ**, MARGRAIN TH, WOODHOUSE JM, ERICHSEN JT. VISUAL PROCESSING IN INFANTILE NYSTAGMUS IS NOT SLOW. *Invest Ophthalmol Vis Sci* 56: 5094–5101.

HARRISON JJ, SUMNER P, **Dunn MJ**, ERICHSEN JT, FREEMAN TC. QUICK PHASES OF INFANTILE NYSTAGMUS SHOW THE SACCADIC INHIBITION EFFECT. *Invest Ophthalmol Vis Sci* 56: 1594–1600.

2014 **Dunn MJ**, MARGRAIN TH, WOODHOUSE JM, ENNIS FA, HARRIS CM, ERICHSEN JT. AUTHOR RESPONSE: GRATING VISUAL ACUITY IN INFANTILE NYSTAGMUS IN THE ABSENCE OF IMAGE MOTION. *Invest Ophthalmol Vis Sci* 55: 4955–4957.

Dunn MJ, MARGRAIN TH, WOODHOUSE JM, ENNIS FA, HARRIS CM, ERICHSEN JT. GRATING VISUAL ACUITY IN INFANTILE NYSTAGMUS IN THE ABSENCE OF IMAGE MOTION. *Invest Ophthalmol Vis Sci* 55: 2682–2686.

Non peer-reviewed journals

- 2017 **Dunn MJ.** DISORDERS OF PERCEPTION. *Optometry Today* 57 (11): 64–69.
- 2016 **Dunn MJ, LEE H.** MANAGEMENT OF NYSTAGMUS. *Optometry Today* 56 (8): 64–68.
- Dunn MJ.** CLINICAL ASSESSMENT OF NYSTAGMUS. *Optometry Today* 56 (7): 80–85.

Electronic

- 2012 **DUNN VISION REFERENCE**
Mobile ophthalmology text hosting a glossary of over 3500 terms related to optometry and vision science. Coded in Objective-C and Java for iOS and Android (over 7000 downloads)
- 2010 - 2012 **EYE HANDBOOK (DICTIONARY)**
Author of dictionary for mobile ophthalmology app (over 600,000 downloads)

TALKS**Invited talks**

- 2017 **VISION 2017 (THE HAGUE, NETHERLANDS)**
'Time to see' in infantile nystagmus
- 2016 **RANK PRIZE FUNDS (GRASMERE, UK)**
Visual perception in the presence of nystagmus
- OXFORD, BRISTOL, CARDIFF & SOUTHAMPTON ALLIANCE IN VISION RESEARCH (CARDIFF, UK)**
Seeing with nystagmus
- 100% OPTICAL (LONDON, UK)**
A clinician's guide to nystagmus
- 2015 **LEICESTER ROYAL INFIRMARY (LEICESTER, UK)**
Visual perception in infantile nystagmus
- MIDLAND PERIPATETIC GROUP FOR TEACHERS OF THE VISUALLY IMPAIRED (BIRMINGHAM, UK)**
Seeing with nystagmus
- LV PRASAD EYE INSTITUTE (HYDERABAD, INDIA)**
Visual perception in infantile nystagmus
- UC BERKELEY (CALIFORNIA, US)**
Visual perception in infantile nystagmus
- UNIVERSITY OF HOUSTON (TEXAS, US)**
Visual perception in infantile nystagmus

Conference presentations (international)

- 2016 EUROPEAN ACADEMY OF OPTOMETRY AND OPTICS (BERLIN, GERMANY)
Monocular contributions to the nystagmus null zone
- 2015 ORTHOPTICS DECODED (MADURAI, INDIA)
Orthoptic treatments for nystagmus (session moderator)
EUROPEAN CONFERENCE ON EYE MOVEMENTS (VIENNA, AUSTRIA)
Temporal visual function in infantile nystagmus
EUROPEAN CONFERENCE ON VISUAL PERCEPTION (LIVERPOOL, UK)
The effect of simulated vision loss on walking paths
NYSTAGMUS NETWORK INTERNATIONAL RESEARCH WORKSHOP (NEW ORLEANS, LOUISIANA)
Visual timing in infantile nystagmus
ARVO ANNUAL MEETING (DENVER, COLORADO)
Visual processing in infantile nystagmus is not slow
- 2013 NYSTAGMUS NETWORK INTERNATIONAL RESEARCH WORKSHOP (ABINGDON, UK)
Appropriate measures of visual performance in infantile nystagmus: Acuity is not enough
EUROPEAN CONFERENCE ON EYE MOVEMENTS (LUND, SWEDEN)
Involuntary saccade initiation is related to the timing of voluntary saccades in infantile nystagmus
ARVO ANNUAL MEETING (SEATTLE, WASHINGTON)
Visual acuity in infantile nystagmus in the absence of image motion

Public engagement & media appearances

- 2017 PUBLIC LECTURE (GREEN GATHERING, UK)
Perception, illusions and visual neuroscience
- 2016 TINTERN PHILOSOPHY CIRCLE (UK)
How much can we know from our senses?
PUBLIC LECTURES (BOOMTOWN FAIR & GREEN GATHERING, UK)
How experience shapes perception: perspectives from visual neuroscience
- 2015 BBC POINTS WEST
TV news article – Mobility and vision in patients following stroke
BBC WALES TODAY
TV news article – Using virtual reality to understand visual guidance of walking
PUBLIC LECTURE (GREEN GATHERING, UK)
Neuroscience of visual perception
- 2014 PUBLIC LECTURE (SUNRISE FESTIVAL, UK)
Psychophysics and perception
- 2010 - 2016 SCIENCE IN HEALTH – LIVE!
Cardiff: Promoting careers in optometry to A-Level students

TEACHING & CLINICAL SUPERVISION

Cardiff University

2013 - PRESENT	ORTHOPTICS (CLINICAL TEACHING LEAD) INTRODUCTORY OPTOMETRY (LECTURES)
2015 - PRESENT	OCCUPATIONAL OPTOMETRY, LAW & BUSINESS (MODULE LEADER)
2014 - 2015	COLOUR VISION & PERCEPTION (MODULE LEADER - LECTURE SERIES)
2013 - 2015	MATLAB PROGRAMMING (STAFF & POSTGRADUATE TAUGHT COURSE)
2010 - 2015	PRIMARY EYE CARE (CLINICAL SUPERVISION)
2013 - 2014	VISUAL PERCEPTION (MODULE LEADER - LECTURE SERIES) INVESTIGATIVE TECHNIQUES (POSTGRADUATE CLINICAL TEACHING)
2010 - 2013	BINOCULAR VISION (CLINICAL SUPERVISION) INVESTIGATIVE TECHNIQUES (CLINICAL TEACHING)

FUNDING

2017	ADDITIONAL CLINICAL TESTING FOR RETINAL PREDICTORS OF VISUAL PERFORMANCE IN NYSTAGMUS <i>Co-investigator. Nystagmus Network, Small Grant Scheme</i>	£1387
2016	THE EFFECT OF VISUAL COGNITIVE IMPAIRMENT DUE TO CEREBROVASCULAR DISEASE ON WALKING <i>Co-investigator. North Bristol Trust, Springboard Grant</i>	£8570
	RETINAL PREDICTORS OF VISUAL PERFORMANCE IN INFANTILE NYSTAGMUS <i>Principal investigator. College of Optometrists, Postgraduate Scholarship</i>	£55,827
2015	BINDING HAND MOVEMENTS TO VISUAL PERCEPTS <i>Principal investigator. Cardiff University Research Opportunities Programme</i>	£810
2014	UNDERSTANDING BINOCULAR VISION IN INFANTILE NYSTAGMUS <i>Principal investigator. College of Optometrists, Post Doctoral Research Award</i>	£19,573
	ESTABLISHING CLINICAL MEASURES OF TEMPORAL VISUAL FUNCTION IN INFANTILE NYSTAGMUS <i>Principal investigator. Nystagmus Network UK</i>	£14,552
2013	AUTOMATING THE ANALYSIS OF INFANTILE NYSTAGMUS WAVEFORMS <i>Co-investigator. Nystagmus Network UK</i>	£1500

HONOURS & AWARDS

2015	FELLOW, HIGHER EDUCATION ACADEMY
2014	ASSOCIATE FELLOW, HIGHER EDUCATION ACADEMY
2013	CAMBRIDGE RESEARCH SYSTEMS AVA TRAVEL AWARD ARVO INTERNATIONAL TRAVEL GRANT

STUDENT SUPERVISION

PhD students

2017 - PRESENT	M WELLS	MAPPING RESIDUAL VISUAL FUNCTION IN HEMIANOPIA
2016 - PRESENT	N THOMAS	RETINAL PREDICTORS OF VISUAL PERFORMANCE IN INFANTILE NYSTAGMUS
2014 - PRESENT	J BRAWN	EVALUATING EYE MOVEMENTS AS BIOMARKERS FOR MONITORING THE PROGRESSION OF HUNTINGTON'S DISEASE TO FACILITATE EARLY INTERVENTION AND CLINICAL MANAGEMENT

MSc/MRes students

2016	G KIDSON	CAN NEUROADAPTIVE TRAINING AID IN CONTACT LENS ADAPTATION?
	H MCDOWELL	PUBLIC PERCEPTION OF VISION LOSS

BSc students

2016	O BAABUSI	A STREAM OF CONSCIOUSNESS OR A RHYTHM OF PERCEPTION?
	E GOLDING	DESIGNING A CHROMATIC BISECTION TASK
	S SUKRI	BINDING HAND MOVEMENTS TO VISUAL PERCEPTS
2015	K WARD	BINDING HAND MOVEMENTS TO VISUAL PERCEPTS
2012	N HOCKINGS	COMPARISON OF THE PARVO- AND MAGNOCELLULAR PATHWAYS OF INDIVIDUALS WITH INFANTILE NYSTAGMUS
	E JONES	THE INFLUENCE OF THE DIRECTION OF TARGET DISPLACEMENT ON THE SACCADIC PARAMETERS OF INFANTILE NYSTAGMUS
	L WOOD	EYE MOVEMENTS DURING REM SLEEP
2011	N CASSELS	EXPLORING THE RELATIONSHIP BETWEEN BRAIN ACTIVITY AND THE OSCILLATORY EYE MOVEMENTS OF INFANTILE NYSTAGMUS: A POSSIBLE BASIS FOR THERAPY

EDUCATION

		Cardiff University
2014	PHD	QUANTIFYING PERCEPTION AND OCULOMOTOR INSTABILITY IN INFANTILE NYSTAGMUS <i>Supervised by Jon Erichsen, Tom Margrain & Maggie Woodhouse</i>
2009	BSc (2:1)	OPTOMETRY

EMPLOYMENT

2016 - PRESENT	LECTURER	<i>School of Optometry & Vision Sciences, Cardiff University</i>
2010 - PRESENT	SELF-EMPLOYED LOCUM OPTOMETRIST	<i>GOC & AOP registered; EHEW accredited</i>
2014 - 2016	RESEARCH ASSOCIATE	<i>School of Optometry & Vision Sciences, Cardiff University</i>
2013 - 2015	TEACHER	<i>School of Optometry & Vision Sciences, Cardiff University</i>
2014 - 2015	OPTOMETRY LEAD	<i>NHS Wales Informatics Service – Advising development of open source optometric referral & patient management systems</i>
2014	RESEARCH ASSOCIATE	<i>Department of Neuroscience, Cardiff and Vale University Local Health Board</i>
2013 - 2014	RESEARCH ASSOCIATE	<i>School of Psychology, Cardiff University</i>
2009 - 2010	PRE-REGISTRATION OPTOMETRIST	<i>Specsavers Opticians, Exeter</i>
2005 - 2009	BEDDED UNIT VOLUNTEER	<i>North Devon Hospice, Barnstaple – Palliative carer for terminally ill patients in their final weeks of life, offering support to patients and relatives</i>

COMMUNITY

REVIEWER FOR THE FOLLOWING JOURNALS & RESEARCH COUNCILS:

- MEDICAL RESEARCH COUNCIL
- JOURNAL OF OPHTHALMOLOGY
- CLINICAL OPHTHALMOLOGY
- OPTOMETRY AND VISION SCIENCE
- STRABISMUS
- JOURNAL OF EYE MOVEMENT RESEARCH
- NYSTAGMUS NETWORK

2014 - PRESENT STEMNET AMBASSADOR

2012 - 2017 MAINTAIN RESEARCH DATABASE FOR *IN-vision*

2015 MEMBER OF *Cardiff School of Optometry and Vision Sciences Research Ethics Audit Committee*

INTERESTS

- CAVING MEMBER OF SOUTH & MID WALES CAVE RESCUE TEAM
EXPEDITIONS TO MAP UNEXPLORED CAVES IN DACHSTEIN, AUSTRIA, 2009 &
PICOS DE EUROPA, SPAIN, 2015
REGULARLY LEAD NOVICE AND EXPERIENCED GROUPS UNDERGROUND
- MUSIC WRITER, PRODUCER AND LEAD GUITARIST FOR PROGRESSIVE ROCK BAND SINCE
2005
- YOGA RYT 200 QUALIFIED GITANANDA YOGA TEACHER