

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

Lecturer & Optometrist, CARDIFF UNIVERSITY, UK

## PUBLICATIONS & TALKS

### Peer-reviewed journals

ZAHIDI AAA, WOODHOUSE JM, ERICHSEN JT, **Dunn MJ**. INFANTILE NYSTAGMUS: AN OPTOMETRIST'S PERSPECTIVE. *Clin Optom (In Review)*

2017 **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 TCA. 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 (In press)*

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)*

**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**

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

**TEACHING & CLINICAL SUPERVISION***Cardiff University*

2013 - PRESENT	ORTHOPTICS (CLINICAL TEACHING LEAD)
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) INTRODUCTORY OPTOMETRY (LECTURES)
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**

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

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

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

## EMPLOYMENT

2016 - PRESENT	LECTURER <i>School of Optometry &amp; Vision Sciences, Cardiff University</i>
2010 - PRESENT	SELF-EMPLOYED LOCUM OPTOMETRIST <i>GOC &amp; AOP registered; EHEW accredited</i>
2014 - 2016	RESEARCH ASSOCIATE <i>School of Optometry &amp; Vision Sciences, Cardiff University</i>
2013 - 2015	TEACHER <i>School of Optometry &amp; Vision Sciences, Cardiff University</i>
2014 - 2015	OPTOMETRY LEAD <i>NHS Wales Informatics Service – Advising development of open source optometric referral &amp; 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 <i>IN-vision</i>
2015	MEMBER OF <i>Cardiff School of Optometry and Vision Sciences Research Ethics Audit Committee</i>

## 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