

***Connecting Optometry with Neuroscience***

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**Education**

1977 – 1981 University of Illinois Champaign, IL  
Major – Statistics

1981 – 1983 Illinois College of Optometry Chicago, IL  
Bachelor of Science in Visual Science (B.S.V.S.)

1981 – 1985 Illinois College of Optometry Chicago, IL  
Doctorate in Optometry (O.D.)

**Professional Experience**

1984 – 1984 Minneapolis Society for the Blind Minneapolis, MN  
Low Vision Externship with Russ Osnes, O.D.

1985 – 1987 Ft. Lauderdale Eye Institute Ft. Lauderdale, FL  
Staff Optometrist

1988 – 1989 Sunrise Rehabilitation Institute Sunrise, FL  
Consultant for Brain Injured Patients

1986 – 1989 Eye Contact, Private Practice Coral Springs, FL  
Emphasis on Optometric Rehabilitation  
for Brain Development

1988 – 1991 Schwartzman-Steinberg Low Vision Clinic Ft. Lauderdale, FL  
Director of Macular Degeneration Clinic

1992 – present The Mind-Eye Connection, now Mind-Eye Institute Northbrook, IL  
Emphasis on the Diagnosis, Treatment and Rehabilitation  
of Patients with:  
- Traumatic Brain Injury  
- Autism and Developmental Delay  
- Processing and Learning Difficulties

2001 – present Consultant in Optometric Litigation Chicago, IL

2012 – present Clinical Associate Professor at Western University of Health Sciences Pomona, CA

2020 -2022 Hosted Interns from Midwestern University Optometry School Downers Grove, IL

**Featured/Mentioned  
in Books**

2015 Featured in a Book “The Ghost in My Brain: How a Concussion Stole my Life  
and How the New Science of Brain Plasticity Helped Me Get It Back, by Clark Elliott.  
Viking Publishers 2015, ISBN 978-0525426561

2016 Mentioned in New York Times Best Seller “The Brain’s Way of Healing” by  
Norman Doidge, Viking-Penguin Publishers 2015, ISBN-13: 978-0143128373

2019 Discussed on pg. 381 in 2<sup>nd</sup> Edition of “Outsmarting Autism” by Patricia Lemer

2020 Mentioned in “Just Give Me the Road”, Anne Marie Romer ISBN-13: 978-1970063486

2021 Mentioned in “Are You Drowning? Overcoming in the Midst of Trauma and Loss”,  
Jenna Shotmeyer ISBN-13: 978-0578982427

2021 Discussed as part of a brain injury protocol in “The Silent Epidemic: What Everyone  
Should Know About Brain Injury” by Mark John Condon ISBN 978-1664153028

2023 Interviewed for All in the Mind, Lynne Malcolm

2024 Sex with a Brain Injury mentions the Ghost in My Brain

2025 Acknowledged as helping lessen symptoms in the book People, Process, Profit, Lori Polep

**Languages**

English (Primary)

French (Fluent)

Greek (Conversational)

Spanish (Minimal)

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**SOME RECENT  
PRESENTATIONS  
Brain Injury**

**Alzheimer's  
Neurology  
Cardiology  
Ophthalmology**

**Neuro-Optometry**

- Inclusion of Brain Mapping and Retinal Neuromodulation in Eye Care Policy Los Angeles, CA
- Shedding Light on the Connection between Retinal Circuitry & Brain Function Saudi Arabia  
(Virtual N20 Neuroscience summit, writing policy for G20 Leaders)
- Influencing Mental Health Through an Overlooked Mind-Eye Connection Buenos Aires, Argentina
- Neuroplasticity of Visual Processing Madrid and Barcelona, Spain
- North Carolina's Family Physician's Weekend, – Neuro-Optometry and Concussions Asheville, NC
- 93<sup>rd</sup> Annual American Congress of Rehabilitative Medicine (ACRM) Chicago, IL  
The Neurological Effect of Lenses and Puzzles on Brain Plasticity
- 12<sup>th</sup> Annual Congress for Brain Mapping and Therapeutics, Chairperson Los Angeles, CA  
Ocular Measurements as Novel Diagnostic and Therapeutic Tools in Brain Function
- Lutheran General Hospital Rehabilitation Department See with Your Ears Park Ridge, IL
- World Congress on NeuroTherapeutics: Dilemmas, Debates & Discussions (DDDN) Basel, Switzerland
- Behavioral Optometry Academy Foundation  
The Importance of Having a Solid Mind-Eye Connection Maintz, Germany
- Cedars-Sinai Medical Center  
Retinal Stimulation as a means of neuromodulation West Hollywood, CA
- 2<sup>nd</sup> International Conference on Neurology and Therapeutics Chicago, IL  
Non-invasive assessment and treatment of autonomic function
- 10<sup>th</sup> Annual Congress for Brain Mapping & Image Guided Therapy Baltimore, MD  
Unexpected effects of selective retinal stimulation on metabolism
- 3<sup>rd</sup> International Conference on Clinical and Experimental Ophthalmology Chicago, IL  
The effect of retinal stimulation on internal visualization systems
- 1st International Symposium on Deep Brain Connectomics Clermont-Ferrand, France  
Effects on deep brain circuitry by modulation of retinal signals
- 9<sup>th</sup> Annual World Congress for Brain Mapping & Image Guided Therapy Toronto, CAN  
Non-invasive assessment and treatment of autonomic function
- 1st International Conference on Clinical Research in Cardiology San Francisco, CA  
Overlooked effects of ambient lighting on cardiovascular disease
- ICOO 2024: XVIII International Conference on Ophthalmology and Optometry Venice, Italy  
Limbic Involvement in Visual Processing
- 6<sup>th</sup> International Congress of Behavioral Optometry Pomona, CA  
A Novel Contribution to the Optometric Rehabilitation of Amblyopia
- Society for Applied Neuroscience Seville, Spain  
Clinical Applications of the Neurological Aspects of Lenses
- Illinois Brain Injury Foundation Chicago, IL  
The Mind-Eye Connection: How TBI affects Daily Function
- International Neuro-Optometric Rehabilitation Association Long Beach, CA  
Testing of the Ignored Retino-Collicular Pathway
- International Occupational Therapy Convention Athens, Greece  
Occupational Therapy and Neuro-Optometry Together
- French Optometry Students – Guest Lecturer Paris, France  
Beyond Traditional Vision Care

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### RECENT PRESENTATIONS

#### Autistic and Learning Issues

- International Congress of Optometry Melbourne, Australia
- Optometry: the Juggling of Sensory and Motor Systems Skive, Denmark
- Sutton Invitational Symposium The Z-Bell Test Auditory and Visual Linkages
- Autism One Awareness & Attention: How To Use Visual Clues In Autism Park Ridge, IL
- The Mind-Eye -- Your Child's Window to the World Park City, UT
- Kids on the Move, Teaching Professionals about Brain Development Orem, UT
- Lutheran General Hospital Effects of Attention Deficit Disorder in Everyday Park Ridge, IL
- Grayslake High School -- Visualization and Reading Grayslake, IL

#### Low Vision

- The Breakers Retirement Community Learning to Live with Macular Degeneration Chicago, IL
- Idaho Commission for the Blind and Visually Impaired Boise, ID
- Neuro-Optometry's Role in Visual Rehabilitation

#### Mental Health

#### Pharmacology

#### Public Health

- Blind Service Association Enhancing Peripheral Vision in Macular Degeneration Chicago, IL
- Discovery Low Vision Conference A New Way of Seeing with Macular Degeneration Chicago, IL
- World Pharma Global Virtual Summit on Pharmaceutical and Novel Drug Delivery Systems Virtual
- The Effect of Retinal Neuromodulation on Brain Activity
- Plenary Speaker European Public Health Conference: Non-invasively Improving Public Health with Innovations in the Central Nervous System via Retinal Neuromodulation Barcelona
- Home Base, Inc. Impact of the Eye on Mental Health: Helping Veterans Enhance their Mind-Eye Connection Boston, MA

### AWARDS

- 2013 Founding Fathers Award from the Neuro-Optometric Rehabilitation Association
- 2020 Theia Award for Innovation from Women in Optometry
- 2022 Golden Axon Award for Leadership from Society for Brain Mapping & Therapeutics
- 2024 Best Presentation Award at XVIII International Conference on Ophthalmology and Optometry

### PUBLICATIONS

- 2002 Open Your Eyes and Listen Book for Parents & Teachers explaining how the eyes are connected to more than eyesight Carrington Press, Inc.
- 2004 An Insight to Vision Text and medical illustrations encompassing how new neuroscience research affects visual pathways Carrington Press, Inc.
- 2004 Abre los Ojos y Escuche (Spanish translation) Carrington Press, Inc.
- 2007 Neuro-Optometric Diagnosis, Treatment and Rehabilitation following Traumatic Brain Injuries. Zelinsky, D. *Physical Medicine and Rehabilitation Clinics of North America*, February 2007, Vol. 18:1, p 87-107 Elsevier
- 2008 Diagnostic neuron-optometrique prise en charge et readaptation après les traumatismes crâniens, La Revue D'Optometrie, No. 25, Avril 2008, ISSN 1632-806X Optometric Society, France
- 2010 Brain Injury Rehabilitation: Cortical and Subcortical Interfacing via Retinal Pathways. PM & R, September 2010, Vol 2 (9) p. 852-857 Elsevier
- 2012 fMRI Analysis of Three Concurrent Processing Pathways, *Functional Magnetic Resonance Imaging - Advanced Neuroimaging Applications*, Rakesh Sharma (Ed.), May, 2012, ISBN: 978-953-51-0541-1 In Tech
- 2014 Auditory/Visual Integration Assessment & Treatment in Brain Injury Rehabilitation Traumatic Brain Injury, Dr. Farid Sadaka (Editor), ISBN: 978-953-51-1222-8, Available from <http://www.intechopen.com/books/traumatic-brain-injury/auditory-visual-integration-assessment-and-treatment-in-brain-injury-rehabilitation> In Tech
- 2017 Neuromodulation via Retinal Stimulation, Textbook of Advanced Neurophotonics and Brain Mapping. Drs. Yu Chen and Babak Kateb (Editors), Taylor Francis ISBN 13: 9781482236859/
- 2017 The Emerging Field of Neuro-Optometry Provides a Synergistic Effect with Ophthalmology Remedy. 2017; 2:1075 [http://remedyoa.com/pdfs\\_folder/roa-v2-id1075.pdf](http://remedyoa.com/pdfs_folder/roa-v2-id1075.pdf)

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**PUBLICATIONS**

(continued)

- 2019 Collaboration and Coordination, chapter in Patrick Quaid's book, pp 55-60. Learning to See= Seeing to Learn ISBN 13: 978-1999059224
- 2019 Computer Vision Conference, Advances in Computer Vision pp 564–579 Elliott C, Putnam, C Zelinsky D, et al, Using the Z-bell<sup>SM</sup> Test to Remediate Spatial Deficiencies in Non-Image-Forming Retinal Pathways
- 2021 Morris K, Nami M, Bolanos JF, et al. Neuroscience20 (BRAIN20, SPINE20, and MENTAL20) Health Initiative: A Global Consortium Addressing the Human and Economic Burden of Brain, Spine, and Mental Disorders Through Neurotech Innovations and Policies. Journal of Alzheimer's Disease. 2021;83(4):1563-1601. doi:10.3233/JAD-215190
- 2021 How Eyeglasses Impact the Brain, Chapter 12 in Concussion Discussions, Edited by Amy . Zellmer and Shane Steadman ISBN13: 9781736632000
- 2022 Nami, M., et al., A Proposed Brain-, Spine-, and Mental- Health Screening Methodology (NEUROSCREEN) for Healthcare Systems Position of the Society for Brain Mapping and Therapeutics. J. Alzheimers Dis, 2022. 86(1): p. 21-42.
- 2023 Total War on PTSD, Chapter 30, p. 363-382. Southern Arizona Press, edited by Lieutenant Courtenay Nold. SBN-13: 978-1960038418
- 2024 Pierce, S., et al., EPIC Technique Spinal Procedure Improves Ocular Motion and Dizziness by Resolving Cranial Nerve VI Palsy. Acta Sci Neurol, 2024. 7(7): p. 3-10.
- 2024 Retinal Neuromodulation as an Influence on Brain Function by Applying Nanoneuroscience Discoveries Chapter 40 Springer Publishers of Textbook 2<sup>nd</sup> edition of the Textbook of Nanoneuroscience and Nanoneurosurgery ISBN 978-1439849415

**RESEARCH**

**Learning  
Difficulties**

- 2005 U.S. Navy Optometry Research Project led by Dr. Chidi Kena and Dr. Suzanne Krause regarding scotopic sensitivity in Naval recruits
- 2005 – present The Effects of Retinal Stimulation on Auditory Localization

**PROFESSIONAL  
MEMBERSHIPS**

- Life Member of MENSA
- 1985 – present Member of Optometric Extension Program (O.E.P.)
- 1989 – present (Fellowship in 2010)
- Charter Member of the Neuro-Optometric Rehabilitation Association (N.O.R.A)
- 2008 – 2021 Community Leader for the Society for Neuroscience (SFN) NeurOnline
- 2009 – 2021 Member of the American Association for the Advancement of Science (AAAS)
- 2009 – present Board Member of the Society for Brain Mapping and Therapeutics worldbrainmapping.org
- 2011 – reinstated as a Fellow Member of Optometrists in Vision Development and Rehabilitation (F.O.V.D.R.) Originally earned in 1989 as (F.C.O.V.D. – name changed due to COVID-19
- 2013 – present Member of the American Optometric Association
- 2023-2024 – President of the Society for Brain Mapping and Therapeutics

**PROFESSIONAL  
ACTIVITIES**

**Grant Reviewer  
Traumatic  
Brain Injury**

- American Institute of Biological Sciences Scientific Peer Advisory and Review Services for the Department of Defense Congressionally Directed Medical Research and Development Programs
- 2007 Clinical Management Panel Peer Review of the Investigator Initiated and New Investigator Proposals for the Extramural Traumatic Brain Injury Research Program
- 2008 Clinical Treatment and Rehabilitation Panel Peer Review of the Multidisciplinary Research Consortium Proposals for the Extramural Traumatic Brain Injury Research Program
- 2009 Blast Peer Review Panel for the Defense Medical Research Program's Intramural Applied Research and Advanced Technology Development
- 2014 Screening tools for mild Traumatic Brain Injury

**Grant Reviewer  
Eye and  
Vision Research**

- 2008 Eye and Vision Research Grant Proposals for Dept. of Defense's Congressionally Directed Medical Research Program's Fiscal Year 2008
- 2016 Vision Research Grant Proposals for Dept. of Defense's Congressionally Directed Medical Research Program's Fiscal Year 2016
- 2017 Vision Research Program - Cell-Based Therapies for Department of Defense's Congressionally Directed Medical Research Program Fiscal Year 2017

**Editorial Reviewer**

- 2010 – present Elsevier's Physical Medicine and Rehabilitation Journal

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**Boards and  
Advisory  
Committees**

2014 – present JoVE (Journal of Visualized Experiments) Peer Reviewed Scientific Video Journal  
2016 – present Remedy Open Access Ophthalmology Journal  
2004 – present Scientific Learning Corporation  
2019 – present Medical Advisory Board, Hope for HIE (Hypoxic Ischemic Encephalopathy)  
2020 – present Board of Directors, Society for Brain Mapping and Therapeutics

**Teaching and  
Certification**

2011 Exploration of sensory-motor interactions program to the Society of European Optometrists in Brussels, Belgium  
2012 Exploration of patient-environment interactions program to optometrists, occupational and physical therapists in Northbrook, Illinois  
2013 Exploration of visual/auditory integration program to optometrists in Mainz, Germany  
2014 ImPACT certification for concussions  
2014 The Importance of Visual/Auditory Interactions in Patients - program in Vienna, Austria 2015  
2014 Exploration of changes in retinal biochemistry in concussions in Northbrook, IL  
2017- present Founder of The Mind-Eye Campus, a monthly webinar featuring new brain research  
2017 An Insight to Vision—beginning of certification process for Z-Bell Testing in Northbrook, IL  
2017 Neuroplasticity of Visual Processing scheduled in Montreal, Canada  
2019 The Overlooked Effect of Retinal Stimulation on Cardiovascular Health in Amsterdam

**PATENTS**

2008 U.S. Patent # 7,427,136 issued on the Z-Bell Test Method  
2009 U.S. Patent # 7,607,777 issued on alteration of corneal tear film  
2011 U.S. Patent # 8,083,351 issued on alteration of body hormones through corneal tear film  
2015 U.S. Patent # 9,155,489 issued on retinal tolerance device  
2016 U.S. Patent # 9,433,354 issued on modifying retinal input for retinal neuromodulation