



## Anthony Norcia

Professor (Research) of Psychology

 Curriculum Vitae available Online

### Bio

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#### BIO

My research program centers around spatial vision and involves the use of behavioral, oculomotor, electrophysiological and functional MRI techniques in humans. My research has focused for many years on normal visual development as well as abnormal visual development in patients with strabismus, autism and cortical visual impairment. To inform this work, I also work with normal adults and animal models. I have published over 30 papers on the normal developmental process, the first in 1977. In addition, I have published over 30 papers on abnormal visual development over the last 20 years and am an expert in the diagnostic classification and pathophysiology of disorders of binocular vision and developmental disorders. I am thus in a position to translate basic science results into clinical applications. My laboratory has established numerous paradigms in which Visual Evoked Potentials have been used as objective measures of sensory and cognitive function. My group has published many papers in which we have related perceptual judgments to human brain activity. We have developed multiple generations of sophisticated and flexible instrumentation that we have shared with many other laboratories. Central to our research program is our unique integration of functional MRI and high-density EEG source imaging that allows us to relate brain electrical activity to identified visual areas with 1-2 cm accuracy in individual participants. The development of this technique involved the creation and management of a diverse team of experts in functional MRI, physics, biomedical engineering and visual physiology. I have completed training of 18 post-doctoral fellows, 14 of whom have gone on to faculty positions or full-time research positions. I am currently training three post-docs and three graduate students. I have served on 12 Ph.D. thesis committees at Stanford. As a Research Professor, I am able to devote most of my time to direct mentoring of my trainees.

#### ACADEMIC APPOINTMENTS

- Professor (Research), Psychology
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Wu Tsai Neurosciences Institute

#### ADMINISTRATIVE APPOINTMENTS

- Committee on Research, Stanford University, (2012-2015)

#### HONORS AND AWARDS

- William A. Kettlewell Chair of Research in Visual Science, Smith-Kettlewell Eye Research Institute (1992)
- Catherine Doyle Kettlewell Chair of Research in Visual Science, Smith-Kettlewell Eye Research Institute (2000)
- Edridge Green Lecturer, Royal College of Ophthalmology, UK (2008)
- Walt and Lilly Disney Award for Amblyopia, Research to Prevent Blindness (2008)
- Trimble Medalist, British Isles Paediatric Ophthalmology Association (2016)

- Inaugural Fellow, Association for Research in Vision and Ophthalmology (2009)

## BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Director, Vision Sciences Society (2012 - 2016)
- President, Vision Sciences Society (2016 - 2016)
- Director, Vision4Children, UK (2010 - present)

## PROFESSIONAL EDUCATION

- Ph.D, Stanford University , Physiological Psychology (1981)

## LINKS

- Stanford Vision and Neurodevelopment Lab: <https://svndl.stanford.edu/>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Vision, development, functional imaging, systems analysis

## Teaching

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### STANFORD ADVISEES

#### Doctoral Dissertation Reader (AC)

Akshay Jagadeesh, Minyoung Lee, Nitish Padmanaban, Guillaume Riesen, Mona Rosenke

#### Postdoctoral Faculty Sponsor

Milena Kaestner, Luca Lo Verde

#### Postdoctoral Research Mentor

Milena Kaestner, Luca Lo Verde

#### Doctoral (Program)

Nathan Kong

### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Neurosciences (Phd Program)

## Publications

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### PUBLICATIONS

- **Differential Experience-Dependent Plasticity of Form and Motion Mechanisms in Anisometropic Amblyopia.** *Investigative ophthalmology & visual science*  
Chen, S. I., Chandna, A., Nicholas, S., Norcia, A. M.  
2019; 60 (13): 4109–19
- **Humans perceive binocular rivalry and fusion in a tristable dynamic state.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*  
Riesen, G., Norcia, A. M., Gardner, J. L.  
2019
- **EEGSourceSim: A framework for realistic simulation of EEG scalp data using MRI-based forward models and biologically plausible signals and noise.** *Journal of neuroscience methods*  
Barzegaran, E., Bosse, S., Norcia, A. M.  
2019: 108377

- **Image Segmentation Based on Relative Motion and Relative Disparity Cues in Topographically Organized Areas of Human Visual Cortex.** *Scientific reports*  
Kohler, P. J., Cottureau, B. R., Norcia, A. M.  
2019; 9 (1): 9308
- **Neural dynamics underlying coherent motion perception in children and adults.** *Developmental cognitive neuroscience*  
Manning, C., Kaneshiro, B., Kohler, P. J., Duta, M., Scerif, G., Norcia, A. M.  
2019; 38: 100670
- **Autism sensory dysfunction in an evolutionarily conserved system** *PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES*  
Vilidaitė, G., Norcia, A. M., West, R. H., Elliott, C. H., Pei, F., Wade, A. R., Baker, D. H.  
2018; 285 (1893)
- **Tractography optimization using quantitative T1 mapping in the human optic radiation** *NEUROIMAGE*  
Schurr, R., Duan, Y., Norcia, A. M., Ogawa, S., Yeatman, J. D., Mezer, A. A.  
2018; 181: 645–58
- **Revisiting the functional significance of binocular cues for perceiving motion-in-depth.** *Nature communications*  
Kohler, P. J., Meredith, W. J., Norcia, A. M.  
2018; 9 (1): 3511
- **The neural basis of visual symmetry and its role in mid- and high-level visual processing** *ANNALS OF THE NEW YORK ACADEMY OF SCIENCES*  
Bertamini, M., Silvanto, J., Norcia, A. M., Makin, A. J., Wagemans, J.  
2018; 1426 (1): 111–26
- **Dynamics of human ON and OFF Visual Pathways**  
Goldberg, J. L., Yakovleva, A., Hung, B., Norcia, A.  
ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2018
- **Measuring Integration Processes in Visual Symmetry with Frequency-Tagged EEG** *SCIENTIFIC REPORTS*  
Alp, N., Kohler, P., Kogo, N., Wagemans, J., Norcia, A.  
2018; 8: 6969
- **Electrophysiological Correlates of Motion Processing and Decision-Making in Children and Adults**  
Manning, C., Scerif, G., Norcia, A.  
SAGE PUBLICATIONS LTD.2018: 556–57
- **Towards a Machine-learning Approach for Sickness Prediction in 360 degrees Stereoscopic Videos**  
Padmanaban, N., Ruban, T., Sitzmann, V., Norcia, A. M., Wetzstein, G.  
IEEE COMPUTER SOC.2018: 1594–1603
- **Detection of Amblyopia Using Sweep VEP Vernier and Grating Acuity** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Hou, C., Good, W. V., Norcia, A. M.  
2018; 59 (3): 1435–42
- **Determinants of neural responses to disparity in natural scenes** *JOURNAL OF VISION*  
Duan, Y., Yakovleva, A., Norcia, A. M.  
2018; 18 (3): 21
- **Dynamics of perceptual decisions about symmetry in visual cortex** *NEUROIMAGE*  
Kohler, P. J., Cottureau, B. R., Norcia, A. M.  
2018; 167: 316–30
- **Distinct Representations of Magnitude and Spatial Position within Parietal Cortex during Number-Space Mapping** *JOURNAL OF COGNITIVE NEUROSCIENCE*  
Kanayet, F. J., Mattarella-Micke, A., Kohler, P. J., Norcia, A. M., McCandliss, B. D., McClelland, J. L.  
2018; 30 (2): 200–218
- **Autism sensory dysfunction in an evolutionarily conserved system.** *Proceedings. Biological sciences*  
Vilidaitė, G., Norcia, A. M., West, R. J., Elliott, C. J., Pei, F., Wade, A. R., Baker, D. H.

2018; 285 (1893): 20182255

- **Development of Relative Disparity Sensitivity in Human Visual Cortex.** *journal of neuroscience*  
Norcia, A. M., Gerhard, H. E., Meredith, W. J.  
2017; 37 (23): 5608-5619
- **Evidence for long-range spatiotemporal interactions in infant and adult visual cortex** *JOURNAL OF VISION*  
Norcia, A. M., Pei, F., Kohler, P. J.  
2017; 17 (6): 12
- **Optimal use of EEG recordings to target active brain areas with transcranial electrical stimulation.** *NeuroImage*  
Dmochowski, J. P., Koessler, L., Norcia, A. M., Bikson, M., Parra, L. C.  
2017
- **Development of contrast normalization mechanisms during childhood and adolescence** *VISION RESEARCH*  
Pei, F., Baldassi, S., Tsai, J. J., Gerhard, H. E., Norcia, A. M.  
2017; 133: 12-20
- **In-vivo measurements of human brain tissue conductivity using focal electrical current injection through intracerebral multicontact electrodes.** *Human brain mapping*  
Koessler, L., Colnat-Coulbois, S., Cecchin, T., Hofmanis, J., Dmochowski, J. P., Norcia, A. M., Maillard, L. G.  
2017; 38 (2): 974-986
- **Sparse EEG/MEG source estimation via a group lasso.** *PloS one*  
Lim, M., Ales, J. M., Cottureau, B. R., Hastie, T., Norcia, A. M.  
2017; 12 (6): e0176835
- **Representation of Maximally Regular Textures in Human Visual Cortex** *JOURNAL OF NEUROSCIENCE*  
Kohler, P. J., Clarke, A., Yakovleva, A., Liu, Y., Norcia, A. M.  
2016; 36 (3): 714-29
- **Temporal Tuning of Word- and Face-selective Cortex.** *Journal of cognitive neuroscience*  
Yeatman, J. D., Norcia, A. M.  
2016; 28 (11): 1820-27
- **Cortical Components of Reaction-Time during Perceptual Decisions in Humans** *PLOS ONE*  
Dmochowski, J. P., Norcia, A. M.  
2015; 10 (11)
- **Relative sensitivity to low- vs. high-level visual properties in face-sensitive regions of the human ventral occipito-temporal cortex: evidence from intracerebral recordings.** *Journal of vision*  
Liu-Shuang, J., Jonas, J., Ales, J., Norcia, A., Maillard, L., Rossion, B.  
2015; 15 (12): 751-?
- **A Representational Similarity Analysis of the Dynamics of Object Processing Using Single-Trial EEG Classification** *PLOS ONE*  
Kaneshiro, B., Guimaraes, M. P., Kim, H., Norcia, A. M., Suppes, P.  
2015; 10 (8)
- **The Structural Properties of Major White Matter Tracts in Strabismic Amblyopia.** *Investigative ophthalmology & visual science*  
Duan, Y., Norcia, A. M., Yeatman, J. D., Mezer, A.  
2015; 56 (9): 5152-5160
- **How to use fMRI functional localizers to improve EEG/MEG source estimation.** *Journal of neuroscience methods*  
Cottureau, B. R., Ales, J. M., Norcia, A. M.  
2015; 250: 64-73
- **Predicting cortical dark/bright asymmetries from natural image statistics and early visual transforms.** *PLoS computational biology*  
Cooper, E. A., Norcia, A. M.  
2015; 11 (5)
- **Predicting Cortical Dark/Bright Asymmetries from Natural Image Statistics and Early Visual Transforms** *PLOS COMPUTATIONAL BIOLOGY*

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- Cooper, E. A., Norcia, A. M.  
2015; 11 (5)
- **Maximally reliable spatial filtering of steady state visual evoked potentials.** *NeuroImage*  
Dmochowski, J. P., Greaves, A. S., Norcia, A. M.  
2015; 109: 63-72
  - **The effect of contrast polarity reversal on face detection: Evidence of perceptual asymmetry from sweep VEP** *VISION RESEARCH*  
Liu-Shuang, J., Ales, J. M., Rossion, B., Norcia, A. M.  
2015; 108: 8-19
  - **Separable effects of inversion and contrast-reversal on face detection thresholds and response functions: A sweep VEP study** *JOURNAL OF VISION*  
Liu-Shuang, J., Ales, J., Rossion, B., Norcia, A. M.  
2015; 15 (2)
  - **Development of Three-Dimensional Perception in Human Infants.** *Annual review of vision science*  
Norcia, A. M., Gerhard, H. E.  
2015; 1: 569-94
  - **Development of Three-Dimensional Perception in Human Infants** *ANNUAL REVIEW OF VISION SCIENCE, VOL 1*  
Norcia, A. M., Gerhard, H. E.  
2015; 1: 569-594
  - **A Representational Similarity Analysis of the Dynamics of Object Processing Using Single-Trial EEG Classification.** *PloS one*  
Kaneshiro, B., Perreau Guimaraes, M., Kim, H., Norcia, A. M., Suppes, P.  
2015; 10 (8)
  - **The steady-state visual evoked potential in vision research: A review** *JOURNAL OF VISION*  
Norcia, A. M., Appelbaum, L. G., Ales, J. M., Cottureau, B. R., Rossion, B.  
2015; 15 (6)
  - **Visuocortical Function in Infants With a History of Neonatal Jaundice** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Hou, C., Norcia, A. M., Madan, A., Good, W. V.  
2014; 55 (10): 6443-6449
  - **Dissociation of part-based and integrated neural responses to faces by means of electroencephalographic frequency tagging** *EUROPEAN JOURNAL OF NEUROSCIENCE*  
Boremanse, A., Norcia, A. M., Rossion, B.  
2014; 40 (6): 2987-2997
  - **Perceived depth in natural images reflects encoding of low-level luminance statistics.** *journal of neuroscience*  
Cooper, E. A., Norcia, A. M.  
2014; 34 (35): 11761-11768
  - **Acuity-independent effects of visual deprivation on human visual cortex** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Hou, C., Pettet, M. W., Norcia, A. M.  
2014; 111 (30): E3120-E3128
  - **The evolution of a disparity decision in human visual cortex.** *NeuroImage*  
Cottureau, B. R., Ales, J. M., Norcia, A. M.  
2014; 92: 193-206
  - **Dynamics and cortical distribution of neural responses to 2D and 3D motion in human.** *Journal of neurophysiology*  
Cottureau, B. R., McKee, S. P., Norcia, A. M.  
2014; 111 (3): 533-543
  - **Flies and humans share a motion estimation strategy that exploits natural scene statistics.** *Nature neuroscience*  
Clark, D. A., Fitzgerald, J. E., Ales, J. M., Gohl, D. M., Silies, M. A., Norcia, A. M., Clandinin, T. R.  
2014; 17 (2): 296-303

- **An objective index of individual face discrimination in the right occipito-temporal cortex by means of fast periodic oddball stimulation.** *Neuropsychologia*  
Liu-Shuang, J., Norcia, A. M., Rossion, B.  
2014; 52: 57-72
- **Electrophysiological measures of low-level vision reveal spatial processing deficits and hemispheric asymmetry in autism spectrum disorder.** *Journal of vision*  
Pei, F., Baldassi, S., Norcia, A. M.  
2014; 14 (11)
- **Linking perception to neural activity as measured by visual evoked potentials** *VISUAL NEUROSCIENCE*  
Norcia, A. M.  
2013; 30 (5-6): 223-227
- **The 6 Hz fundamental stimulation frequency rate for individual face discrimination in the right occipito-temporal cortex** *NEUROPSYCHOLOGIA*  
Alonso-Prieto, E., Van Belle, G., Liu-Shuang, J., Norcia, A. M., Rossion, B.  
2013; 51 (13): 2863-2875
- **The time course of shape discrimination in the human brain** *NEUROIMAGE*  
Ales, J. M., Appelbaum, L. G., Cottureau, B. R., Norcia, A. M.  
2013; 67: 77-88
- **On determining the intracranial sources of visual evoked potentials from scalp topography: A reply to Kelly et al. (this issue)** *NEUROIMAGE*  
Ales, J. M., Yates, J. L., Norcia, A. M.  
2013; 64: 703-711
- **Assessment of OLED displays for vision research.** *Journal of vision*  
Cooper, E. A., Jiang, H., Vildavski, V., Farrell, J. E., Norcia, A. M.  
2013; 13 (12)
- **An objective signature for visual binding of face parts in the human brain.** *Journal of vision*  
Boremanse, A., Norcia, A. M., Rossion, B.  
2013; 13 (11)
- **Increasing the accuracy of electromagnetic inverses using functional area source correlation constraints** *HUMAN BRAIN MAPPING*  
Cottureau, B. R., Ales, J. M., Norcia, A. M.  
2012; 33 (11): 2694-2713
- **Spatial Contrast Sensitivity Vision Loss in Children with Cortical Visual Impairment** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Good, W. V., Hou, C., Norcia, A. M.  
2012; 53 (12): 7730-7734
- **Visual gain control abnormalities in Autism Spectrum Disorders** *16th World Congress of Psychophysiology of the International Organization of Psychophysiology (IOP)*  
Pei, F., Baldassi, S., Norcia, A.  
ELSEVIER SCIENCE BV.2012: 298-99
- **Bridging the gap: global disparity processing in the human visual cortex** *JOURNAL OF NEUROPHYSIOLOGY*  
Cottureau, B. R., McKee, S. P., Norcia, A. M.  
2012; 107 (9): 2421-2429
- **The Time Course of Segmentation and Cue-Selectivity in the Human Visual Cortex** *PLOS ONE*  
Appelbaum, L. G., Ales, J. M., Norcia, A. M.  
2012; 7 (3)
- **Dynamics of Normalization Underlying Masking in Human Visual Cortex** *JOURNAL OF NEUROSCIENCE*  
Tsai, J. J., Wade, A. R., Norcia, A. M.  
2012; 32 (8): 2783-2789
- **Disparity-Specific Spatial Interactions: Evidence from EEG Source Imaging** *JOURNAL OF NEUROSCIENCE*  
Cottureau, B. R., McKee, S. P., Ales, J. M., Norcia, A. M.

2012; 32 (3): 826-840

- **Distinct effects of attention on the neural responses to form and motion processing: A SSVEP source-imaging study** *JOURNAL OF VISION*  
Palomares, M., Ales, J. M., Wade, A. R., Cottureau, B. R., Norcia, A. M.  
2012; 12 (10)
- **Effect of Grade I and II Intraventricular Hemorrhage on Visuocortical Function in Very Low Birth Weight Infants** *SEEING AND PERCEIVING*  
Madan, A., Norcia, A. M., Hou, C., Pettet, M. W., Good, W. V.  
2012; 25 (2): 143-154
- **An objective method for measuring face detection thresholds using the sweep steady-state visual evoked response** *JOURNAL OF VISION*  
Ales, J. M., Farzin, F., Rossion, B., Norcia, A. M.  
2012; 12 (10)
- **Piecing it together: Infants' neural responses to face and object structure** *JOURNAL OF VISION*  
Farzin, F., Hou, C., Norcia, A. M.  
2012; 12 (13)
- **Visual Cortical Function in Very Low Birth Weight Infants without Retinal or Cerebral Pathology** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Hou, C., Norcia, A. M., Madan, A., Tith, S., Agarwal, R., Good, W. V.  
2011; 52 (12): 9091-9098
- **Distinct cortical responses to 2D figures defined by motion contrast** *VISION RESEARCH*  
Fesi, J. D., Yannes, M. P., Brinckman, D. D., Norcia, A. M., Ales, J. M., Gilmore, R. O.  
2011; 51 (19): 2110-2120
- **Contrast Gain Control Abnormalities in Idiopathic Generalized Epilepsy** *ANNALS OF NEUROLOGY*  
Tsai, J. J., Norcia, A. M., Ales, J. M., Wade, A. R.  
2011; 70 (4): 574-582
- **Orientation tuning in the visual cortex of 3-month-old human infants** *VISION RESEARCH*  
Baker, T. J., Norcia, A. M., Candy, T. R.  
2011; 51 (5): 470-478
- **Disparity-Tuned Population Responses from Human Visual Cortex** *JOURNAL OF NEUROSCIENCE*  
Cottureau, B. R., McKee, S. P., Ales, J. M., Norcia, A. M.  
2011; 31 (3): 954-965
- **Impaired visual decision-making in individuals with amblyopia** *JOURNAL OF VISION*  
Farzin, F., Norcia, A. M.  
2011; 11 (14)
- **V1 is not uniquely identified by polarity reversals of responses to upper and lower visual field stimuli** *NEUROIMAGE*  
Ales, J. M., Yates, J. L., Norcia, A. M.  
2010; 52 (4): 1401-1409
- **Configural specificity of the lateral occipital cortex** *NEUROPSYCHOLOGIA*  
Appelbaum, L. G., Ales, J. M., COTTEREAU, B., Norcia, A. M.  
2010; 48 (11): 3323-3328
- **Quantitative Fiber Tracking of the Optic Radiation Is Correlated with Visual-Evoked Potential Amplitude in Preterm Infants** *AMERICAN JOURNAL OF NEURORADIOLOGY*  
Glass, H. C., Berman, J. I., Norcia, A. M., Rogers, E. E., Henry, R. G., Hou, C., Barkovich, A. J., Good, W. V.  
2010; 31 (8): 1424-1429
- **Connecting the Dots: How Local Structure Affects Global Integration in Infants** *JOURNAL OF COGNITIVE NEUROSCIENCE*  
Palomares, M., Pettet, M., Vildavski, V., Hou, C., Norcia, A.  
2010; 22 (7): 1557-1569
- **Human neutrophil alloantigen-1a,-1b,-2,-3a and-4a frequencies in Brazilians** *TISSUE ANTIGENS*

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- Norcia, A. M., Sugano, E. Y., Chiba, A. K., Moritz, E., Guirao, F. P., Yamamoto, M., Bordin, J. O.  
2009; 74 (5): 404-407
- **Spatio-temporal tuning of coherent motion evoked responses in 4-6 month old infants and adults** *VISION RESEARCH*  
Hou, C., Gilmore, R. O., Pettet, M. W., Norcia, A. M.  
2009; 49 (20): 2509-2517
  - **Backward masking suppresses collinear facilitation in the visual cortex** *VISION RESEARCH*  
Sterkin, A., Yehezkel, O., Bonneh, Y. S., Norcia, A., Polat, U.  
2009; 49 (14): 1784-1794
  - **Evidence for Visual Compromise in Preverbal Children with Orbital Vascular Birthmarks** *AMERICAN JOURNAL OF OPHTHALMOLOGY*  
Good, W. V., Hou, C., Frieden, I. J., Norcia, A. M.  
2009; 147 (4): 679-682
  - **Disparity Tuning of Binocular Facilitation and Suppression after Normal versus Abnormal Visual Development** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Norcia, A. M., Hale, J., Pettet, M. W., McKee, S. P., Harrad, R. A.  
2009; 50 (3): 1168-1175
  - **Assessing direction-specific adaptation using the steady-state visual evoked potential: Results from EEG source imaging** *JOURNAL OF VISION*  
Ales, J. M., Norcia, A. M.  
2009; 9 (7)
  - **Attentive and pre-attentive aspects of figural processing** *JOURNAL OF VISION*  
Appelbaum, L. G., Norcia, A. M.  
2009; 9 (11)
  - **Multi-component correlate for lateral collinear interactions in the human visual cortex** *VISION RESEARCH*  
Sterkin, A., Yehezkel, O., Bonneh, Y. S., Norcia, A., Polat, U.  
2008; 48 (15): 1641-1647
  - **Figure-ground interaction in the human visual cortex** *JOURNAL OF VISION*  
Appelbaum, L. G., Wade, A. R., Pettet, M. W., Vildavski, V. Y., Norcia, A. M.  
2008; 8 (9)
  - **Neural correlates of transformational apparent motion** *PERCEPTION*  
Mirabella, G., Norcia, A. M.  
2008; 37 (9): 1368-1379
  - **Abnormalities of coherent motion processing in strabismic amblyopia: Visual-evoked potential measurements** *JOURNAL OF VISION*  
Hou, C., Pettet, M. W., Norcia, A. M.  
2008; 8 (4)
  - **Development of cortical responses to optic flow** *VISUAL NEUROSCIENCE*  
Gilmore, R. O., Hou, C., Pettet, M. W., Norcia, A. M.  
2007; 24 (6): 845-856
  - **Validation study of VEP vernier acuity in normal-vision and amblyopic adults** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Hou, C., Good, W. V., Norcia, A. M.  
2007; 48 (9): 4070-4078
  - **Sensitivity and configuration-specificity of orientation-defined texture processing in infants and adults** *VISION RESEARCH*  
Pei, F., Pettet, M. W., Norcia, A. M.  
2007; 47 (3): 338-348
  - **Cue-invariant networks for figure and background processing in human visual cortex** *JOURNAL OF NEUROSCIENCE*  
Appelbaum, L. G., Wade, A. R., Vildavski, V. Y., Pettet, M. W., Norcia, A. M.  
2006; 26 (45): 11695-11708



- **Visual development in very low birth weight infants** *PEDIATRIC RESEARCH*  
Mirabella, G., Kjaer, P. K., Norcia, A. M., Good, W. V., Madan, A.  
2006; 60 (4): 435-439
- **Neural correlates of shape-from-shading** *VISION RESEARCH*  
Hou, C., Pettet, M. W., Vildavski, V. Y., Norcia, A. M.  
2006; 46 (6-7): 1080-1090
- **The repeatability of best corrected acuity in normal and amblyopic children 4 to 12 years of age** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Chen, S. I., Chandna, A., Norcia, A. M., Pettet, M., Stone, D.  
2006; 47 (2): 614-619
- **Measurement of position acuity in strabismus and amblyopia: Specificity of the vernier VEP paradigm** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Chen, S. I., Norcia, A. M., Pettet, M. W., Chandna, A.  
2005; 46 (12): 4563-4570
- **Event-related potentials show configural specificity of global form processing** *NEUROREPORT*  
Pei, F., Pettet, M. W., Vildavski, V. Y., Norcia, A. M.  
2005; 16 (13): 1427-1430
- **A VEP measure of the binocular fusion of horizontal and vertical disparities** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Hale, J., Harrad, R. A., MCKEE, S. P., Pettet, M. W., Norcia, A. M.  
2005; 46 (5): 1786-1790
- **Development of sensitivity to texture and contour information in the human infant** *JOURNAL OF COGNITIVE NEUROSCIENCE*  
Norcia, A. M., Pei, F., Bonne, Y., Hou, C., Sampath, V., Pettet, M. W.  
2005; 17 (4): 569-579
- **Suppression of monocular visual direction under fused binocular stimulation: Evoked potential measurements** *JOURNAL OF VISION*  
Norcia, A. M., MCKEE, S. P., Bonne, Y., Pettet, M. W.  
2005; 5 (1): 34-44
- **Experience-expectant development of contour integration mechanisms in human visual cortex** *JOURNAL OF VISION*  
Norcia, A. M., Sampath, V., Hou, C., Pettet, M. W.  
2005; 5 (2): 116-130
- **Recovery of contour integration in relation to LogMAR visual acuity during treatment of amblyopia in children** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Chandna, A., Gonzalez-Martin, J. A., Norcia, A. M.  
2004; 45 (11): 4016-4022
- **Development of the spatial organization and dynamics of lateral interactions in the human visual system** *JOURNAL OF NEUROSCIENCE*  
Hou, C., Pettet, M. W., Sampath, V., Candy, T. R., Norcia, A. M.  
2003; 23 (25): 8630-8640
- **Late maturation of visual hyperacuity** *PSYCHOLOGICAL SCIENCE*  
Skoczenski, A. M., Norcia, A. M.  
2002; 13 (6): 537-541
- **Temporal dynamics of the human response to symmetry** *JOURNAL OF VISION*  
Norcia, A. M., Candy, T. R., Pettet, M. W., Vildavski, V. Y., Tyler, C. W.  
2002; 2 (2): 132-139
- **Extending the model of image/threshold database into the spatio-temporal domain.** *HUMAN VISION AND ELECTRONIC IMAGING VII*  
Carney, T., Klein, S. A., BEUTTER, B., Norcia, A., Chen, C. C., Tyler, C. W., Makous, W., Watson, A., Cropper, S. J., Popple, A. V., Robertson, K., Manahilov, V., Simpson, et al  
2002; 4662: 138-148

- **Neural correlates of object-based attention** *JOURNAL OF VISION*  
Pei, F., Pettet, M. W., Norcia, A. M.  
2002; 2 (9): 588-596
- **Normalization models applied to orientation masking in the human infant** *JOURNAL OF NEUROSCIENCE*  
Candy, T. R., Skoczenski, A. M., Norcia, A. M.  
2001; 21 (12): 4530-4541
- **Colinear facilitation promotes reliability of single-cell responses in cat striate cortex** *EXPERIMENTAL BRAIN RESEARCH*  
Kasamatsu, T., Polat, U., Pettet, M. W., Norcia, A. M.  
2001; 138 (2): 163-172
- **Contrast response characteristics of long-range lateral interactions in cat striate cortex** *28th Annual Meeting of the Society-for-Neuroscience*  
Chen, C. C., Kasamatsu, T., Polat, U., Norcia, A. M.  
LIPPINCOTT WILLIAMS & WILKINS.2001: 655-61
- **Contour integration deficits in anisometric amblyopia** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Chandna, A., Pennefather, P. M., Kovacs, I., Norcia, A. M.  
2001; 42 (3): 875-878
- **Changes in cortical activity during suppression in stereoblindness** *NEUROREPORT*  
Norcia, A. M., Harrad, R. A., Brown, R. J.  
2000; 11 (5): 1007-1012
- **A new test of contour integration deficits in patients with a history of disrupted binocular experience during visual development** *VISION RESEARCH*  
Kovacs, I., Polat, U., Pennefather, P. M., Chandna, A., Norcia, A. M.  
2000; 40 (13): 1775-1783
- **Development of rivalry and dichoptic masking in human infants** *Annual Meeting of the Association-for-Research-in-Vision-and-Ophthalmology (ARVO)*  
Brown, R. J., Candy, T. R., Norcia, A. M.  
ASSOC RESEARCH VISION OPHTHALMOLOGY INC.1999: 3324-33
- **Electrophysiological correlates of vernier and relative motion mechanisms in human visual cortex** *VISUAL NEUROSCIENCE*  
Norcia, A. M., Wesemann, W., Manny, R. E.  
1999; 16 (6): 1123-1131
- **Development of VEP Vernier acuity and grating acuity in human infants** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Skoczenski, A. M., Norcia, A. M.  
1999; 40 (10): 2411-2417
- **Asymmetric responses in cortical visually evoked potentials to motion are not derived from eye movements** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Wilson, J. R., Noyd, W. W., Aiyer, A. D., Norcia, A. M., Mustari, M. J., Boothe, R. G.  
1999; 40 (10): 2435-2439
- **Oscillatory motion but not pattern reversal elicits monocular motion VEP biases in infantile esotropia** *VISION RESEARCH*  
Shea, S. J., Chandna, A., Norcia, A. M.  
1999; 39 (10): 1803-1811
- **Contour detection threshold: repeatability and learning with 'contour cards'** *SPATIAL VISION*  
Pennefather, P. M., Chandna, A., Kovacs, I., Polat, U., Norcia, A. M.  
1999; 12 (3): 257-266
- **Elongated physiological summation pools in the human visual cortex** *VISION RESEARCH*  
Polat, U., Norcia, A. M.  
1998; 38 (23): 3735-3741
- **OKN, perceptual and VEP direction biases in strabismus** *VISION RESEARCH*  
Brosnahan, D., Norcia, A. M., Schor, C. M., Taylor, D. G.  
1998; 38 (18): 2833-2840

- **Development of directional motion symmetry in the monocular visually evoked potential of infant monkeys** *VISION RESEARCH*  
Brown, R. J., Wilson, J. R., Norcia, A. M., Boothe, R. G.  
1998; 38 (9): 1253-1263
- **Neural noise limitations on infant visual sensitivity** *NATURE*  
Skoczenski, A. M., Norcia, A. M.  
1998; 391 (6668): 697-700
- **Collinear stimuli regulate visual responses depending on cell's contrast threshold** *NATURE*  
Polat, U., Mizobe, K., Pettet, M. W., Kasamatsu, T., Norcia, A. M.  
1998; 391 (6667): 580-584
- **Lack of lateral inhibitory interactions in visual cortex of monocularly deprived cats** *VISION RESEARCH*  
Kasamatsu, T., Kitano, M., Sutter, E. E., Norcia, A. M.  
1998; 38 (1): 1-12
- **Spatial frequency masking with the sweep-VEP** *VISION RESEARCH*  
Peterzell, D. H., Norcia, A. M.  
1997; 37 (17): 2349-2359
- **A method for investigating binocular rivalry in real-time with the steady-state VEP** *VISION RESEARCH*  
Brown, R. J., Norcia, A. M.  
1997; 37 (17): 2401-2408
- **Abnormal long-range spatial interactions in amblyopia** *VISION RESEARCH*  
Polat, U., Sagi, D., Norcia, A. M.  
1997; 37 (6): 737-744
- **Neurophysiological evidence for contrast dependent long-range facilitation and suppression in the human visual cortex** *VISION RESEARCH*  
Polat, U., Norcia, A. M.  
1996; 36 (14): 2099-2109
- **Development of grating acuity and contrast sensitivity in the central and peripheral visual field of the human infant** *VISION RESEARCH*  
Allen, D., Tyler, C. W., Norcia, A. M.  
1996; 36 (13): 1945-1953
- **Abnormal motion processing and binocularity: Infantile esotropia as a model system for effects of early interruptions of binocularity** *EYE*  
Norcia, A. M.  
1996; 10: 259-265
- **Measurement of vernier and motion sensitivity with the rapid-sweep-VEP** *5th Meeting of the Bielschowsky-Society-for-Research-of-Squint*  
Wesemann, W., Norcia, A. M., Manny, R. E.  
FERDINAND ENKE VERLAG.1996: 11-17
- **PLASTICITY OF HUMAN MOTION PROCESSING MECHANISMS FOLLOWING SURGERY FOR INFANTILE ESOTROPIA** *Binocular Oculomotor Coordination and Plasticity Symposium*  
Norcia, A. M., Hamer, R. D., Jampolsky, A., ORELBIXLER, D.  
PERGAMON-ELSEVIER SCIENCE LTD.1995: 3279-96
- **AN ADAPTIVE FILTER FOR STEADY-STATE EVOKED-RESPONSES** *EVOKED POTENTIALS-ELECTROENCEPHALOGRAPHY AND CLINICAL NEUROPHYSIOLOGY*  
Tang, Y., Norcia, A. M.  
1995; 96 (3): 268-277
- **SPATIALLY DISTRIBUTED RESPONSES INDUCED BY CONTRAST REVERSAL IN CAT VISUAL-CORTEX** *EXPERIMENTAL BRAIN RESEARCH*  
Kitano, M., Kasamatsu, T., Norcia, A. M., Sutter, E. E.  
1995; 104 (2): 297-309
- **APPLICATION OF ADAPTIVE FILTERING TO STEADY-STATE EVOKED-RESPONSE** *MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING*  
Tang, Y., Norcia, A. M.

1995; 33 (3): 391-395

- **RETINOTOPIC AND NONRETINOTOPIC FIELD POTENTIALS IN CAT VISUAL-CORTEX** *VISUAL NEUROSCIENCE*  
Kitano, M., Niiyama, K., Kasamatsu, T., Sutter, E. E., Norcia, A. M.  
1994; 11 (5): 953-977
- **THE DEVELOPMENT OF MOTION SENSITIVITY DURING THE FIRST YEAR OF LIFE** *VISION RESEARCH*  
Hamer, R. D., Norcia, A. M.  
1994; 34 (18): 2387-2402
- **PREOPERATIVE ALTERNATE OCCLUSION DECREASES MOTION PROCESSING ABNORMALITIES IN INFANTILE ESOTROPIA** *JOURNAL OF PEDIATRIC OPHTHALMOLOGY & STRABISMUS*  
Jampolsky, A., Norcia, A. M., Hamer, R. D.  
1994; 31 (1): 6-17
- **DOES CHROMATIC SENSITIVITY DEVELOP MORE SLOWLY THAN LUMINANCE SENSITIVITY** *VISION RESEARCH*  
Allen, D., Banks, M. S., Norcia, A. M.  
1993; 33 (17): 2553-2562
- **IMPROVED PROCESSING OF THE STEADY-STATE EVOKED-POTENTIAL** *ELECTROENCEPHALOGRAPHY AND CLINICAL NEUROPHYSIOLOGY*  
Tang, Y., Norcia, A. M.  
1993; 88 (4): 323-334
- **MOTION VEPS IN LATE-ONSET ESOTROPIA** *CLINICAL VISION SCIENCES*  
Hamer, R. D., Norcia, A. M., ORELBIXLER, D., Hoyt, C. S.  
1993; 8 (1): 55-62
- **CONTRAST DEPENDENCE OF THE OSCILLATORY MOTION THRESHOLD ACROSS THE VISUAL-FIELD** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*  
Wesemann, W., Norcia, A. M.  
1992; 9 (10): 1663-1671
- **COMPARISON OF ON-AXIS AND OFF-AXIS PHOTOREFRACTION WITH CYCLOPLEGIC RETINOSCOPY IN INFANTS** *JOURNAL OF PEDIATRIC OPHTHALMOLOGY & STRABISMUS*  
Hamer, R. D., Norcia, A. M., Day, S. H., HAEGERSTROMPORTNOY, G., Lewis, D., HSUWINGES, C.  
1992; 29 (4): 232-239
- **THEORY OF ECCENTRIC PHOTOREFRACTION (PHOTORETINOSCOPY) - ASTIGMATIC EYES** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*  
Wesemann, W., Norcia, A. M., Allen, D.  
1991; 8 (12): 2038-2047
- **CORTICAL RECOVERY FROM EFFECTS OF MONOCULAR DEPRIVATION CAUSED BY DIFFUSION AND OCCLUSION** *BRAIN RESEARCH*  
Ohashi, T., Norcia, A. M., Kasamatsu, T., Jampolsky, A.  
1991; 548 (1-2): 63-73
- **ANOMALOUS MOTION VEPS IN INFANTS AND IN INFANTILE ESOTROPIA** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Norcia, A. M., Garcia, H., Humphry, R., Holmes, A., Hamer, R. D., ORELBIXLER, D.  
1991; 32 (2): 436-439
- **DEVELOPMENT OF CONTRAST SENSITIVITY IN THE HUMAN INFANT** *VISION RESEARCH*  
Norcia, A. M., Tyler, C. W., Hamer, R. D.  
1990; 30 (10): 1475-1486
- **Polaroid photorefractive screening of infants.** *Journal of pediatric ophthalmology & strabismus*  
Hsu-Winges, C., Hamer, R. D., Norcia, A. M., Wesemann, H., Chan, C.  
1989; 26 (5): 254-260
- **THE DEVELOPMENT OF MONOCULAR AND BINOCULAR VEP ACUITY** *VISION RESEARCH*  
Hamer, R. D., Norcia, A. M., Tyler, C. W., HSUWINGES, C.  
1989; 29 (4): 397-408

- **MEASUREMENT OF SPATIAL CONTRAST SENSITIVITY WITH THE SWEEPED CONTRAST VEP** *VISION RESEARCH*  
Norcia, A. M., Tyler, C. W., Hamer, R. D., Wesemann, W.  
1989; 29 (5): 627-637
- **ABNORMAL ACUITY DEVELOPMENT IN INFANTILE ESOTROPIA** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Day, S. H., ORELBIXLER, D. A., Norcia, A. M.  
1988; 29 (2): 327-329
- **HIGH VISUAL CONTRAST SENSITIVITY IN THE YOUNG HUMAN INFANT** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*  
Norcia, A. M., Tyler, C. W., Hamer, R. D.  
1988; 29 (1): 44-49
- **Visual acuity development in normal and abnormal preterm human infants.** *Journal of pediatric ophthalmology & strabismus*  
Norcia, A. M., Tyler, C. W., Picuch, R., Clyman, R., GROBSTEIN, J.  
1987; 24 (2): 70-74
- **DIFFERENTIAL GROWTH OF ACUITY FOR STEADY-STATE PATTERN REVERSAL AND TRANSIENT PATTERN ONSET-OFFSET VEPS** *CLINICAL VISION SCIENCES*  
ORELBIXLER, D. A., Norcia, A. M.  
1987; 2 (1): 1-9
- **PHOTOREFRACTION WITH A CATADIOPTRIC LENS - IMPROVEMENT ON THE METHOD OF KAAKINEN** *ACTA OPHTHALMOLOGICA*  
Norcia, A. M., Zadnik, K., Day, S. H.  
1986; 64 (4): 379-385
- **COMPARATIVE-STUDY OF ELECTROPHYSIOLOGICAL AND PSYCHOPHYSICAL MEASUREMENT OF THE CONTRAST SENSITIVITY FUNCTION IN HUMANS** *AMERICAN JOURNAL OF OPTOMETRY AND PHYSIOLOGICAL OPTICS*  
Allen, D., Norcia, A. M., Tyler, C. W.  
1986; 63 (6): 442-449
- **METHODS FOR THE IDENTIFICATION OF EVOKED-RESPONSE COMPONENTS IN THE FREQUENCY AND COMBINED TIME FREQUENCY DOMAINS** *ELECTROENCEPHALOGRAPHY AND CLINICAL NEUROPHYSIOLOGY*  
Norcia, A. M., Sato, T., Shinn, P., MERTUS, J.  
1986; 65 (3): 212-226
- **ELECTROPHYSIOLOGICAL ASSESSMENT OF CONTRAST SENSITIVITY IN HUMAN INFANTS** *AMERICAN JOURNAL OF OPTOMETRY AND PHYSIOLOGICAL OPTICS*  
Norcia, A. M., Tyler, C. W., Allen, D.  
1986; 63 (1): 12-15
- **PHOTOGRAPHIC DETECTION OF AMBLYOGENIC FACTORS** *OPHTHALMOLOGY*  
Day, S. H., Norcia, A. M.  
1986; 93 (1): 25-28
- **ELECTROPHYSIOLOGICAL EVIDENCE FOR THE EXISTENCE OF COARSE AND FINE DISPARITY MECHANISMS IN HUMAN VISION** *RESEARCH*  
Norcia, A. M., Sutter, E. E., Tyler, C. W.  
1985; 25 (11): 1603-1611
- **INFANT VEP ACUITY MEASUREMENTS - ANALYSIS OF INDIVIDUAL-DIFFERENCES AND MEASUREMENT ERROR** *ELECTROENCEPHALOGRAPHY AND CLINICAL NEUROPHYSIOLOGY*  
Norcia, A. M., Tyler, C. W.  
1985; 61 (5): 359-369
- **SPATIAL-FREQUENCY SWEEP VEP - VISUAL-ACUITY DURING THE 1ST YEAR OF LIFE** *VISION RESEARCH*  
Norcia, A. M., Tyler, C. W.  
1985; 25 (10): 1399-1408
- **DIGITAL FILTERING AND ROBUST REGRESSION TECHNIQUES FOR ESTIMATING SENSORY THRESHOLDS FROM THE EVOKED-POTENTIAL** *IEEE ENGINEERING IN MEDICINE AND BIOLOGY MAGAZINE*  
Norcia, A. M., Clarke, M., Tyler, C. W.

1985; 4 (4): 26-32

● **TEMPORAL FREQUENCY LIMITS FOR STEREOSCOPIC APPARENT MOTION PROCESSES** *VISION RESEARCH*

Norcia, A. M., Tyler, C. W.

1984; 24 (5): 395-401

● **EVENT-RELATED BRAIN POTENTIALS TO HUMAN FACES IN INFANTS** *CHILD DEVELOPMENT*

Courchesne, E., Ganz, L., Norcia, A. M.

1981; 52 (3): 804-811