**Jeremy M. Wolfe**

**Professor of Opthalmology and Radiology**

**Harvard Medical School**

**Office Address:**

Visual Attention Lab

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**Education:**

1977 A.B.(summa cum laude) Princeton University

1981 Ph.D. (Psychology) MIT

Doctoral Thesis: *On Binocular Single Vision*, advisor: Richard Held

**Academic Appointments:**

2010 to present Professor of Radiology, Harvard Medical School

2003 to present Faculty Affiliate, Division of Sleep Medicine, Harvard Medical School

2002 to present Professor of Ophthalmology (with tenure), Harvard Medical School

1991 - 2002 Associate Professor of Ophthalmology, Harvard Medical School

1988 - 1991 Class of 1922 Associate Professor, Massachusetts Institute of Technology

1987 - 1991 Associate Professor, Brain and Cognitive Sciences, Massachusetts Institute of Technology

1981 - 1987 Assistant Professor, Department of Psychology/Brain and Cognitive Sciences, Massachusetts Institute of Technology

1981 - 1983 Lecturer, Department of Psychology, Massachusetts Institute of Technology

**Hospital Appointments:**

2010 to present Director, Center for Advanced Medical Imaging (CAMI), Brigham and Women’s Hospital/Radiology

2010 to present Director, Visual Attention Lab, Brigham and Women’s Hospital/Surgery

1991 - 2010 Director of Psychophysical Studies, Center for Clinical Cataract Research, Brigham and Women’s Hospital/Surgery

1991 to present Psychophysicist, Brigham and Women’s Hospital/Surgery

**Other Appointments:**

2011 to present Adjunct Professor, Center for Computational Neuroscience and Neural Technology, Boston University

2002 to present Senior Lecturer, MIT, Department of Brain & Cognitive Science

2011 - 2014 Honorary Professor, University of Sydney (Australia), Faculty of Health Sciences

2003 - 2011 Adjunct Professor, Boston University, Center for Neural Systems

1993 - 2003 Adjunct Associate Professor, Boston University, Center for Neural Systems

1993 - 1994 Visiting Associate Professor, Brown University, Department of

Cognitive Science

1991 - 2002 Visiting Associate Professor, MIT, Department of Brain & Cognitive Science

1991 - 1992 Visiting Associate Professor, Wellesley College, Department of Psychology

**Honors and Awards:**

2011 Keynote Address, Asian Conference on Visual Perception (Hong Kong)

2011 Fellow of the American Psychological Association (Division 21)

2010 Keynote Address, Association for Psychological Science

2009 Fellow of the Eastern Psychological Association

2009 Distinguished Scientific Contribution, New England Psychological Association

2003 Honorary Masters of Arts, Harvard University

2002 Fellow of American Association for the Advancement of Science (AAAS)

2002 Fellow of the American Psychological Society

2002 Fellow of the American Psychological Association (Division 1)

2001 Elected to Society of Experimental Psychologists

1997 Fellow of the American Psychological Association (Division 3)

1995 Fellow of the American Psychological Association (Division 6)

1989 Baker Memorial Prize for Undergraduate Teaching, Massachusetts Institute of Technology

1988 Class of 1922 Professorship, Massachusetts Institute of Technology

1977 Phi Beta Kappa, Princeton University

1977 Summa Cum Laude, Princeton University

**Professional Leadership:**

2014- 2015 President-Elect of the Federation of Associations in Behavioral & Brain Sciences (FABBS)

2010-present Board Member, Federation of Associations in Behavioral & Brain Sciences (FABBS)

2010-2015 Psychonomic Society: Chair 2014; Chair-Elect 2013; Governing Board 2010-2015; Finance Committee 2010-2011; Membership Committee 2011-2013; Communication Committee 2013- present, Nomination Committee, 2015

2008-2011 American Psychological Association (APA): President of Division 3, 2010-2011; Member of the Executive Committee and Program Committee Chair for Division 3 in 2008, for Division 1 in 2004, for Division 6 in 1997-1998

1988-2002 Eastern Psychological Association: President 2001-2002; Board of Directors 1996-1999; Program Committee 1988-1991

**Editorial Boards:**

2015 – Founding Editor, Cognitive Research: Principles and Implications

2015 -- Consulting Editor, Attention, Perception and Psychophysics

2008 – 2015 Editor, Attention, Perception and Psychophysics (previously Perception and Psychophysics)

2015-present Consulting Editor, Psychological Review

2012-2013 Guest Editor: Journal of Vision

2009-2011 Editorial Board: Psychological Science

2007-2011 Editorial Board, Journal of Experimental Psychology: General

2005-2012 Consulting Editor, Visual Cognition

1998-2003 Associate Editor, Perception and Psychophysics

1996-2000 Associate Editor, APA Encyclopedia of Psychology

1998-2002 Editorial Advisory Board, Academic Press, Encyclopedia of the Human Brain

2003-2008 Consulting Editor, Perception and Psychophysics (,)

1996-2006 Editorial Board, Cognitive Science

1993-1997 Consulting Editor, Perception and Psychophysics

1989-1993 Editorial Board, Journal of Experimental Psychology: Human Perception and Performance

1991 Consulting Editor, Spatial Vision and Guest Editor for Special Issue in Honor of Bela Julesz

1996-2001 Advisor, MIT Press

1994-2001 Book Review Editor, Perception

**Professional Service Assignments:**

*External Committees, Review Panels*

2014 External Review Panel for the 2015 Grawemeyer Award in Psychology

2012 to present National Academy of Sciences – Member of the Board on Behavioral, Cognitive, and Sensory Sciences (BBCSS)

2010 to present Menu Research and Development Advisory Council,

Culinary Institute of America, Hyde Park, NY

2009 - 2013 National Academy of Sciences – Chairman of the Panel on Soldier Systems (Army Research Lab Technical Assessment Board)

2006-2009 Member of the Panel on Soldier Systems (Army Research Lab Technical Assessment Board - National Academy of Sciences)

2007-2008 Member of the Neuroscience Group of the Panel on Soldier Systems (Army Research Lab Technical Assessment Board - National Academy of Sciences)

1998-2002 NIH - Member of Visual Sciences B (VISB) review panel

 ad hoc grant reviews for: NIH, NIMH, NSF, AFOSR, HFSP, NSERC (Canada), SERC (United Kingdom), ISF (Israel), BSF (Israel), and NIMH-SEP

*Internal University Service:*

2010 to present Subcommittee on Promotions and Reappointments of the Executive Committee of the Department of Ophthalmology, Harvard Medical School

2008 to present Steering Committee: Center for Advanced Medical Imaging (CAMI) – Brigham and Women’s Hospital/Radiology

1998-1999 Low Vision Search Committee, Schepens Eye Research Institute

1990-1991 President, MIT Phi Beta Kappa chapter

1989-1991 Advisor to Student Peer-Counseling Hotline, MIT

1988-1989 Faculty Fellow, MacGregor dormitory, MIT

1987-1991 Founder and Chair: MIT Program in Psychology

1986-1987 Committee on HASS-distribution courses outside the

School of Humanities, Arts, and Social Sciences, MIT

1985-1988 Committee on Curricula, MIT

1984-1991 Steering Committee of the Cognitive Science major, MIT

1981-1991 Freshman Advisor including Advisor Seminars 1988-1990, MIT

**Current Membership in Professional Societies**

Psychonomic Society (Fellow)

American Psychological Association (Fellow - Divisions 1, 3, 6, 21)

American Psychological Society (Fellow)

Eastern Psychological Association (Fellow)

Society for Experimental Psychology (elected member)

American Association for the Advancement of Science (Fellow)

Radiological Society of North America (RSNA)

Vision Sciences Society

**Other National Boards**

2012-present At-Large Member of the North American Board of the Union for Reform Judaism

**Research Funding:**

*According to NIH Reporter, my total NIH funding since 1998 is $8,601,417. Obviously, that does not include funding before 1998 or the non-NIH grants.*

**RO1 EY017001** (Wolfe, PI) 4/1/07-3/31/17

NIH-NEI $397,826 (current year)

*Prevalence effects in visual search: Theoretical and practical implications*

The proposed research has three specific aims: 1) human foraging research, 2) studies of hybrid memory and visual search tasks in basic search and radiological settings and 3) to test theoretically and clinically motivated strategies to reduce miss errors related to the low prevalence of targets in applied search settings (e.g. cancer screening).

**ONR-MURI N000141010278** (PI-Niebur, Johns Hopkins University, Local PI – Wolfe)11/1/09-10/31/15

Office of Naval Research $573,356

*Figure-Ground Processing, Saliency and Guided Attention for Analysis of Large Natural Scenes*

The major goals are to develop the next generation of “salience map” hardware and software and to relate this to the guidance of attention in real scenes. This project asks how humans forage in complex scenes (like web pages or Google maps)

**National Geospatial Agency** (Wolfe –PI) 1/1/2013-12/31/2015

**HM0177-13-1-0001\_P00001**

*Enhancing Visual Search by GEOINT Analysts* $ 398,576

How do novices and experts search overhead photographic imagery for targets of interest?

**NSF SMA-0835976** (PI – Shinn-Cunningham, Boston University, Sub-contract-Wolfe 3/1/2013-2/28/2016

*CELEST: A Center for Learning* $ 419,373

Coordinate the “Foraging and Learning with Attention in a Mutable Environment” project for the Boston University NSF Science of Learning Center (CELEST)

**Army Research Office (Wolfe – Co-I, Trafton Drew, Utah, PI)** $60,031 (TDC current yr)

**R00000000000588**

Attentional support for visual search and surveillance

To identify the fundamental limitations of the human visual attention system that can produce errors in complex threat detection tasks. Specifically, to provide a novel description of capacity limitations that govern human monitoring of sustained dynamic scenes,

*Past Funding:*

2/82 - 2/83 NIH 1 RO3 EY04297-01 False Fusion and Binocular Vision, **Wolfe PI**

12/83 - 11/86 NIH (1 R01 EY5087) Binocular Perception Despite Stereodeficiency,

**Wolfe PI**

3/85 - 2/88 Lighting Research Institute (85:SP:5)

 Focusing the Eyes: Sensory and Adaptive Properties of Accommodation

 **Wolfe, PI**

7/85 - 6/87 Whitaker Health Sciences Fund

 Basic Problems and Health-Related Issues in Human Vision

 **Wolfe, PI**

4/84 - 3/88 BRSG spell out via MIT, Normal and Abnormal Binocular Human Vision

 **Wolfe, PI**

2/88 - 1/89 Educational Foundation of America

 Psychophysical evaluation of a model of motion perception

 **Wolfe Co-Investigator** with E. Adelson

4/93 - 3/95 NIH (F32 EY06492) **Wolfe = Sponsor**

 Individual differences in visual attention.

 (Post-doctoral fellowship for Patricia O'Neill)

1/96 - 1/98 NIH (F32 MH11306) **Wolfe = Sponsor**

 Circadian analysis of selective attention.

 (Post-doctoral fellowship for Todd Horowitz)

7/96 - 12/99 HFSP spell out - Perception of surface properties of objects.

 (Collaboration among 5 PIs: P Jolicoeur - director, S Kosslyn,

 L. Chen, G. Humphreys, W. Cowan, **J.M. Wolfe**)

9/97 - 9/00 NSF SBR-9710498 Post-Attentive Vision; **Wolfe, PI**

7/94 – 7/99 NIH - NHLBI (RO1 - HL52992)

Bright light treatment of shift rotation insomnia

C. Czseisler, PI; **Wolfe, Investigator**

9/99 – 9/02 NIH – NORA ; Circadian adaptation to night work in older people.

C. Czseisler, PI; **Wolfe, Investigator**

12/86 - 7/05 NIH - NEI (R01 EY05087); **Wolfe, PI**

 Psychophysical Structure of Human Vision

8/03-7/07 NIMH (RO1-MH065576) Horowitz-PI, **Wolfe-Investigator**; Control of Dynamic Attention

9/04-9/06 NIH (F32 EY016387) **Wolfe, Sponsor**

 Serial and parallel processing in visual perception

 (Post-doctoral fellowship for David Fencsik)

6/93 – 11/08 Air Force Office of Scientific Research (AFOSR) **Wolfe, PI**

 Toward Guided Search 4.0

9/98 – 11/08 NIMH (RO1 - MH56020) **Wolfe, PI**

 Post-Attentive Vision

10/06 -11/08 Dept of Homeland Security

Science and Technology (S&T) Directorate

Grant Number 06-G-017, **Wolfe, PI**

Visual Dimensions of the Explosive Detection Screener Task

10/09 - 9/10 Harvard Catalyst, Schaumberg, PI; **Wolfe, Investigator** Developing a psychophysical test for dry eye.

9/09 - 9/12 NIH – NEI (3R01EY017001-03S1) **Wolfe, PI**

 ARRA-NIH-NEI National Eye Institute

Supplement to: Prevalence effects in visual search: Theoretical and practical implications

7/03-6/11 NIH-NIMH (R01 MH065576) Horowitz-PI; **Wolfe, Investigator** Control of Dynamic Attention

9/09-12/12 Toshiba Corporation, Seltzer-PI, **Wolfe- section PI**

Novel display strategies for lung nodule detection from CT scans.   $100,000

12/12-11/15 NIH NRSA# 1F32EY022558-01A1 Post-doctoral fellowship: Melissa Vo; **Wolfe, Sponsor**, ended early, 6/14, when Melissa Vo took a faculty position.

01/12-12/14 Google Corporation, **Wolfe-PI**

Rules of visual foraging and visual search $71,000

11/13-11/14 Hewlett-Packard: HP Labs, **Wolfe-PI**

Next Generation Software and Visualization $100,000

**Major Current Research Interests**

Work in the laboratory can be broadly divided into Basic and Clinical/Applied topics unified by a general interest in fundamental processes vision and visual attention. We use a variety of methodologies but we are primarily a human behavioral lab using psychophysical methods.

*Basic Research*

1. Preattentive vision - Studies of the processing of visual stimuli before they are selected by attention for further, more complete analysis. This includes studies of the fate of stimuli that are never selected for attentional scrutiny.
2. Attentional deployment - Studies of the mechanisms by which attention selects specific items. We have a long-standing interest in the guidance of attentional deployment by preattentive information and an interest in the temporal dynamics of search including studies of how to terminate searches when no target can be found. The theoretical core of work in this lab area is our Guided Search model.
3. Post-Attentive vision - Studies of the consequences of attention. Once attention has been deployed to an item and has been removed, what are the persistent effects of that act of attention? These topics, in turn, connect to questions concerning memory for visual stimuli.
4. Searching scenes – How do humans search complex real world scenes for real objects? How does knowledge of the structure and meaning of scenes guide attention?
5. Extended search – Most laboratory search tasks are structured in a series of “trials” lasting a second or so where observers look for one target. Real world search tasks (e.g. shopping) may involve search for multiple instances of multiple targets. Moreover, continuing with the same example, the observer may move, changing the search scene. How do the rules from single trial search apply in these more extended search and foraging tasks? What new rules do we need to account for extended search behavior?
6. Non-selective vision – Some aspects of visual processing do not appear to require selection of individual objects by attention. Sometimes this is called “gist”, “gestalt”, or “holistic” processing. Whatever its name, we believe that this is the product of a “non-selective” processing pathway in the visual system, operating in parallel with the selective, attentionally-bottlenecked pathway that permits object recognition.

*Clinical and Applied Research*

Our civilization has created a host of socially important visual tasks that can be seen as difficult visual searches through complex artificial scenes. Our basic science can be applied to these tasks and, in turn, the specific demands of these tasks stimulate new basic scientific questions.

1. Medical screening – Medical image perception poses a wide variety of visual search problems. For example, screening tasks like mammography or cervical cancer screening are visual search tasks for very low prevalence targets. Having studied the effects of low prevalence in the lab, we now study them in medical settings. We have a particular interest in the effects of prevalence on errors and on the interaction of prevalence effects with Computer Aided Detection (CAD) systems.
2. Airport security – Like medical screening, airport baggage screening is low prevalence search task involving complex stimuli and a strong aversion to miss errors. We are interested in behavioral interventions and modifications of the visual stimuli that could improve performance.
3. Foraging/Extended Search – As noted above, there are numerous other tasks that involve searching massive scenes or images for what may be hard to find targets. Some of these search tasks can be characterized as foraging tasks (c.f. picking berries from a bush, satellite surveillance, or reading a whole body CT of an accident victim). Here we want to know when it is time to move to the next bush, piece of territory, or the next case given that there might always be one more target in the current stimulus.

**Teaching:**

Teaching Award:

1989 Baker Memorial Prize for Undergraduate Teaching, MIT

Undergraduate Teaching:

1981-2009 I taught Introduction to Psychology for many years at MIT and Harvard. This took many forms from the large undergraduate course (MIT 9.00) to a 30-40 person version in the MIT Concourse Program (a Freshman intensive program). Harvard versions had 100-250 students. The audio recordings of lectures from the big MIT 9.00 class were posted on MIT’s OpenCourseware site in 2007 and were in the top 10 on iTunesUniversity (iTunesU) for most of 2007-2008

2001-2010 Psychology and Literature, offered every Spring, 10-36 students/class, co-taught with an instructor from the MIT Writing program. The course had different theme each year and was designed to satisfy MIT Humanities and Writing requirements for MIT undergraduates.

2007, 2008 Perception, Harvard University

2007 Psychology and Free Will, MIT Concourse Program (freshman intensive program)

1994 Human Vision, Brown University with Leslie Welch

1994 Visual Attention, Brown University

1992 Sensation and Perception, Wellesley College

1983-1991 Sensation and Perception (9.35) MIT

1980-1982 Sensation and Perception (9.35), MIT and Wellesley, with R. Held

Graduate Teaching:

1981-1991 Human Vision, MIT (not every year)

1981-1991 Visual Physiology and Psychophysics w/ P Schiller (not every year)

A wide variety of lectures have been provided as part of team-taught graduate survey courses, as well as guest lectures in a variety of other courses, lectures to Ophthalmology residents, etc.

**Graduate Students and Postdoctoral Training:**

Doctoral or Thesis Committee Membership

 Carmen Egido (MIT)

 Shinsuke Shimojo (MIT)

 Joseph Scheuhammer (MIT)

 Kyle Cave (MIT)

 Miri Dick (Weizmann Inst, Israel)

 Josee Rivest (Harvard)

 Belinda Goodenough (U. New South Wales, Australia)

 Greg Zelinsky (Brown)

 Marvin Chun (MIT)

 Nicholas John Reynolds (Australian National U.)

 Vera Maljkovic (Harvard)

 Satoru Suzuki (Harvard)

 Diane Williams (Toronto)

 Robert Cunningham (Boston U.)

 Gregory Gancarz (Boston U.)

 Michael Anes (Boston U.)

 Arni Kristjansson (Harvard)

 Steve Fraconeri (Harvard)

 Richard DeVaul (MIT)

 Todd Herrington (Harvard)

 Ramakrishna Chakravarthi (Harvard)

 Serena Butcher (Harvard)

 Justin Wood (Harvard)

 Michelle Greene (MIT)

 Barbara Hidalgo-Sotelo (MIT)

 Grayden Solman (U. Waterloo, Ontario, Canada)

 Thomas Z Luo (Harvard Medical School)

Graduate Student Supervision as Advisor: Note that the Ophthalmology and Radiology departments at Harvard Medical School do not have PhD programs, so opportunities to serve as the primary advisor for doctoral students are severely limited.

 Gregory Gancarz (Boston University, 1993-1996)

 Jeff Doon (Boston University, 2010-2013, Ennio Mingolla – Primary Advisor)

 Jinxia Zhang (2012 – 2014), Nanjing University of Science and Technology – NUST;

 Primary Advisor: Jing-yu Yang)

Post-doctoral Students (name, followed by current position)

 Patricia O'Neill (1992 - 1995) - Professor – Western Conn. U

 Todd Horowitz (1995 - 1999) - NIH/NCI

 Gary Randall (1998 - 2000) Software development - UK

 Peter Brawn (1998 - 2000) Access Testing Centre, Sydney, Australia

 Aude Oliva (2000 - 2002 ) Senior Research Scientist. – MIT

 Nayantara Santhi (2000 - 2002) U. Surrey, Guilford, UK

 Melina Kunar (2003 - 2006) Lecturer in Psychology, Warwick, UK

 David Fencsik (2003 - 2007) Asst. Prof, Cal. State East Bay

 Evan Palmer (2003 - 2007) Asst. Prof, Wichita State, Kansas

 Anina Rich (2005 - 2007), Asst. Prof., MACCS, Maquarie U, Sydney, NSW, Australia

 Piers Howe (2007 –2010) Asst. Prof, U. Melbourne, Melbourne, Australia

 Ricardo Pedersini (2007 – 2010) Health Outcomes Practice, Kantar Health (1/13)

Ester Reijnen (2008 – 2009) ZHAW Zürcher Hochschule für Angewandte Wissenschaften, Zurich, Switzerland

 Yair Pinto (2008 – 2010) Postdoc, Amsterdam

 Karla Evans (2007 – 2013) Asst. Prof. York, UK

 Michelle Greene (2009 – 2011) Postdoc, Stanford

 Melissa Vo (2009 – 2014), Professor, Goethe University, Frankfurt, Germany

 Trafton Drew (2010 – 2014) Asst. Prof., U. Utah

 Krista Ehinger (2013 –

 Matt Cain (2013 – 2014) Research Psychologist, NSRDEC,

U.S. Army Soldier RD&E Center, Natick, MA

 Preeti Sareen (2013 – 2015)

 Maria Nordfang (2013 – 2014) U. Copenhagen

 Chia-Chen Wu (2015 -

Research Fellows

 Constance Royden (1997) now Associate Professor - Holy Cross, Worcester, MA

Research Associates

Todd Horowitz (1999-2012) Program Director, National Cancer Inst

 Kathy O'Craven (1999-2000) was Asst. Prof. - U Toronto

Visiting Scientists (including Masters students)

 Aline Bompas (2001) – DYCOG Team, Lyon Neuroscience Research Center

Ester Reijnen (Sept-Nov, 2006) Zurich University of Applied Sciences, Switzerland

 Yair Pinto (Dec, 2006 - June, 2007, 2009-2010) U. Amsterdam

 Michael Zehetleitner (Mar-May, 2009) U. Munich

 Patricia Graf (Mar – Sep, 2009), U Munich

 Maria Nordfang (Feb – Aug, 2010, March-May, 2012), U. Copenhagen

 Kazuya Ishibashi (Mar – Sep, 2010), Kobe U, Japan

 Francesca Bocca (July-Sep, 2010), U Munich

Yasuki Noguchi (July – Sept, 2011), Kobe U, Japan

 Lisa Pfanmuller (April – Oct, 2012), U Munich

 Dejan Draskow (May – Oct, 2012, Sept-Oct, 2013), U Munich

 Kilian Semelman (Aug – Sept, 2012, April-June, 2013), U Munich

 Johan Hulleman (Oct – Dec, 2012), U. Manchester, UK

 Warren Reed (Sept – Nov, 2013), U New South Wales, Sydney, NSW, Australia

 Beatriz Gil Gómez de Liaño (June-July, 2014), Universidad Autónoma de Madrid

 (Summer, 2015)

Duygu Sönmez (Feb-July, 2014) Hacettepe University, Ankara, Turkey

Matt Thompson (July-Dec, 2014), U. Queensland, Brisbane, Australia

Carlos Velasco Pinzon (Aug-Sept, 2014), Oxford U

**Outreach:**

The lab routinely hosts summer students, typically from three programs:

Project Success: This is a program at Harvard Medical School to "open the door to biomedical careers" for under-represented minority High School students. My laboratory has hosted and mentored one or two students from this program every summer since 1998.

Research Science Institute of the Center for Excellence in Education: This is an international program giving research experience to talented high school students. My laboratory has hosted and mentored one or two students from this program every summer since 1996. Several have gone on to place well in the Intel/Westinghouse Science Competition.

CELEST: This NSF-funded Science of Learning Center is based at Boston University. CELEST runs a summer program for undergraduates with an emphasis on diversity. We have hosted 1-2 students each year for several years.

**Research Presentations:**

Selected Invited Colloquia:

Brandeis U. Houston

Princeton U. Wesleyan College, CN

Yale U. Harvard U.

Brown U. U. Delaware

NE College of Optometry NIH, Bethesda, MD

Tufts U, Somerville, MA Boston U.

U. Waterloo, Ontario, Canada McMaster U, Ontario, Canada

Johns Hopkins U. U. of Toronto

Ohio State MIT

U. of Utah Shriver Center (Waltham, MA)

Georgetown (Washington, DC) CalTech

U .Southern California Duke (11/99)

Columbia U (12/99) Rutgers U. (2/00)

Boston VA Hospital (12/00) University College London (12/00)

MIT AI lab (1/01) Houston - Optometry (2/01)

Rice U (2/01) Brandeis (4/01)

U. Beijing Graduate School (8/01) Boston U (9/01)

Schepens Eye Research Inst (9/01) Vanderbilt U/ (Nashville, TN, 4/02)

Boston U Med School (Raviola Lecture, 4/02) Wright-Patterson AFB (7/02)

Georgia Tech (10/02) Rockefeller U, NY (1/03)

Concordia U, Montreal (2/03) Harvard Psych (3/03)

MGH-Navy Yard (3/03) MIT-BCS (4/03)

Boston U Beck Memorial Symposium (9/03)

Macquarie U, Sydney, Australia (1/04)

Dartmouth (3/04) Stanford (8/04)

TSA/Atlantic City (10/04) Duke (3/05)

Columbia (3/05) U. Illinois (3/05)

Analogic Corporation (6/05) Northeastern U (9/05)

U Houston (11/05) York U (Toronto) (1/06)

BWH (radiology) (1/06) Harvard (2/06)

MIT (3/06) W. Conn. State (3/06)

Princeton (3/06) Siemens (NJ) (3/06)

MGH(Cytopathology) (5/06) CalTech (1/07)

Mitsubish, Cambridge, MA (1/07) Harvard U (IIC) (2/07)

Colorado, Boulder (2/07) Berkeley, CA (4/07)

UC Davis (4/07) Oxford, UK (9/07)

Novartis, Cambridge, MA (9/07) UT Austin (10/07)

U Toronto (1/08) Analogic Corp, Peabody, MA (1/08)

Columbia U. (2/08) U. Minn (4/08)

Vanderbilt U, Nashville, TN (6/08) BWH (Radiology) (8/08)

BWH (Women’s Imaging ) (9/08) Schepens Eye Res (MA) (9/08)

Mass Eye&Ear (MA) (1/09) Columbia (1/09)

NAS False Alarm EDS meeting, San Francisco (2/09)

National Geospatial Agency visual search meeting, Airlie, VA (2/09)

Queen’s U (Kingston, Ont) (2/09) NYU (4/09)

U. Copenhagen (7/09) Dalhousie U, Halifax, NS (9/09)

NE Col. Optom. Boston (10/09) Boston U. (10/09)

Johns Hopkins (2/10) Yale (3/10)

Johns Hopkins (9/10) MGH Martinos (9/10)

MIT (CSAIL) (9/10) Washington U, St Louis (11/10)

Northwestern, Evanston, IL (11/10) Harvard MBB (3/11)

Harvard Med, Nuc. Medicine (4/11) Indiana U (10/11)

Università degli Studi di Milano-Bicocca, Milan, Italy (10/11)

Harvard Decision Group (2/12) Northeastern U (3/12)

Kansas State U (3/12) U. Maryland (3/12)

Procter & Gamble, Cincinnati (5/12) Harvard Psych (6/12)

Pathology Dept, MGH (6/12) Brandeis (9/12)

Conn. College (9/12) U. of Arizona (1/13)
Hewlett-Packard, Palo Alto, CA (1/13) Mich. State U (1/13)

U. Reykjavik, Iceland (4/13) U. Copenhagen (4/13)

U. Vienna (7/13) U. Queensland, Australia (8/13)

U. Sydney, NSW (8/13) Macquarie U, Sydney, NSW (8/13)

U. New South Wales (8/13) Aptima Inc, Woburn, MA (9/13)

Brown U. (10/13) UCSD (12/13)

Inst for Infocomm Research (I2R), Singapore (1/14)

NUS-Duke Singapore (1/14) Concordia, Montreal (2/14)

Kaiserslautern, Germany (3/14) Ottawa U, Ottawa (4/14)

Free University, Amsterdam (5/14) Amazon, Seattle, WA (6/14)

National Central University, Jhongli City, Taiwan (6/14)

U. Louisville, KY (9/14) U. Madrid (UAM) 10/14

Higher School of Economics, Moscow, 2 talks (10/14)

Goethe U (Frankfurt) (2/15) U. Geneva (2/15)

MGH, Boston (2/15) U. York, UK (7/15)

Invited Conference Presentations

1993 Guided Search 2.0: The upgrade. Human Factors Society

1993 The effects of aging on normal visual function. ARVO Symposium

 on Cataract at the Academy of Ophthalmology Meeting,

1993 A new look at binocular single vision. Academy of Optometry

1994 Extending Guided Search: Why Guided Search needs a preattentive "item map". CW Eriksen Festschrift, U. Illinois, May 20-22

1995 Understanding visual search and visual attention. Invited Address,

 Eastern Psychological Association Annual Meeting, Boston, April 1

1995 Where is Guided Search going? Banff Annual Seminar in Cognitive Science (BASICS) Banff, Alberta, CA, May 1995

1996 Vision: preattentive, attentive and post-attentive. New Fellows Address

 American Psychological Association meeting - Toronto, Aug. 1996

1996 Post-attentive vision.

 International Congress of Psychology - Montreal, Aug. 1996

1997 Visual search: Preattentive processing and the guidance of visual attention.

 and Visual experience: Less than you think, more than you know. at Neuronal basis and psychological aspects of consciousness. -

 Instituti Italiano per gli Studi Filosofici, International School of Biocybernetics, Ischia, Italy, Oct, 1997

1998 HM as a model of vision: Vision as amnesia. - American Psychological Association, Mind, Brain, and Behavior Symp. Aug 14th

 San Francisco.

1998 How quickly they forget: A modest alternative to blinks an blindness. Abstracts of the Psychonomic Society (Dallas, Nov, '98) Abs. #507

1999 Paying attention to attention in the teaching of Psychology. - National Institute on the Teaching of Psychology (NITOP), St. Petersburg, Jan. 1999

1999 Vision, attention, and memory. 3rd annual Vision Research conference. Preattentive and Attentive Mechanisms in Vision (7-8 May): Ft. Lauderdale, FL.

1999 The Deployment of Covert Attention: Two Surprises. NATO RTO/SCI-12 Workshop on Search and Target Acquisition. (21-23 June): Utrecht, The Netherlands

2000 Post-attentive vision and the illusion of perception. Invited paper presented at the Toward a Science of Consciousness, Tuscon, AZ. (April 11, 2000)

2000 The unbinding problem. Invited paper presented at the annual meeting of the Psychonomic Society, New Orleans, LA. (Nov 18, 2000)

2001 Change Blindness Workshop, Duke U, May 26, 2001

2001 From stimulus to perception: "Small is the gate and narrow the road", Invited Plenary speaker at the Fifth annual meeting of the Association for the Study of Consciousness. Duke U, May 28, 2001

2001 Levels of Perceptual Delusion: The problem of post-attentive vision, invited speaker at 'Levels of Perception' conference in honor of Ian Howard, York U., Toronto, Ontario June 19-23, 2001

2002 What are we searching for? Studies in Visual Attention. Presidential Address at Annual meeting of the Eastern Psychological Association, Boston, April 9, 2002

2002 What guides the development of attention in visual search? Old question – new answers. Invited Symposium Talk Meeting of the Psychonomic Society, Kansas City, MO(Nov, 2002).

2003 Modeling visual search: Guided search and its friends. Invited Keynote, Munich Symposium on Visual Search, Holzhausen am Ammersee, Bavaria, Germany (June, 2003).

2003 Speed limits on the top-down guidance of attention. Invited talk, International workshop on Visual Attention. San Miniato, Italy (June, 2003).

2004 Reconfiguring your visual system: How and how fast do you change your mind? Invited talk: Visual Cortex: A variety of viewpoints. Satellite meeting of the Australian Neuroscience Society, (Melbourne, Jan 27, 2004)

2004 A two-pathway architecture for visual attention (w/ Todd Horowitz): Invited Talk: Australian Neuroscience Society, (Melbourne, Jan 29, 2004)

2004 The role of selective attention in human vision: A two pathways account.

Invited Talk: Eighth International Conference on Cognitive and Neural Systems, Boston University on May 19-22, 2004.

2004 What Are We Searching For? Seeking Guidance in the Study of Visual Attention. Invited Plenary Talk: Annual meeting of the American Psychological Association, Honolulu, July 28 – Aug 1, 2004

2005 Guided Search: Invited talk at Modeling Integrated Cognitive Systems (MICS) Saratoga Springs, NY, March 3-5, 2005

2005 How Might the Rules that Govern Visual Search Constrain the Design of Visual Displays? Invited talk - Society for Information Display

May 22-27, 2005 Boston, Massachusetts USA

2006 Searching the Cytological Sample. Invited - Annual meeting of the UK National Association of Cytologists, York, UK April 22, 2006

2006 Attentional time-sharing in multiple object tracking Todd

S. Horowitz, Jeremy M. Wolfe, George A. Alvarez, & David E. Fencsik

Invited Symposium talk – Vision Sciences Society, Sarasota, FL, May 5, 2006

2006 Changing your mind: Psychophysical measurement of the top-down and bottom-up contributions to the guidance of visual attention. Invited Symposium talk – Vision Sciences Society, Sarasota, FL, May 5, 2006

2006 Prevalence effects in visual search: If you don’t find it often, you often don’t find it. Invited talk – MACCS Visual Cognition Meeting, Macquarie U, Sydney, NSW, Australia, June 1-2, 2006

2006 Selective and non-selective pathways in visual search and scene perception. Invited talk – Bio-Inspired Scene Understanding Using a Network of Disparate Sensors, Office of Naval Research, Arlington, VA, , July 25-26, 2006

2007 Guidance of visual search by unlocalized scene properties Invited talk MIT Scene Understanding Seminar (SUNS07), MIT, Cambridge, MA, Feb, 1-2, 2007

2007 How do we see what we "see". Ultrasound/Women's Imaging Course, Westin Hotel, Boston, May 2, 2007

1. Keynote Address: Capturing the user's attention: Insight from the study of human vision. UIST (ACM Symposium on User Interface Software and Technology) , Newport, RI, Oct. 9, 2007.

2008 Highly Efficient Search for Arbitrary Objects in Natural Scenes Invited talk MIT Scene Understanding Seminar (SUNS07), MIT, Cambridge, MA, Feb, 1, 2008

2008 The Puzzling Relationship of Attention and Awareness: The View from Étienne Bonnot de Condillac's Château, Invited talk at Vision, Attention and Emotion Symposium at the Italian Academy of Columbia U, NYC, March 25, 2008

2008 Hiding in plain sight: Visible information that you can't find.

Visualization in the World symposium, Charlotte Visualization Center, U. North Carolina, Chapel Hill, April 24-25, 2008.

2008 Keynote Address: Modeling visual search in real scenes: What will it take? Firbourg/Munich Visual search symposium, Murten, Switrzerland, July 16-19, 2008

2008 Classical and non-classical guidance of attention in visual search. International Congress of Psychology, Berlin, July 22-25, 2008

2008 The role of memory in visual search. APA annual meeting, Boston, Aug. 14-17, 2008

2008 Perceptual Learning, Motor Learning and Automaticity, Amsterdam, Dec. 8-12, 2009

2009 Search in real scenes: The latest mysteries, the latest clues. Invited talk MIT Scene Understanding Seminar (SUNS09), MIT, Cambridge, MA, Jan 30, 2009

2009 The human in the loop. Invited talk Algorithm Detection for Security Applications. Northeastern U., Boston, MA April 23, 2009

2009 Perception: How we “see” things. Invited talk American Roentgen Ray Society 2009 Annual Meeting, Boston, MA, April 29, 2009

2009 Human in the loop: Invited talk: American Society of Neuroradiology meeting, Vancouver May 16-21, 2009

2009 If you don’t find it often, you often don’t find it: The role of target prevalence in visual search tasks. Invited talk: Harvard Medical School

 Department of Ophthalmology, 2009 Update on Ophthalmology, June 20, 2009

2009 Mammography in the blink of an eye. Last-minute invited talk (I replaced a “new investigator” speaker who couldn’t attend the APA Annual Meeting, Toronto, ON, 8/8/09

2009 Keynote Address: When should I leave? Invited talk NGA Academic Research Program (NARP) Symposium, Washington, DC 9/29-30/09

2009 If I can see so much, why do I miss so much. Distinguished contribution award address. New England Psychological Association Annual meeting, Worcester, MA, 10/10/09

2009 Keynote Address: What are we searching for? Adventures in the airport, the hospital, and the lab. Invited talk: IEEE Applied Imagery Pattern Recognition Conference, Washington, DC 10/15-16/09

2009 Pay Attention! Harvard Graduate School of Education faculty-industry leader research project entitled "Learning Innovations Laboratory” Oct 27-28, 2009, Cambridge, MA

2010 How might visual search and visual attention influence sports performance? Sports Vision 2010, Jan 24, 2010, Fenway Park, Boston, MA

2010 A series of three lectures given to the Graduate School consortium of Swiss

 Psychology departments (organized by Joe Krummenacher) April 9-10, 2010

2010 How can it be so easy to find arbitrary objects in natural scenes?

Invited talk: Selection and control mechanisms in perception and action. Meeting at Hebrew University, Inst. for Advanced Studies, April 12-15, 2010, Jerusalem, Israel

2010 Who is looking at that image? The human factor, Invited talk:

Algorithm Development for Security Applications (ADSA) Workshop 3:

Application to Advanced Imaging Technology (Whole Body Imaging)

April 27-28, 2010, Northeastern University

2010 If I am so good at this, why do I miss so much? Invited plenary talk, International Society for Magnetic Resonance in Medicine, May 4, 2010, Stockholm, Sweden

2010 Visual Search Gets Real: From the Lab to the Airport to the Radiology Suite. Invited Keynote Address, Assoc. for Psychological Science (APS), May 27, 2010, Boston, MA

2010 Visual Search: Telluride neuromorphic workshop, July 1-8, 2010, Telluride, CO

2010 On Vision & Attention, National Cancer Institute Basic and Biobehavioral Research Branch Expert Meeting: Sensory Sciences & Embodied Cognition August 4-5, 2010, Washington, DC; 3 presentations

2011 The future of psychology. in “Presidential Perspectives on Psychology” Symposium, Eastern Psychological Association Annual Meeting, March 11, 2011, Boston

2011 “What’s my motivation in this scene? Visual search when it really counts”

59th Nebraska Symposium on Motivation, U. Nebraska, Lincoln, NE, April 7-9, 2011

2011 The Salami at the Airport: Visual Search Gets Real" Saturday, Vision Sciences Society Public Lecture, May 7, 2011 Naples, Florida

2011 Dancing Chickens and iPods Stored in Honey: Why Visual Attention Research Matters. Keynote lecture for WestConn Research Day, Western Connecticut State University, May 13, 2011, Danbury, CT

2011 Visual Search. Tutorial lectures at The 3rd Beijing International Symposium on Computational Neuroscience. Medical School, Tsinghua University, Beijing, China, July 13, 2011

2011 Don't pack your iPod in honey: Lessons from the study of visual search. Keynote address at Asian Conference on Visual Perception, Hong Kong, July 16, 2011

2011 If I can see so much, why do I miss so much? And why should I care? Invited talk at the Mind Matters conference. Procter and Gamble, Cincinnati, Ohio, October, 13, 2011

2011 Visual search for objects. Invited talk at the Rovereto Attention Workshop, Rovereto, Italy, October 28, 2011

2011 How might technology improve human detection performance? Algorithm Development for Security Applications (ADSA) Workshop 6: August 8, 2011, Northeastern University

2012 The rules of guidance in visual search. Keynote address at 1st Indo-Japan Conference on Perception and Machine Intelligence. Kolkata, India Jan 20-21, 2012

2012 Is that a salami in your suitcase? When visual search really matters. Keynote address at the 2012 Great Plains Students’ Psychology Convention, NW Missouri State U, Maryville, Missouri

2012 There is a world elsewhere” Guided Search beyond the computer screen.

 Keynote address at Visual Search and Selective Attention (VSSA III), July 20-23, 2012 at Holzhausen/Ammersee, Germany.

2012 Afloat on a sea of images: How do humans deal with New tools and practices for seeing and learning in medicine? Keynote address at Visualization Tools in Medical Education and Expertise (ViTiMEE) Oct. 22-23, Turku Finland.

2013 If I can see so much, why do I miss so much? Entertainment Software and Cognitive Neurotherapeutics Society Society, ESCoNS 2. Los Angeles, 3/14-17/13

2013 Wolfe, J. M., Cunningham, C. A., & Drew, T. Hybrid visual and memory search. Paper presented at the APS annual meeting in a symposium on Predicting Choice from Exploration, Washington, DC. May 26, 2013

2013 Wolfe, J. M. How selective and non-selective pathways contribute to visual search in scenes. 17th International Conf. on Cognitive and Neural Systems (ICCNS), Boston University, June 4, 2013

2014 Keynote Address: Wolfe, J M Visual Search from Lab to Clinic and Back. SPIE 2014 Medical Imaging, Conference 9037 Image Perception, Observer Performance, and Technology Assessment, San Diego, Feb 15-20, 2014

2014 Keynote Address: Wolfe, J M The Human Search Engine 2014. 56th Conference of Experimental Psychologists (TeaP), Giessen, Germany,March 31-April 2, 2014

2014 Wolfe, J M If I can see so much, why do I miss so much. Invited speech. 17th Conference on Attention and Perception, Chaiyi, Taiwan. June, 25-26, 2014

2014 Wolfe, J M Beyond searching for red vertical lines: New frontiers in visual search. Invited speech. 17th Conference on Attention and Perception, Chaiyi, Taiwan. June, 25-26, 2014

2014 Wolfe, J M Registered Reports and Replications. Reliability and Replication in Psychological Science, Princeton University, April 12, 2014

2014 Wolfe, J M Dancing chickens and gorillas in the lung: If I can see so much, why do I miss so much? Invited talk at The Grand Illusion of Consciousness-4 workshop, organized by the Cognitive Research lab of Higher School of Economics (Moscow) and the Cognitive research group of Saint Petersburg State University.

2015 Wolfe, J M Medical Image Perception I: The human search engine, Invited talk at Fourth Malmö Conference on Medical Imaging, Gothenburg, Sweden, May 28-30, 2015

2015 Wolfe, J M Medical Image Perception II: How much of my time is this image worth? Invited talk at Fourth Malmö Conference on Medical Imaging, Gothenburg, Sweden, May 28-30, 2015

2015 Wolfe, J M., Drew, T, Cunningham, C, Ehinger, K, & Boettcher, S. Hybrid Search: How Long-Term Memories Interact with Visual Search. Psychonomic Society Governing Board Edinburgh Symposium, Edinburgh, July 17, 2015

**Bibliography:**

**Google Scholar profile (reasonably accurate): http://scholar.google.com/citations?user=WQmNzVMAAAAJ&hl=en&oi=ao**

**18,637 citations, h= 59 in June, 2015**

**158 Original Reports, 2 in press, 13 proceedings, 1 textbook, 36 book chapters, 352 published abstracts**

**Original Reports (in refereed publications):**

1. Kinchla, R.A., & Wolfe, J.M. The order of visual processing: "Top-down", "bottom-up", or "middle-out". Perception and Psychophysics 1979; 25: 225-231.

2.Wolfe, J.M., & Held, R. Eye torsion and visual tilt are mediated by different binocular processes. Vision Research 1979; 19: 917-920.

3. Wolfe, J.M., & Owens, D.A. Evidence for separable binocular processes differentially affected by artificial anisometropia. American Journal of Optometry and Physiological Optics 1979; 56: 279-284.

4. Wolfe, J.M. The computer paper illusion. Perception 1979; 8: 347-348.

5. Held, R., Gwiazda, J., Brill, S., Mohindra, I. & Wolfe, J.M. Infant visual acuity is underestimated because near threshold gratings are not preferentially fixated. Vision Research 1979; 19: 1377-1379.

6. Gwiazda, J., Wolfe, J.M., Brill, S., Mohindra, I., & Held, R. Quick assessment of preferential looking acuity in infants. American Journal of Optometry and Physiological Optics 1980; 57 :420-427.

7. Wolfe, J.M., & Held, R. Cyclopean stimulation can influence sensations of self-motion in normal and stereoblind subjects. Perception and Psychophysics 1980; 28: 139-142.

8. Wolfe, J.M., Held, R., & Bauer, J.A. A binocular contribution to the production of optokinetic nystagmus in normal and stereoblind subjects. Vision Research 1981; 21: 587-590.

9. Wolfe, J.M., & Owens, D.A. Is accommodation colorblind? Focusing isoluminant contours. Perception 1981; 10: 53-62.

10. Wolfe, J.M., & Held, R. A purely binocular mechanism in human vision. Vision Research 1981; 21: 1755-1759.

11. Wolfe, J.M., & Held, R. Binocular adaptation that cannot be measured monocularly. Perception 1982; 11: 287-295.

12. Wolfe, J.M., & Held, R. Gravity and the tilt aftereffect. Vision Research 1982; 22: 1075-1078.

13. Wolfe, J.M., Held, R., & Gwiazda, J. A reply to Nachmias. American Journal of Optometry and Physiological Optics 1982; 59: 848.

14. Wolfe, J.M. Hidden visual processes. Scientific American 1983; 248: 94-103.

15. Wolfe, J.M., & Held, R. Shared characteristics of stereopsis and the purely binocular process. Vision Research 1983; 23: 217-227.

16. Wolfe, J.M., Gwiazda, J., & Held, R. The meaning of non-monotonic psychometric functions in the assessment of infant preferential looking acuity. Vision Research 1983; 23: 917-920.

17. Wolfe, J.M. Influence of spatial frequency, luminance, and duration on binocular rivalry and abnormal fusion of briefly present, dichoptic stimuli. Perception 1983; 12: 447-456.

18. Wolfe, J.M. Afterimages, binocular rivalry, and the false fusion phenomenon. Perception 1983; 12: 439-445.

19. Wolfe, J.M. Reversing ocular dominance and suppression in a single flash. Vision Research 1984; 24: 471-478.

20. Wolfe, J.M. Global factors in the Hermann grid illusion. Perception 1984; 13: 33-40.

21. Wolfe, J.M. Short test flashes produce large tilt aftereffects. Vision Research 1984; 24: 1959-1964.

22. Owens, D.A., & Wolfe, J.M. Accommodation for flickering stimuli. Ophthalmological Physiological Optics 1985; 5: 291-296.

23. Wolfe, J.M., & O'Connell, K.M. Fatigue and structural change: Two consequences of visual pattern adaptation. Investigative Ophthalmology and Visual Science 1986;27: 538-543.

24. Wolfe, J.M. Stereopsis and binocular rivalry. Psychological Review 1986; 93: 269-282.

25. Wolfe, J.M. Briefly presented stimuli can disrupt constant suppression and binocular rivalry suppression. Perception 1986; 15: 413-417.

26. Wolfe, J.M. Measurement of chromatic aberration of the human eye: A fast and simple method. Clinical Vision Science1987;1: 281-286.

27. Wolfe, J.M., & O'Connell, K.M. Adaptation of the resting state of accommodation: Dark and light field measures. Investigative Ophthalmology and Visual Science 1987; 28: 992-996.

28. Wolfe, J.M. The vernier aftereffect. Perception 1987; 16: 593-597.

29. Wolfe, J.M. Parallel ideas about stereopsis and binocular rivalry. A reply to Blake and O'Shea. Psychological Review 1988; 95: 155-158.

30. Wolfe, J.M. & Franzel, S.L. Binocularity and visual search. Perception and Psychophysics 1988; 44: 81-93.

31. Wolfe, J.M., Cave, K.R., & Franzel, S.L. Guided Search: An alternative to the Feature Integration Model for visual search. Journal of Experimental Psychology: Human Perception and Performance1989; 15: 419-433.

32. Cave, K.R., & Wolfe, J.M. Modeling the role of parallel processing in visual search. Cognitive Psychology1990; 22: 225-271.

33. Wolfe, J.M., & Pokorny, C.W. Inhibitory Tagging in Visual Search: A failure to replicate. Perception and Psychophysics 1990; 48: 357-362.

34. Wolfe, J.M. Complexity, guided search, and the data. Behavioral and Brain Sciences 1990; 13(3): 457-458.

35. Wolfe, J.M., Yu, K.P., Stewart, M.I., Shorter, A.D., & Cave, K.R. Limitations on the parallel guidance of visual search: Color X Color and Orientation X Orientation conjunctions. Journal of ExperimentalPsychology: Human Perception and Performance1990; 16: 879-892.

36. Newman, N.J., Wolfe, J.M., Stewart, M.I., & Lessell, S. Binocular visual function in patients with a history of monocular optic neuritis. Clinical Vision Science 1991;6(2): 95-107.

37. Wolfe, J.M., Friedman-Hill, S.R., Stewart, M.I., & O'Connell, K.M. The role of categorization in visual search for orientation. Journal of Experimental Psychology: Human Perception & Performance 1992; 18(1): 34-49.

38. Wolfe, J.M., Yee, A., & Friedman-Hill, S.R. Curvature is a basic feature for visual search tasks. Perception 1992; 21: 465-480.

39. Wolfe, J.M. "Effortless" texture segmentation and "parallel" visual search are not the same thing. Vision Research 1992;32(4): 757-763.

40. Wolfe, J.M., & Friedman-Hill, S.R. On the role of symmetry in visual search. Psychological Science 1992; 3(3): 194-198.

41. Wolfe, J.M., & Friedman-Hill, S.R. Visual search for oriented lines: The role of angular relations between targets and distractors. Spatial Vision 1992; 6(3): 199-208.

42. Wolfe, J.M. The parallel guidance of visual attention. Current Directions in Psychological Science 1992; 1(4): 125-128.

43. Wolfe, J.M. Talking to yourself about *What* is *Where.* What is the vocabulary of preattentive vision?Commentary on Jackendorf and Landau. Behavioral and Brain Sciences 1993; 16(2): 254-255.

44. Ishiguchi, A., & Wolfe, J.M. Asymmetrical effects of crossed and uncrossed disparity on stereoscopic capture. Perception 1993; 22: 1403-1413.

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46. Wolfe, J.M. Guided Search 2.0: A revised model of visual search. Psychonomics Bulletin and Review 1994; 1(2): 202-238.

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57. Horowitz, T.S., & Wolfe, J.M. Visual search has no memory. Nature 1998; 394: 575-577.

58. Wolfe, J.M., Klempen, N.L., & Shulman, E.P. Which End is Up? Two representations of orientation in visual search. Vision Research 1999; 39(12): 2075-2086.

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and restricted context in repeated visual search. *Percept Psychophys,* 70(2), 314-328.

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## Thesis

## Wolfe JM On binocular single vision [dissertation]. Cambridge, MA: Massachusetts Institute of TechnologyPublished Abstracts (352)

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305. Suzuki, M., Wolfe, J. M., Horowitz , T. S., & Noguchi, Y. (2012). Masking of target with illusory color-orientation misbinding. Paper presented at the 31st Annual Meeting of the Japanese Psychonomic Society.

306. Cunningham, C. A., & Wolfe, J. M. (2012). Lions or tigers or bears: Oh my! Hybrid visual and memory search for categorical targets. Paper presented at OPAM (Minneapolis, MN, Nov 2012) see also *Visual Cognition, 20*(9), 1024-1027.

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330. Aizenman, A., Drew, T., Georgian-Smith, D., & Wolfe, J. M. (2014). Comparing search strategy in breast tomosynthesis and 2D mammogram: an eye tracking study *paper presented at the Annual Meeting of the Vision Science Society, May 2014, 56.418*

331. Boettcher, S., & Wolfe, J. M. (2014). Searching for the right word: Hybrid visual and memory search for words. *paper presented at the Annual Meeting of the Vision Science Society, May 2014, 53.304*

332. Cain, M. S., Boettcher, S., & Wolfe, J. M. (2014). When Does the Aardvark Move to the Next Anthill? Foraging search with moving targets *paper presented at the Annual Meeting of the Vision Science Society, May 2014, 53.307*

333. Drew, T., & Wolfe, J. M. (2014). Shuffling your way out of change blindness *paper presented at the Annual Meeting of the Vision Science Society, May 2014, 62.26*.

334. Ehinger, K. A., & Wolfe, J. M. (2014). Foraging and navigating in a virtual orchard: Which tree do you visit next? . *paper presented at the Annual Meeting of the Vision Science Society, May 2014, 26:568*.

335. Gil-Gómez de Liaño, B., Drew, M. R., Quiros, M., & Wolfe, J. M. (2014). Updating for free? Span and Updating tasks modulate Visual Search in a similar manner *paper presented at the Annual Meeting of the Vision Science Society, May 2014, 53.305*

336. Hout, M., Walenchok, S., Goldinger, S. D., & Wolfe, J. M. (2014). The low-prevalence effect is due to failures of attention, not premature search termination or motor errors: Evi- dence from passive search and eye-movements *paper presented at the Annual Meeting of the Vision Science Society, May 2014*.

337. Josephs, E. L., Draschkow, D., Vo, M. L., & Wolfe, J. M. (2014). Active visual search boosts memory for objects, but only when making a scene. *paper presented at the Annual Meeting of the Vision Science Society, May 2014, 55.14*.

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342. Wolfe, J. M., Drew, T., & Vo, M. L. (2014). You don’t know where your eyes have been and that could be problem *paper presented at the Annual Meeting of the Vision Science Society, May 2014, 56.417*.

343. Zhang, J., Fougnie, D., Gong, X., Alvarez, G. A., & Wolfe, J. M. (2014). Winter is coming: How humans forage in a temporally structured environment *paper presented at the Annual Meeting of the Vision Science Society, May 2014, 53.301*

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345. Drew, T., Wolfe, J. M., Birdwell, R. L., & Georgian-Smith, D. (2013). Comparing search in breast tomosynthesis and 2D mammograms: an eye-tracking study*. Paper Talk presented at American Roentgen Ray Society : San Diego, CA..*

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347. Wolfe, J. M. (2014). Enhancing Visual Search by GEOINT Analysts. Paper presented at the NGA Academic Research Program (NARP) Symposium and Workshops. *Paper presented at the NGA Academic Research Program (NARP) Symposium and Workshops, Washington, DC, Sept 10-11, 2014*

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349. Becker, S. I., Venini, D., Retell, J. D., & Wolfe, J. M. (2014). Mirror blindness: Our failure to recognize the target in search for mirror-reversed shapes*. paper presented at Psychonomic Soc, Annual Meeting, Long Beach, CA Nov 20-23, 2014.*

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354. Sareen, P., & Wolfe, J. M. (2015). The tree in the bathroom: The role of inconsistent information in understanding the gist of a scene. *paper presented at the Annual Meeting of the Vision Science Society, May 2015*.

355. Aizenman, A., Thompson, M., Ehinger, K. A., & Wolfe, J. M. (2015). Visual search through a 3D volume: Studying novices in order to help radiologists. *paper presented at the Annual Meeting of the Vision Science Society, May 2015*.

356. Ehinger, K. A., & Wolfe, J. M. (2015). Foraging in satellite imagery: When is it time to move to the next map? *paper presented at the Annual Meeting of the Vision Science Society, May 2015*.

357. Cain, M. S., Josephs, E. L., & Wolfe, J. M. (2015). Keep on rolling: Visual search asymmetries in 3D scenes with motion-defined targets. *paper presented at the Annual Meeting of the Vision Science Society, May 2015*.

358. Wolfe, J. M., Cain, M. S., Ehinger, K. A., & Drew, T. (2015). Guided Search 5.0: Meeting the challenge of hybrid search and multiple-target foraging. *paper presented at the Annual Meeting of the Vision Science Society, May 2015*.

359. Gil-Gómez de Liaño, B. T., Drew, T., Rin, D. F., & Wolfe, J. M. (2015). Active working memory tasks interfere with inefficient search but NOT with efficient search, guided by bottom-up salience. *paper presented at the Annual Meeting of the Vision Science Society, May 2015*.