Yoshiaki Tsushima PhD
1-4, Yamadaoka, Sutia city
Osaka, Japan, 565-0871
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ACADEMIC DEGREES / CERTIFICATES

Boston University 2005- 2009 Massachusetts, USA

PhD in Psychology

Major: Brain, Behavior, and Cognition

Ph.D Thesis: The role of attention in perceptual learning (2009)

Boston University 2003- 2004 Massachusetts, USA

Major: Psychology (MA program)

Northeastern University 2002 Massachusetts, USA

Major: Engineering (Took Calculus and Physics courses)

Graduate School of Osaka Educational University Osaka, Japan

MA of Education (2001)

Major: Special Education

Master's Thesis: A study on Assessment of Executive Function

–Relationship to Goldstein's Abstract Attitude- (2001)

Obtained an Advanced Teaching License for special education

Osaka Educational University Osaka, Japan

BA of Education (1999)

Major: Special Education (Coursework included: 2 Teaching Practices)

Independent Seminar: Communication Disorders

Graduation Thesis: The characteristic of High-Functioning Autism (1999)

Obtained 2 Teaching Licenses for Primary school and special education

WORK / RESEARCH EXPERIENCES

National Institute of Information and Communications Technology Osaka, Japan

Research Fellow, April 2015- to date

Osaka University Osaka, Japan

Research Fellow, April 2017- to date

Osaka City University Osaka, Japan
Instructor, April 2017- to date

Wacoal Holdings Corp. Kyoto, Japan
Research adviser, April. 2021- to date

Wacoal Holdings Corp. Kyoto, Japan
Engineering adviser, Oct. 2017- March 2021

NHK Science and Technology Research Labs Tokyo, Japan
Post-Doctoral Fellow, May 2012- April 2015

University of Regensburg Regensburg, Germany
Post-Doctoral Fellow, April 2011- April 2012

Harvard University Massachusetts, USA
Post-Doctoral Fellow, April 2009- March 2011

ATR (Advanced Telecommunication Research Institute) Kyoto, Japan
Member of Computational Neuroscience 2009- 2010

Boston University Massachusetts, USA
Research Volunteer at Vision Sciences Laboratory May 2002- April 2004
Research Assistant at Vision Sciences Laboratory May 2004- December 2008

Massachusetts General Hospital Massachusetts, USA
Research Volunteer at Athinoula A. Martinos Center 2005- to date

ATR (Advanced Telecommunication Research Institute) Kyoto, Japan
Member of Cognitive Neuroscience 2004 Summer

Osaka Educational University Osaka, Japan
Member of Yamashita Laboratory 1999-2001
Member of Takeda Laboratory 1997-1999

OTHER PROFESSIONAL EXPERIENCES

Teaching at Shibaura Institute of Technology 2013, 2014 Tokyo, Japan

Technical program committee of Workshop at UbiComp 2012, "Effects of subliminal perception in Ubiquitous Computing Environments" 2012 Pennsylvania, USA

Refereed abstracts for Inter-Science of Learning Center Student and Post-Doc Conference 2008 Pittsburgh, USA

Teaching Practice at National School for handicapped children 1998 Osaka, Japan

Teaching Practice at a primary school 1997 Osaka, Japan

AWARDS

Boston University Research Assistant Fellowship (2004- 2008)

Japanese Society for the Promotion of Science (2009- 2011)

SELECTED PUBLICATIONS

Tsushima, Sawahata & Komine (2020) Task-dependent fMRI decoder with the power to extend Gabor patch results to Natural images, *Scientific Reports*, Jan 28; 10, 1382

Tsushima, Okada, Kawai, Sumita, Ando & Miki (2020) Effect of illumination on perceived temperature, *PloS One*, Aug 10;15(8):e0236321

Hine and Tsushima (2018) Not explicit but implicit memory is influenced by individual perception style, *PloS One*, 13(1):e0191654. doi: 10.1371/journal.pone.0191654

Tsushima, Komine, Sawahata, and Morita (2016) Undetectable Changes in Image Resolution of Luminance-Contrast Gradients Affect Depth Perception, *Frontiers in Psychology*, 7:242. doi: 10.3389/fpsyg.2016.00242

Tsushima (2015) Relationship Between Depth Perception and Ultra High Definition Images (in Japanese), *The Institute of Image Information and Television Engineers*, VOL.69, NO.6, JULY

Komine, Tsushima, Sawahata, and Hiruma (2015) A Relationship between Image Resolution and Depth Sensation in Shading Image (in Japanese), *NHK R&D report*, 47-54

Tsushima, Komine, Sawahata, and Hiruma (2014) "Higher resolution stimulus facilitates depth perception: MT+ plays a significant role in monocular depth perception", *Scientific Reports*, Oct 20; **4**, 6687

Tsushima (2014) "Weaker signals induces more precise temporal-integration", *Scientific Reports*, April 11; **4**, 4660

Seitz, Protopapas, Tsushima, Vlahou, Gori, Grossberg, and Watanabe (2010) "Unattended exposure to components of speech sounds yields same benefits as explicit auditory training", *Cognition*, Jun; **153**(3):435-443

Tsushima and Watanabe (2009) “Roles of attention in perceptual learning from perspective of psychophysics and animal learning”, *Learning and Behavior,* **37**(2), 126-132

Tsushima, Seitz, and Watanabe (2008) “Task-irrelevant learning occurs only when the irrelevant feature is weak”, *Current Biology,* Vol. 18, No.12, R516-517

Tsushima, Sasaki, and Watanabe (2006) “Greater disruption due to failure of inhibitory control on an ambiguous distractor”, *Science,* 314, 1786-1788

See also Petra Stroerig (2006) “The impact of invisible stimuli”, *Science*, **314**, 1694-1695

Setiz, Nanez, Holloway, Tsushima, and Watanabe (2006) “Two cases requiring external reinforcement in perceptual learning”, *Journal of Vision*, **6**(9), 966-973

SELECTED PRESENTAIONS

Tsushima, Nishino, Ando (2017) “Olfactory stimulation affects motion perception.” ECVP, Berlin, Germany

Tsushima, Sakano, Wada, Ando (2017) “Which regions in the human brain are involved in lightness perception?” APCV, Tainan, Taiwan

Tsushima, Sakano, Ando (2016) “Size of motion display affects precision of motion perception.” ECVP, Belgrade, Serbia

Tsushima (2015) “fMRI Decoding reveals the neural mechanism of monocular depth perception”, Universitat Regensburg, Regensburg, Germany

Tsushima (2014). "The world of peri-threshold" NTT Communication Science Lab. Kanagawa, Japan

Tsushima, Komine, Sawahata, Hiruma (2014) “Higher resolution stimulus facilitates depth perception even when the resolution difference is undetectable.” ECVP, Belgrade, Serbia

Tsushima (2014) “Science of subliminal effect”, Invited Talk, Japan Rorschach Society for the Comprehensive System, Tokyo, Japan

Tsushima (2014) “The factor for depth sensation on ultra-high-definition display”, Invited Talk, JEITA, Tokyo, Japan

Tsushima, Komine, Sawahata, Hiruma (2013) “Higher resolution stimulus enhances depth perception evenwhen the resolution difference is undetectable.”, talk presented, IDW, Hokkaido, Japan

Tsushima, Komine, Hiruma (2013) “Cortical area MT+ plays a role in monocular depth

perception”, ECVP, Bremen, Germany

Tsushima, Komine, Sawahata, Hiruma (2012) “Luminance-contrast smoothness as a depth cue.”, IDW Kyoto, Japan

Tsushima, Komine, Hiruma (2012) “Subthrehold Contrast smoothness as a Depth Cue”, ECVP, Alghero, Italy

Tsushima and Nakayama (2010) “Do weaker signals enhance temporal motion integration?”, SfN, San Diego, USA

Tsushima and Nakayama (2010) “Does an auditory distractor allow humans to behave more randomly?”, VSS, Florida, USA

Tsushima (2010). "Science for subliminal effects", Osaka Medical University, Osaka, Japan

Tsushima (2009). "The effect of sub-threshold signals" talk presented, NHK, Tokyo, Japan

Tsushima (2009). "Unattended exposure to components of speech sounds yields same benefits as explicit auditory training", Honda Research Institute, Saitama, Japan

Tsushima (2008) “The role of attention in task-irrelevant learning”, Universite Paris Decartes Paris, France

Tsushima (2008) “Greater impact by weaker stimuli”, University of Tokyo, Tokyo, Japan

Tsushima (2008) “The role of attention in task-irrelevant learning”, Universitat Regensburg Regensburg, Germany

Tsushima (2008) “The role of attention in task-irrelevant learning”, Columbia University New York, USA

Tsushima (2008) “The role of attention in task-irrelevant learning”, Neuroscience Society, Amsterdam, the Netherlands

Tsushima, Seitz, and Watanabe (2008) “Task-irrelevant perceptual learning occurs only when the irrelevant feature is weak.” VSS, Florida, USA

Tsushima, Sasaki, and Watanabe (2007) “Greater Disruption by Sub-threshold task-irrelevant signals.” VSS, Florida, USA

Tsushima, Sasaki, and Watanabe (2006) “Sub-threshold task-irrelevant motion signals disrupt task performance more severely than supra-threshold signals.” VSS, Florida, USA

Tsushima and Watanabe (2005)“Subliminal task-irrelevant motion signals more severely disrupt RSVP task performance than supraliminal signals.” VSS, Florida, USA

Tsushima (2004) “Does a subliminal task-irrelevant feature have any effect on the task?” ATR Institute Kyoto, Japan

Tsushima (2001) A lecture about human brain system Okayama, Japan

SOCIETY / MEMBERSHIP

European Conference on Visual Perception
Regular member 2011- to date
International Display Workshop
Regular member 2012- to date
Vision Sciences Society
Postdoc member 2010- to date (Student member 2003- 2009)
Japanese Society of Aphasiology (Japan Society for Higher Brain Dysfunction)
Student member 2000 -2001

SPECIAL QUALIFICATIONS

Languages: Japanese, English
Computer Skills: Windows, Mac OS, Unix/Linux, MS office, Illustrator, Matlab, Psyscope,
fMRI: Functional MRI Visiting Fellowship program March 7-11, 2005, Massachusetts General Hospital
Japanese Calligraphy: A level