# Partners in Science 2019

Academic Studies using WorldViz Technology

January 2019 - February 2020





WorldViz is proud to present its fourth and latest Partners in Science Report: In 2019, more than 90 published research studies utilized a WorldViz VR solution. Our previous WorldViz Partners in Science reports from 2015 to 2019 highlighted over 240 previously published studies combined.

Universities around the world are using cutting-edge WorldViz VR solutions to broaden the horizon of scientific understanding. Virtual reality is a powerful research tool allowing for unprecedented experimental control within fully immersive stimuli. This WorldViz Partners in Science Report highlights published studies from our partners - top scientific researchers embracing virtual reality to advance their field.

The 2019 report is organized by scientific field: *Architecture, Computer Science, Engineering, Neuroscience, Physiology, Psychology.* 

Links to the published journal articles for each study along with the authors are provided below. As some of the papers are hosted on SpringerLink and IEEE, you'll need to use your university license to access them.



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Architecture4Computer Science5Engineering12Neuroscience18Physiology30Psychology32About Worldviz47



### **Architecture**

#### **American University of Beirut**

Department of Civil and Environmental Engineering Researcher: Farook Hamzeh | Hisham Abou-Ibrahim | Anthony Daou | Mazen Faloughi

Nadim Kawwa

Title of Paper/Research: 3D visualization techniques in the AEC industry: the possible uses

of holography

Journal: Journal of Information Technology in Construction

Date: April, 2019

#### **Thomas Jefferson University**

College of Architecture and the Built Environment Researcher: G. Ozcan-Deniz

Title of Paper/Research: Expanding applications of virtual reality in construction industry:

A multiple case study approach

Journal: Journal of Construction Engineering, Management & Innovation 2019 Volume 2

Issue 2 Pages 48-66

Date: June, 2019

China University of Mining and Technology

Architecture

**Yancheng Institute of Technology** 

Urban and Rural Planning

Researcher: Liang Sun | Weikang Tan | Yanbing Ren | Xiang Ji | Zhi Wang | Pei Li

Title of Paper/Research: Research on Visual Comfort of Underground Commercial Streets'

Pavement in China on the Basis of Virtual Simulation

Journal: International Journal of Pattern Recognition and Artificial Intelligence

Date: July, 2019



**Tohoku University** 

Graduate School of Information Sciences

Researcher: Kazumichi Matsumiya

Title of Paper/Research: Separate multisensory integration processes for ownership and

<u>localization of body parts</u> **Journal:** Scientific Reports

Date: January, 2019

Yonsei University College of Medicine
Institute of Behavioral Science in Medicine

**Hanyang University** 

Department of Computer Science

Researcher: Hyojung Eom | Kwanguk (Kenny) Kim | Sungmi Lee | Yeon-Ju Hong | Jiwoong Heo

Jae-Jin Kim | Eunjoo Kim

Title of Paper/Research: <u>Development of Virtual Reality Continuous Performance Test</u>

Utilizing Social Cues for Children and Adolescents with Attention-Deficit/Hyperactivity Disorder

Journal: Cyberpsychology, Behavior, and Social Networking

Date: March, 2019

**Indian Institute of Technology, Kanpur** 

Department of Electrical Engineering

**University of Warwick** 

Department of Computer Science

Researcher: Zeeshan Akhtar | Tanaya Guha

Title of Paper/Research: Computational Analysis of Gaze Behavior in Autism During Interacti-

on with Virtual Agents

Journal: ICASSP 2019 - 2019 IEEE International Conference on Acoustics, Speech and Signal

Processing (ICASSP) **Date:** May, 2019



#### **Indian Institute of Technology Gandhinagar**

Center for Cognitive Science Electrical Engineering Department Researcher: Pradeep Raj Krishnappa Babu I Uttama Lahiri

**Title of Paper/Research:** Classification approach for understanding implications of emotions

using eye-gaze

Journal: Journal of Ambient Intelligence and Humanized Computing

Date: May, 2019

#### **Miami University**

Department of Computer Science and Software Engineering Armstrong Institute for Interactive Media Studies Researcher: Eric R. Bachmann | Eric Hodgson | Cole Hoffbauer | Justin Messinger

Title of Paper/Research: Multi-User Redirected Walking and Resetting Using Artificial Poten-

tial Fields

Journal: IEEE Transactions on Visualization and Computer Graphics, vol. 25, no. 5

Date: May, 2019

#### **University of Minnesota**

Computer Science

Researcher: Christianah Adigun

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Title of Paper/Research: Designing Immersive Virtual Environments for Cognitive Learning

and Spatial Memory Tasks

Journal: University of Minnesota Digital Conservancy



Fraunhofer Institute for Communication, Information Processing and Ergonomics

**Human Factors** 

Institute for Occupational Safety and Health of the German Social Accident Insurance

Accident Prevention

Researcher: Mara Kaufeld | Peter Nickel

Title of Paper/Research: Level of Robot Autonomy and Information Aids in Human-Robot

<u>Interaction Affect Human Mental Workload – An Investigation in Virtual Reality</u>

Journal: HCII 2019. Lecture Notes in Computer Science, vol 11581

Date: June, 2019

#### **Heriot-Watt University**

School of Mathematical & Computer Sciences

Researcher: Ben Kenwright

Title of Paper/Research: Virtual Reality: Where Have We Been? Where Are We Now? and

Where Are We Going?

Journal: Preprints 2019

Date: July, 2019

#### Indian Institute of Technology, Gandhinagar

Computer Science and Engineering
Cognitive Science
Electrical Engineering

Researcher: Pradeep Raj Krishnappa Babu | Sujata Sinha | Arvind Roshaan S. | Uttama Lahiri Title of Paper/Research: Virtual Reality Based Collaborative Multiplayer Task Platform for Children with Autism

Journal: Proceedings of the 10th International Conference on Computing, Communication and

Networking Technologies (ICCCNT)

**Date:** July, 2019



#### **University of Washington**

Human Photonics Lab, Department of Mechanical Engineering

#### **University of Texas**

Medical Branch and Shriners Children's Hospital

#### **University of Washington**

Department of Rehabilitation Medicine

#### **University of Florence**

Department of Health Sciences

#### **University Jaume**

Department of Basic and Clinical Psychology and Psychobiology

#### **King Abdulaziz University**

Department of Computer Science

#### **Effat University**

Department of Computer Science

#### **University of Washington**

Department of Radiology

### University of Washington Harborview Medical Center

Department of Anesthesiology

**Researcher:** Hunter G. Hoffman | Walter J. Meyerll | Sydney A. Drever | Maryam Soltani Barbara Atzori | Rocio Herrero | Wadee Alhalabi | Todd L. Richards | Sam R. Sharar Mark P. Jensen | David R. Patterson

Title of Paper/Research: Virtual Reality Distraction to Help Control Acute Pain during Medical

#### **Procedures**

Journal: Virtual Reality for Psychological and Neurocognitive Interventions

Date: August, 2019

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**Miami University** 

Computer Science
Psychology & Interactive Media

Researcher: Justin Messinger | Eric Hodgson | Eric R. Bachmann

Title of Paper/Research: Effects of Tracking Area Shape and Size on Artificial Potential Field

Redirected Walking

Journal: 2019 IEEE Conference on Virtual Reality and 3D User Interfaces (VR)

Date: August, 2019

**Simon Fraser University** 

School of Interactive Arts + Technology

Bonn-Rhein-Sieg University of Applied Sciences

Institute of Visual Computing

Researcher: Thinh Nguyen-Vo | Bernhard E. Riecke | Wolfgang Stuerzlinger | Duc-Minh Pham

Ernst Kruijff

Title of Paper/Research: NaviBoard and NaviChair: Limited Translation Combined with Full

Rotation for Efficient Virtual Locomotion

Journal: IEEE Transactions on Visualization and Computer Graphics

Date: August, 2019

**Graduate School of Vanderbilt University** 

Computer Science

Researcher: Haojie We

Title of Paper/Research: Using a virtual environment to evaluate pedestrian street crossing

decisions at the a traffic roundabout

Journal: The Faculty of the Graduate School of Vanderbilt University

Date: August, 2019



#### **Indian Institute of Technology Gandhinagar**

Centre for Cognitive and Brain Sciences
Department of Electrical Engineering

Researcher: Vishav Jyoti I Uttama Lahiri

Title of Paper/Research: <u>Human-Computer Interaction based Joint Attention cues</u>: <u>Implications on functional and physiological measures for children with autism spectrum disorder</u>

Journal: Computers in Human Behavior

Date: October, 2019

#### **University of Utah**

Department of Psychology

#### **Vanderbilt University**

Department of Electrical Engineering and Computer Science

Researcher: Sarah H. Creem-Regehr | Devin M. Gill | Grant D. Pointon | Bobby Bodenheimer

Jeanine K. Stefanucci

Title of Paper/Research: Mind the Gap: Gap Affordance Judgments of Children, Teens, and

Adults in an Immersive Virtual Environment

Journal: Frontiers in Robotics and Al

Date: October, 2019

#### **China Agricultural University**

College of Information and Electrical Engineering

#### **York University**

Department of Electrical Engineering and Computer Science

Researcher: Jingbo Zhao I Robert S. Allison

Title of Paper/Research: Comparing head gesture, hand gesture and gamepad interfaces for

answering Yes/No questions in virtual environments

Journal: Virtual Reality 2019

Date: December, 2019



#### **York University**

Department of Electrical Engineering and Computer Science

Researcher: Jingbo Zhao I Robert Allison

Title of Paper/Research: The Role of Binocular Vision in Avoiding Virtual Obstacles While

Walking

Journal: IEEE Transactions on Visualization and Computer Graphics

Date: January, 2020



#### **Beijing Normal University**

Research Center of Geospatial Cognition and Visual Analytics, and Faculty of Geographical Science

#### **Technical University of Munich**

Liqiu Meng Department of Civil, Geo and Environmental Engineering Researcher: Weihua Dong | Tianyu Yang | Hua Liao | Liqiu Meng

Title of Paper/Research: How does map use differ in virtual reality and desktop-based

environments?

Journal: International Journal of Digital Earth

Date: February, 2019

#### **Eindhoven University of Technology**

Department of Industrial Engineering & Innovation Sciences

Researcher: Peter A. M. Ruijten | Raymond Cuijpers

Title of Paper/Research: Do Not Let the Robot Get too Close: Investigating the Shape and

Size of Shared Interaction Space for Two People in a Conversation

Journal: Information 2020, 11(3), 147

Date: March, 2019

#### **Osaka University**

Graduate School of Engineering Cybermedia Center Researcher: Muhammad Hegazy | Kensuke Yasufuku | Hirokazu Abe

Title of Paper/Research: Immersive Gamified Environments (IGE) as an Approach to Assess

Subjective Qualities of Daylighting in Architectural Spaces

Journal: 2019 IEEE Conference on Virtual Reality and 3D User Interfaces

Date: March, 2019



**Indian Institute of Technology Gandhinagar** 

Cognitive Science
Electrical Engineering

Researcher: Vishav Jyoti | Uttama Lahiri

Title of Paper/Research: Virtual Reality based Joint Attention Task Platform for Children with

<u>Autism</u>

Journal: IEEE Transactions on Learning Technologies

Date: April, 2019

**University of Lisbon** 

Department of Civil Engineering

Researcher: Alcínia Zita Sampaio

Title of Paper/Research: Using VR technology to improve BIM: maintenance and

construction

Journal: Laval Virtual VRIC 2019 Proceedings

Date: April, 2019

**Sharda University** 

Department of Mechanical Engineering

**Researcher:** Anuj Kumar Sehgal | Vineet Kumar | Nitesh Kumar | Aman Gupta **Title of Paper/Research:** Assembly of Mechanical Parts in Virtual Environment

Journal: Advances in Engineering Design

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Date: April, 2019



**Colorado School of Mines** 

Department of Mining Engineering

Researcher: E.Isleyen | H.S.Duzgun

Title of Paper/Research: Use of virtual reality in underground roof fall hazard assessment

and risk mitigation

Journal: International Journal of Mining Science and Technology Volume 29, Issue 4

Date: June, 2019

**Minjiang University** 

School of Physics and Electronic Information Engineering Researcher: Xiaobin Lin | Jianxing Wang | Yingwu Zhou | Chen Lin

Title of Paper/Research: Enhancing the Design and Innovation Capability - A Study on

the Effectiveness of Augmented Reality and Big Data

**Journal:** Atlantis Press- 3rd International Conference on Economics and Management, Education, Humanities and Social Sciences (EMEHSS 2019) Advances in Social Science, Education

and Humanities Research, volume 325

Date: June, 2019

#### Universidad de Oviedo

Departamento de Construcción e Ingeniería de Fabricación

Departamento de Geología

Researcher: Santiago Martín | Hodei Uzkeda | Josep Poblet | Mayte Bulnes

**Title of Paper/Research:** Geological interpretation of two virtual outcrops of deformed Palaeozoic rocks (NW Iberian Peninsula) using 3D stereo VDT in a computer assisted virtual environment (CAVE™)

Journal: Journal of Iberian Geology volume 45

**Date:** July, 2019



Indian Institute of Technology, Gandhinagar

Centre for Cognitive and Brain Sciences
Department of Electrical Engineering

Researcher: Vishav Jyoti | Uttama Lahiri

Title of Paper/Research: Design of Intelligent Artificial Agents: Its Application in Joint

Attention Task for Children with Autism

Journal: International Conference on Intelligence Science ICIS 2019: Computer and

Information Science **Date:** August, 2019

**National Information Processing Institute** 

Researcher: Zbigniew Bohdanowicz | Jarosław Kowalski | Katarzyna Abramczuk Grzegorz Banerski | Daniel Cnotkowski | Agata Kopacz | Paweł Kobylinski | Aldona Zdrodowska Cezary Biele

**Title of Paper/Research:** <u>Is a Virtual Ferrari as Good as the Real One? Children's Initial</u> Reactions to Virtual Reality Experiences

**Journal:** International Conference on Human Systems Engineering and Design: Future Trends and Applications IHSED 2019: Human Systems Engineering and Design II pp 397-403

Date: August, 2019

Indian Institute of Technology Gandhinagar Indian Institute of Technology Kharagpur University at Buffalo Researcher: Deepesh Kumar | Nirvik Sinha | Anirban Dutta | Uttama Lahiri

Title of Paper/Research: Virtual reality-based balance training system augmented with

operant conditioning paradigm

Journal: BioMedical Engineering OnLine volume 18, Article number: 90 (2019)

Date: August, 2019



#### **University of Queensland**

School of Information Technology and Electrical Engineering Centre for Health Services Research Researcher: Aaron J Snoswell | Centaine L Snoswell

Title of Paper/Research: Immersive Virtual Reality in Health Care: Systematic Review of

Technology and Disease States

Journal: JMIR Biomedical Engineering (JBME), Vol 4, No.1

Date: September, 2019

NED University of Engineering & Technology Karachi

Virtual Reality Center

Researcher: Dr. Farrukh Arif

Title of Paper/Research: Utilizing Immersive Visualization For Infrastructure Management

Decision-Making and Technical Capacity Building

Journal: VR in Focus - Newsletter of NED University VR Center

Date: September, 2019

**Texas A&M University at Qatar** 

Petroleum Engineering, Research Computing

**Researcher:** Albertus Retnanto | Mohamed Fadlelmula | Nayef Alyafei | Ali Sheharyar **Title of Paper/Research:** <u>Active Student Engagement in Learning-Using Virtual Reality</u>

Technology to Develop Professional Skills for Petroleum Engineering Education

Journal: Society of Petroleum Engineers

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Date: September, 2019



**University of Burgos** 

Department of Civil Engineering

Researcher: David Checa | Andres Bustillo

Title of Paper/Research: A review of immersive virtual reality serious games to enhance

learning and training

Journal: Multimedia Tools and Applications volume 79

Date: December, 2019

**IIT Gandhinagar** 

Department of Electrical Engineering

Researcher: Adyasha Dash I Uttama Lahiri

Title of Paper/Research: Design of Virtual Reality-Enabled Surface Electromyogram-Triggered

**Grip Exercise Platform** 

Journal: IEEE Transactions on Neural Systems and Rehabilitation Engineering (Volume: 28,

Issue: 2, Feb. 2020)

Date: December, 2019



Technische Universität Berlin

Biological Psychology and Neuroergonomics

**University of California San Diego** 

Center for Advanced Neurological Engineering

Researcher: Evelyn Jungnickel | Lukas Gehrke | Marius Klug | Klaus Gramann

Title of Paper/Research: MoBI—Mobile Brain/Body Imaging

Journal: Neuroergonomics, The Brain at Work and in Everyday Life

**Date:** 2019

### Coimbra Institute for Biomedical Imaging and Translational Research

Institute for Nuclear Sciences Applied to Health, Brain Imaging Network

#### **University of Coimbra**

Laboratory of Biostatistics and Medical Informatics, Institute for Biomedical Imaging and Life Sciences, Faculty of Medicine

#### **Coimbra Hospital and University Centre**

Division of Movement Disorders, Department of Neurology Researcher: Nadia Canario | Mario Sousa | Fradique Moreira | Isabel Catarina Duarte

Francisco Oliveira | Cristina Januario | Miguel Castelo-Branco

**Title of Paper/Research:** Impulsivity across reactive, proactive and cognitive domains in Parkinson's disease on dopaminergic medication: Evidence for multiple domain impairment

Journal: PLoS ONE 14(2)

Date: February, 2019

#### **University of Muenster**

Otto Creutzfeldt Center for Cognitive and Behavioral Neuroscience

Researcher: Luke Bölling | Niklas Stein | Frank Steinicke | Markus Lappe

Title of Paper/Research: Shrinking Circles: Adaptation to Increased Curvature Gain in

Redirected Walking

Journal: IEEE Transactions on Visualization and Computer Graphics, vol. 25

Date: February, 2019



#### **University of Coimbra**

Institute for Biomedical Imaging and Life Sciences, Faculty of Medicine Institute of Nuclear Sciences Applied to Health, Coimbra Institute for Biomedical Imaging and Life Sciences (CIBIT) Institute of Systems and Robotics, Department

#### **Maastricht University**

Department of Cognitive Neuroscience

of Electrical and Computer Engineering

Researcher: Bruno Direito I João Lima I Marco Simões I Alexandre Sayal I Teresa Sousa

Michael Lührs | Carlos Ferreira | Miguel Castelo-Brancoab

Title of Paper/Research: Targeting dynamic facial processing mechanisms in superior

temporal sulcus using a novel fMRI neurofeedback target

Journal: Neuroscience, Volume 406, 15 May 2019

Date: February, 2019

#### **Indian Institute of Technology Gandhinagar**

Department of Electrical Engineering

Researcher: Adyasha Dash | Anand Yadav | Anand Chauhan | Uttama Lahiri

Title of Paper/Research: <u>Kinect-Assisted Performance-Sensitive Upper Limb Exercise</u>

Platform for Post-stroke Survivors

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Journal: Frontiers in Neuroscience - Neural Technology

Date: March, 2019



#### **University College London**

Institute of Behavioural Neuroscience Institute of Cognitive Neuroscience

#### **University of Kent**

School of Psychology

#### **University of the Basque Country**

School of Psychology

#### **Durham University**

Department of Psychology

#### **University of East Anglia**

School of Psychology

#### **University Hospital Magdeburg**

Institute of Cognitive Neurology and Dementia Research (IkND)

#### **Max Planck Institute**

Biological Cybernetics

Researcher: Amir-Homayoun Javadi | Eva Zita Patai | Eugenia Marin-Garcia | Aaron Margolis

Heng Ru M. Tan | Dharshan Kumaran | Marko Nardini | Will Penny | Emrah Duze

Peter Dayan | Hugo J. Spiers

Title of Paper/Research: Prefrontal Dynamics Associated with Efficient Detours and

Shortcuts: A Combined Functional Magnetic Resonance Imaging and Magnetoencephalography

Study

Journal: Journal of Cognitive Neuroscience, Volume 31, No. 8

Date: June, 2019

#### **Radboud University Nijmegen**

Institute for Brain, Cognition and Behaviour

Researcher: Lieke Heil | Olympia Colizoli | Egbert Hartstra | Johan Kwisthout | Stan van Pelt

Iris van Rooij I Harold Bekkering

Title of Paper/Research: Processing of Prediction Errors in Mentalizing Areas

Journal: Journal of Cognitive Neuroscience

Date: June, 2019

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#### **University College London**

Institute of Cognitive Neuroscience

Researcher: Sujatha Krishnan-Barman I Antonia F. de C.Hamilton Title of Paper/Research: Adults imitate to send a social signal

Journal: Cognition, Volume 187

Date: June, 2019

#### **University of Coimbra**

Coimbra Institute for Biomedical Imaging and Life Sciences

Faculty of Medicine

**Polytechnic Institute of Coimbra** 

Researcher: Joao Castelhano | Isabel C. Duarte | Carlos Ferreira | Joao Duraes

Henrique Madeira | Miguel Castelo-Branco

Title of Paper/Research: The role of the insula in intuitive expert bug detection in computer

code: an fMRI study

Journal: Brain Imaging and Behavior

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#### **Northeastern University**

Department of Physical Therapy, Movement, and Rehabilitation Science

### The Jerzy Kukuczka Academy of Physical Education

Department of Human Motor Behavior

#### **Lafayette College**

Psychology Department

#### **Northeastern University**

Department of Electrical and Computer Engineering

#### **New Jersey Institute of Technology**

Department of Biomedical Engineering

#### **Rutgers University**

IDepartment of Rehabilitation and Movement Science

#### **Northeastern University**

Department of Bioengineering

Researcher: Mariusz P. Furmanek | Luis F. Schettino | Mathew Yarossi | Sofia Kirkman

Sergei V. Adamovich I Eugene Tunik

Title of Paper/Research: Coordination of reach-to-grasp in physical and haptic-free virtual

<u>environments</u>

Journal: Journal of NeuroEngineering and Rehabilitation

Date: June, 2019

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**University of Bremen** 

Cognitive Neuroinformatics

Researcher: Jaime Leonardo Maldonado Cañón | Thorsten Kluss | Christoph Zetzsche Title of Paper/Research: Adaptivity of End Effector Motor Control Under Different Sensory

Conditions: Experiments With Humans in Virtual Reality and Robotic Applications

Journal: Frontiers in Robotics and Al

Date: July, 2019

#### **University College London**

Institute of Behavioural Neuroscience

**University of Kent** 

School of Psychology

#### **University of the Basque Country**

School of Psychology

#### **University College London**

Institute of Cognitive Neuroscience

#### **Durham University, Durham, UK**

Department of Psychology

#### **University of East Anglia**

School of Psychology

#### **University Hospital Magdeburg**

Institute of Cognitive Neurology and Dementia Research

#### **Max Planck Institute**

Biological Cybernetics

Researcher: Amir-Homayoun Javadi | Eva Zita Patai | Eugenia Marin-Garcia | Aaron Margois Heng-Ru M. Tan | Dharshan Kumaran | Marko Nardini | Will Penny | Emrah Duzel | Peter Dayan Hugo J. Spiers

**Title of Paper/Research:** Backtracking during navigation is correlated with enhanced anterior cingulate activity and suppression of alpha oscillations and the 'default-mode' network

**Journal:** Proceedings of the Royal Society B: Biological Sciences

Date: July, 2019

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#### **West Virginia University**

Department of Neuroscience
Department of Human Performance

#### **Imperial College London**

Department of Medicine

Researcher: R. L. Hardesty | P. H. Ellaway | V. Gritsenko

Title of Paper/Research: Distinct Proximal and Distal Corticospinal Signals Embed Limb

<u>Dynamics Through the Modulation of Stiffness</u> **Journal:** bio Rxiv, The Preprint Server for Biology

Date: August, 2019

#### **University of British Columbia**

School of Kinesiology

### University of British Columbia and Vancouver Coastal Health

Pacific Parkinson's Research Centre, Djavad Mowafaghian Centre for Brain Health

#### **York University**

School of Kinesiology and Health Science

#### **Radboud University Medical Center**

Department of Neurology, Donders Institute for Brain, Cognition and Behaviour

#### **University of British Columbia**

Djavad Mowafaghian Centre for Brain Health International Collaboration on Repair Discoveries Researcher: Elizabeth P. Pasman I Martin J. McKeown I Taylor W. Cleworth

Bastiaan R. Bloem I J. Timothy Inglis I Mark G. Carpenter

Title of Paper/Research: A Novel MRI Compatible Balance Simulator to Detect Postural

Instability in Parkinson's Disease

Journal: Frontiers in Neurology

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Date: August, 2019



German Center for Neurodegenerative Diseases (DZNE)

Aging and Cognition Research Group

Otto-von-Guericke-University Magdeburg

Department of Neurology, Medical Faculty

**Center for Behavioral Brain Sciences** 

Researcher: J. P. Shine I J. P. Valdés-Herrera I C. Tempelmann & T. Wolbers

Title of Paper/Research: Evidence for allocentric boundary and goal direction information

in the human entorhinal cortex and subiculum

**Journal:** Nature Communications volume 10, Article number: 4004 (2019)

Date: September, 2019

#### **Maastricht University**

Department of Cognitive Neuroscience

#### **University of Copenhagen**

Department of Neuroscience and Pharmacology

#### **Yale University**

Department of Radiology and Biomedical Imaging

#### **University College London**

Department of Computer Science

Researcher: Kiki van der Heijden | Elia Formisano | Giancarlo Valente | Minye Zhan

Ron Kupers | Beatrice de Gelder

Title of Paper/Research: Reorganization of Sound Location Processing in the Auditory Cortex

of Blind Humans

Journal: Cerebral Cortex Date: September, 2019

#### **Rochester Institute of Technology**

Chester F. Carlson Center for Imaging Science

Researcher: Kamran Binaee | Gabriel Diaz

Title of Paper/Research: Movements of the eyes and hands are coordinated by a common

predictive strategy

Journal: Journal of Vision October 2019, Vol.19, 3.

Date: October, 2019

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**University College London** 

Institute of Cognitive Neuroscience

**Goldsmiths University of London** 

Computing Department

Researcher: Joanna Hale | Jamie A. Ward | Francesco Buccheri | Dominic Oliver

Antonia F. de C. Hamilton

Title of Paper/Research: Are You on My Wavelength? Interpersonal Coordination in Dyadic

**Conversations** 

Journal: Journal of Nonverbal Behavior volume 44

Date: October, 2019

**Rochester Institute of Technology** 

Chester F. Carlson Center for Imaging Science

Researcher: Kamran Binaee

Title of Paper/Research: Study of Human Hand-eye Coordination Using Machine Learning

Techniques in a Virtual Reality Setup

Journal: Rochester Institute of Technology, ProQuest Dissertations Publishing, 2019

Date: October, 2019

**University College London** 

Institute of Cognitive Neuroscience
Wellcome Trust Centre for Neuroimaging

Researcher: Tian Ye | Stephen M Fleming | Antonia F. de C. Hamilton

Title of Paper/Research: Spontaneous attribution of false beliefs in adults examined using a

signal detection approach

Journal: Quarterly Journal of Experimental Psychology

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Date: November, 2019



### German Center for Neurodegenerative Diseases (DZNE)

Aging & Cognition Research Group

**University of Leipzig** 

Institute of Psychology

**Otto-von-Guericke University** 

Center for Behavioural Brain Sciences

Otto-von-Guericke-University

Medical Faculty, University Hospital Magdeburg Researcher: Xiaoli Chen | Paula Vieweg | Thomas Wolbers

**Title of Paper/Research:** Computing distance information from landmarks and self-motion cues - Differential contributions of anterior-lateral vs. posterior-medial entorhinal cortex in

<u>humans</u>

Journal: Neurolmage, Volume 202

Date: November, 2019

#### **Kennedy Krieger Institute**

Center for Movement Studies

The Johns Hopkins University School of Medicine

Department of Biomedical Engineering

The Johns Hopkins University School of Medicine

Department of Physical Medicine and Rehabilitation

The Johns Hopkins University School of Medicine

Department of Neuroscience

Researcher: Kevin A. Day | Kendra M. Cherry-Allen | Amy J. Bastian

Title of Paper/Research: Individualized feedback to change multiple gait deficits in chronic

<u>stroke</u>

Journal: Journal of NeuroEngineering and Rehabilitation

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Date: December, 2019



**Kennedy Krieger Institute** 

Center for Movement Studies

**Johns Hopkins University School of Medicine** 

Department of Biomedical Engineering
Department of Neuroscience

Researcher: Kevin A. Day | Amy J. Bastian

Title of Paper/Research: Providing low-dimensional feedback of a high-dimensional

movement allows for improved performance of a skilled walking task

Journal: Scientific Reports

Date: December, 2019

#### **Kobe University**

Japan Society for the Promotion of Science, and Graduate School of Human Development and Environment

#### **University College London**

Institute of Cognitive Neuroscience

Researcher: Tian Ye | Fumikazu Furumi | Daniel Silva | Antonia Hamilton

Title of Paper/Research: Taking the perspectives of many people: humanization matters

Journal: PsyArXiv PrePrints

Date: January, 2020

Institute of Biology II, RWTH Aachen University

Molecular and Systems Neurophysiology

Researcher: Alexander Bexter | Björn M. Kampa

Title of Paper/Research: Mazemaster: An open-source python-based software package for

controlling virtual reality experiments

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Journal: bioRxiv

Date: January, 2020

#### **University of Muenster**

Otto Creutzfeldt Center for Cognitive and Behavioral Neuroscience Researcher: Luke Bölling | Niklas Stein | Frank Steinicke | Markus Lappe

Title of Paper/Research: Shrinking Circles: Adaptation to Increased Curvature Gain in

Redirected Walking

Journal: IEEE Transactions on Visualization and Computer Graphics, vol. 25

Date: February, 2020

University of Louisville Indian Institute of Technology Gandhinagar Vanderbilt University Researcher: Karla Conn Welch | Uttama Lahiri | Zachary E. Warren | Nilanjan Sarkar Title of Paper/Research: A System to Measure Physiological Response During Social

Interaction in VR for Children With ASD

Journal: Computational Models for Biomedical Reasoning and Problem Solving

Date: April, 2019

Indian Institute of Technology, Gandhinagar

Cognitive Science
Electrical Engineering

Researcher: Vishav Jyoti | Sanika Gupta | Uttama Lahiri

Title of Paper/Research: Virtual Reality based Avatar-mediated Joint Attention Task for Child-

ren with Autism: Implication on Performance and Physiology

Journal: 2019 10th International Conference on Computing, Communication and Networking

Technologies (ICCCNT)

Date: June, 2019

#### **Virginia Commonwealth University**

Department of Physical Therapy

**Université Laval** 

Department of Neuroscience

**Ohio University, College of Arts & Sciences** 

Department of Psychology

Researcher: Susanne M. van der Veen | Martine Bordeleau | Peter E. Pidcoe

Christopher R. France | James S. Thomas

Title of Paper/Research: Agreement Analysis between Vive and Vicon Systems to Monitor

Lumbar Postural Changes

Journal: Sensors 2019, 19(17), 3632

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Date: August, 2019

#### Leibniz Research Centre for Working Environment and Human Factors

Department of Ergonomics

Researcher: Thorsten Plewan I Gerhard Rinkenauer

Title of Paper/Research: Allocation of attention in 3D space is adaptively modulated by rela-

tive position of target and distractor stimuli

Journal: Attention, Perception, & Psychophysics

Date: November, 2019



**National Institutes of Health** 

Social and Behavioral Research Branch

**National Human Genome Research Institute** 

Basic Biobehavioral and Psychological Sciences Branch

**National Cancer Institute** 

Researcher: Susan Persky | William D. Kistler | William M.P. Klein | Rebecca A. Ferrer

Title of Paper/Research: Internet Versus Virtual Reality Settings for Genomics Information

**Provision** 

Journal: Cyberpsychology, Behavior, and Social Networking VOL. 22, NO. 1

Date: January, 2019

# National Research Council Canada Brown University

Department of Cognitive, Linguistic, and Psychological Sciences

#### **University of Wisconsin-Madison**

Department of Psychology and Wisconsin Institute for Discovery Researcher: Max Kinateder | William H.Warren | Karen B.Schloss

Title of Paper/Research: What color are emergency exit signs? Egress behavior differs from

verbal report

Journal: Psychology of Violence

Date: February, 2019

#### **University of Guelph**

Psychology Department

Researcher: Barbara A. Morrongiello | Mackenzie Seasons | Katherine McAuley

Stephanie Koutsoulianos

Title of Paper/Research: Child pedestrian behaviors: Influence of peer social norms and

correspondence between self-reports and crossing behaviors

Journal: Journal of Safety Research, Volume 68

Date: February, 2019



**Tsinghua University** 

Department of Psychology

Researcher: Jichengsi Guo | Jianping Huang | Xiaoang Wan

Title of Paper/Research: Influence of route decision-making and experience on human path

integration

Journal: Acta Psychologica, Volume 193

Date: February, 2019

**University of Zurich** 

Department of Geography
Department of Humanities

Researcher: Sascha Credé | Tyler Thrash | Christoph Hölscher | Sara Irina Fabrikant

Title of Paper/Research: The acquisition of survey knowledge for local and global landmark

configurations under time pressure

Journal: Spatial Cognition & Computation- An Interdisciplinary Journal

Volume 19, 2019 - Issue 3 Date: February, 2019

University of California, Santa Barbara

Department of Psychological and Brain Sciences

Researcher: Peri Gunalp | Tara Moossaian | Mary Hegarty

Title of Paper/Research: Spatial perspective taking: Effects of social, directional, and

interactive cues

Journal: Memory & Cognition volume 47

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Date: February, 2019



#### **University of Guelph**

Psychology Department

Researcher: Barbara A. Morrongiello I Mackenzie Seasons I Katherine McAuley

Stephanie Koutsoulianos

Title of Paper/Research: Child pedestrian behaviors: Influence of peer social norms and

correspondence between self-reports and crossing behaviors

Journal: Journal of Safety Research, Volume 68

Date: February, 2019

#### **Iowa State University**

Department of Psychology

Researcher: Jonathan W. Kelly | Brenna C. Klesel | Lucia A. Cherep

Title of Paper/Research: Visual Stabilization of Balance in Virtual Reality Using the HTC Vive

Journal: ACM Journals, ACM Transactions on Applied Perception, Vol. 16, No. 2

Date: April, 2019

#### University of Osnabrück

Cognitive Science

Researcher: Viviane Clay | Peter König | Sabine König Title of Paper/Research: Eye Tracking in Virtual Reality

Journal: Journal of Eye Movement Research

- 34 -

Date: April, 2019



University of Campania L. Vanvitelli

Department of Psychology

Researcher: Gennaro Ruggiero I Mariachiara Rapuano I Tina Iachini

Title of Paper/Research: Perceived temperature modulates peripersonal and interpersonal

spaces differently in men and women

Journal: Journal of Environmental Psychology

Date: April, 2019

**Justus Liebig University Giessen** 

Experimental Psychology

Researcher: Harun Karimpur | Yaniv Morgenstern | Katja Fiehler

Title of Paper/Research: Facilitation of allocentric coding by virtue of object-semantics

Journal: Scientific Reports

Date: April, 2019

**University of Leeds** 

School of Psychology Centre for Immersive Technologies Researcher: Jack Brookes | Matthew Warburton | Mshari Alghadier | Mark Mon-Williams

Faisal Mushtag

Title of Paper/Research: Studying human behavior with virtual reality: The Unity Experiment

**Framework** 

**Journal:** Behavior Research Methods (2019)

- 35 -

Date: April, 2019



**Hanyang University** 

Department of Computer Science

**Yonsei University** 

Department of Psychiatry and Institute of Behavioral Science in Medicine

**University of California (UC) Davis** 

School of Education and MIND Institute

Researcher: Seung-hun Seo | Eunjoo Kim | Peter Mundy | Jiwoong Heo

Kwanguk (Kenny) Kim

Title of Paper/Research: Joint Attention Virtual Classroom: A Preliminary Study

Journal: Psychiatry Investigation

Date: April, 2019

**University of Guelph** 

Department of Psychology

Researcher: Barbara A Morrongiello | Michael Corbett | Stephanie Koutsoulianos

Avianna Foster

Title of Paper/Research: Effects of Peers on Child Pedestrian Behaviors in a Virtual Traffic

Context

Journal: Journal of Pediatric Psychology, Volume 44, Issue 4

Date: May, 2019

**Oregon State University** 

School of Psychological Science

University of California, Santa Barbara

Department of Psychological and Brain Sciences

**Swiss Federal Institute of Technology** 

Department of Information Technology and Electrical Engineering

Researcher: Kristen L. Macuga | Andrew C. Beall | Roy S. Smith | Jack M. Loomis

Title of Paper/Research: Visual control of steering in curve driving

Journal: Journal of Vision

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**Date:** May, 2019



**University of Guelph** 

Psychology

Researcher: Barbara A Morrongiello | Michael Corbett | Stephanie Koutsoulianos

Avianna Foster

Title of Paper/Research: Effects of Peers on Child Pedestrian Behaviors in a Virtual Traffic

Context

Journal: Journal of Pediatric Psychology, Volume 44, Issue 4

Date: May, 2019

**University of Milan** 

Department of Philosophy

**University of Padua** 

Department of Philosophy, Sociology, Education, and Applied Psychology Researcher: Samuele laquinto | Giuseppe Spolaore

Title of Paper/Research: Outline of a logic of knowledge of acquaintance

Journal: Analysis, Volume 79, Issue 1

Date: June, 2019

**Cardiff University** 

School of Psychology

Researcher: Danlu Cen | Simon K. Rushton | Seralynne D. Vann

Title of Paper/Research: Neither the richness of optic flow, nor the precision of heading

judgements, predicts walking trajectories

- 37 -

Journal: PsyArXiv PrePrints



#### **University of Southern California**

Division of Biokinesiology and Physical Therapy

#### **Simon Fraser University**

Department of Biomedical Physiology and Kinesiology

Researcher: Natalia Sánchez | Surabhi N. Simha | J. Maxwell Donelan | James M. Finley

Title of Paper/Research: Taking advantage of external mechanical work to reduce metabolic

cost: the mechanics and energetics of split-belt treadmill walking

Journal: The Journal of Physiology

Date: June, 2019

University of California, Santa Barbara

Geography

Researcher: Elizabeth Chrastil | Grace Nicora | Andrew Huang

Title of Paper/Research: Vision and body-based cues make equal contributions to path

integration in a novel homing task

Journal: Cognition Date: June, 2019

**University of Leeds** 

School of Psychology Institute of Transport Studies Researcher: Richard Wilkie | Callum Mole | Oscar Giles | Natasha Merat | Richard Romano

Gustav Markkula

Title of Paper/Research: Cognitive Load During Automation Affects Gaze Behaviours and

Transitions to Manual Steering Control

- 38 -

Journal: The 10th International Driving Symposium on Human Factors in Driver Assessment,

Training, and Vehicle Design



#### **University of Leeds**

School of Psychology Institute of Transport Studies Researcher: Callum Mole | Oscar Giles | Natasha Merat | Richard Romano | Gustav Markkula

Richard Wilkie

Title of Paper/Research: Where You Look During Automation Influences Where You Steer

After Take-Over

Journal: Proceedings of the Tenth International Driving Symposium on Human Factors in

Driver Assessment, Training and Vehicle Design

Date: June, 2019

German Center for Neurodegenerative Diseases University of Alberta

Department of Psychology

Researcher: Ruojing Zhou | Weimin Mou

Title of Paper/Research: Boundary shapes guide selection of reference points in goal

localization

Journal: Attention, Perception, & Psychophysics

Date: June, 2019

#### **University of Leeds**

Department of Linguistics & Phonetics

#### **University of Surrey**

School of Psychology

#### Université de Lille

Psychologie : Interactions Temps Émotions Cognition

#### **University Of Sheffield**

Department of Psychology

Researcher: Jamie Lingwood | Emily Farran | Yannick Courbois | Mark Blades

Title of Paper/Research: Using virtual environments to investigate wayfinding in adults

Journal: OSF Preprints

- 39 -



**University of Texas at Austin** 

School of Information

**Stanford University** 

Department of Communication
Graduate School of Education

**University of Wisconsin-Whitewater** 

Department of Psychology

**Researcher:** Jakki O. Bailey | Jeremy N. Bailenson | Jelena Obradovic | Naomi R. Aguiar **Title of Paper/Research:** Virtual reality's effect on children's inhibitory control, social

compliance, and sharing

Journal: Journal of Applied Developmental Psychology, Volume 64

Date: July, 2019

**National Human Genome Research Institute** 

Social & Behavioral Research Branch

Researcher: Haley E. Yaremych | William D. Kistler | Niraj Trivedi | Susan Persky

Title of Paper/Research: Path Tortuosity in Virtual Reality: A Novel Approach for Quantifying

Behavioral Process in a Food Choice Context

Journal: Cyberpsychology, Behavior, and Social Networking Vol. 22, No. 7

Date: July, 2019

**Durham University** 

Department of Psychology

Birkbeck, University of London

Department of Psychological Sciences

**University of Oxford** 

Department of Experimental Psychology, Medical Sciences Division

**University of Texas at Austin** 

Center for Learning and Memory

Researcher: James Negen | Brittney Chere | Laura-Ashleigh Bird | Ellen Taylor

Hannah E.Roome | Samantha Keenagh | Lore Thaler | Marko Nardin

Title of Paper/Research: Sensory cue combination in children under 10 years of age

Journal: Cognition Date: July, 2019



**University of Michigan** 

School of Kinesiology
Department of Biomedical Engineering

Researcher: Brian J. Diefenbach | David B. Lipps

Title of Paper/Research: Quantifying the three-dimensional joint position sense of the

shoulder

Journal: Human Movement Science, Volume 67

Date: August, 2019

**University of Bern** 

Institute of Psychology

**Swiss Distance Learning University** 

Researcher: Stefan Weber | Fred W. Mast | David Weibel

Title of Paper/Research: Body size illusions influence perceived size of objects: a validation

of previous research in virtual reality

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Journal: Virtual Reality Date: August, 2019

#### **Georgia Institute of Technology**

School of Psychology

#### **Vanderbilt University**

Department of Psychology
Electrical Engineering and Computer Science

#### The Pennsylvania State University

Department of Geography

**Researcher:** Qiliang He | Timothy P. McNamara | Bobby Bodenheimer | Alexander Klippel **Title of Paper/Research:** Acquisition and transfer of spatial knowledge during wayfinding. **Journal:** Journal of Experimental Psychology: Learning, Memory, and Cognition, 45(8)

Date: August, 2018



**University of Alberta** 

Department of Psychology

Researcher: Lin Wang | Weimin Mou

Title of Paper/Research: Effect of room size on geometry and features cue preference during

reorientation: Modulating encoding strength or cue weighting

Journal: Quarterly Journal of Experimental Psychology

Date: September, 2019

**Oregon State University** 

School of Psychological Science

Researcher: Joshua D.Bell I Kristen L.Macuga

Title of Paper/Research: Goal-directed aiming under restricted viewing conditions with

confirmatory sensory feedback

Journal: Human Movement Science Volume 67

Date: September, 2019

#### **Durham University**

Department of Psychology

#### **University of Verona**

Department of Neurosciences, Biomedicine and Movement Sciences

### Korea Advanced Institute of Science and Technology

Department of Bio and Brain Engineering

Researcher: James Negen | Angela Sandri | Sang Ah Lee | Marko Nardini

Title of Paper/Research: Boundaries in spatial cognition: Looking like a boundary is more

important than being a boundary.

- 42 -

Journal: Journal of Experimental Psychology. Learning, Memory and Cognition

Date: September, 2019



**George Mason University** 

Department of Psychology

**Georgetown University** 

Department of Psychology

**Researcher:** Eva Robinson | Kelly Michaelis | James C.Thompson | Martin Wiener **Title of Paper/Research:** Temporal and spatial discounting are distinct in humans

Journal: Cognition, Volume 190

Date: September, 2019

Johannes Gutenberg-Universität Mainz

Psychologisches Institut, Abteilung Allgemeine Experimentelle Psychologie Researcher: Christoph von Castell | Heiko Hecht

Title of Paper/Research: Wall patterns influence the perception of interior space

Journal: Quarterly Journal of Experimental Psychology

Date: October, 2019

**Capital Normal University** 

College of Psychology

Researcher: Aili Shi | Yamin Wang | Nan Ding

Title of Paper/Research: The effect of game—based immersive virtual reality learning environment on learning outcomes: designing an intrinsic integrated educational game for

pre-class learning

**Journal:** Interactive Learning Environments

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Date: October, 2019



#### **Technische Universität**

Faculty of Psychology

Researcher: Rebekka S. Schubert | Maarten L. Jung | Jens R. Helmert

Title of Paper/Research: Size matters: How reaching and vergence movements are

influenced by the familiar size of stereoscopically presented objects

Journal: PLOS One. A Peer-Reviewed, Open Access Journal

Date: November, 2019

#### **Durham University**

Department of Psychology

Researcher: James Negen | Laura Bird | Marko Nardini

Title of Paper/Research: An Adaptive Cue Selection Model of Allocentric Spatial Reorientation

Journal: bioRxiv

Date: November, 2019

#### **University Mainz**

Department of Psychology
Department of Child and Adolescent
Psychiatry and Psychotherapy

#### **University Bochum**

LWL University Hospital Hamm for Child and Adolescent Psychiatry, Psychotherapy and Psychosomatic Researcher: Robin Welsch | Heiko Hecht | David R. Kolar | Michael Witthöft

Tanja Legenbauer

Title of Paper/Research: Body image avoidance affects interpersonal distance perception:

A virtual environment experiment

Journal: European Eating Disorders Review

- 44 -

Date: December, 2019



**Tel Aviv University** 

The School of Psychological Sciences
The Sagol School of Neuroscience

Researcher: Noa Simhi | Galit Yovel

Title of Paper/Research: Dissociating identity from gait: A virtual reality study of the role of

dynamic identity signatures in person recognition

Journal: PsyArXiv PrePrints

Date: December, 2019

University of Campania L. Vanvitelli

Department of Psychology

Researcher: G Ruggiero | Ruotolo, F | Iachini, T.

Title of Paper/Research: Being Like You Improves My Comfort Space: Social Human-Virtual

**Confederates Interactions** 

Journal: CEUR Workshop Proceedings

Date: 2019

#### **Maastricht University**

Clinical Psychological Science, Faculty of Psychology and Neuroscience

**Catholic University of Leuven** 

Leuven Institute of Criminology

Researcher: Daniël van Helvoort | Emil Stobbe | Richard Benning | Henry Otgaar

Vincent van de Ven

Title of Paper/Research: Physical exploration of a virtual reality environment: Effects on

spatiotemporal associative recognition of episodic memory

Journal: Memory and Cognition

- 45 -

Date: January 2020

#### **Southwest University**

Key Laboratory of Personality and Cognition, Faculty of Psychological Science

#### **Leiden University**

Cognitive Psychology Unit, Institute for Psychological Research and Leiden Institute for Brain and Cognition Researcher: Ke Ma | Bernhard Hommel

Title of Paper/Research: Metacontrol and body ownership: divergent thinking increases the

virtual hand illusion

Journal: Psychological Research volume 84

Date: February, 2020



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From training teams to selling complex products, visualizing architectural projects and workflows, designing product prototypes, and studying social behavior, WorldViz empowers today's leading enterprises to create immersive virtual worlds and experiences.

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