

# Curriculum Vitae

Prof. Dr. Walter F. Bischof  
scians GmbH  
Moosgasse 16  
3305 Iffwil  
E-mail: wfb@scians.ch

## Education

1982                      Ph.D. Psychology Universität Bern

## Employment

2015 -                      Director, scians Ltd.  
2014 -                      Adjunct Professor, Psychology, University of British Columbia, Canada  
                                 Professor Emeritus, Computing Science, University of Alberta, Canada  
2000 – 2014                Professor of Computing Science, University of Alberta  
1986 – 2000                Professor of Psychology, University of Alberta, Canada

## Recent Grants

2015-2020                Eye Movements in Perception, Interaction and Visual Guidance of Actions  
                                 (NSERC Discovery grant)  
2011                        Surgical Skill Evaluation System (NSERC RTI)  
2010                        Investigating the Use of a Multi-Touch Table-Top in Upper Extremity  
                                 Rehabilitation Programs (Glenrose Hospital Foundation Grant)  
2011-2013                3D Multimedia in Mobile Handheld Edutainment: Impacts and Benefits  
                                 on Critical Thinking and Learning Performance (SSHRC Strategic  
                                 Research Grant)  
2009-2014                Attention in Spatial Navigation (NSERC Discovery grant)  
2008-2011                Decision Support for Multi-mode Oil Sands Operations (NSERC  
                                 Collaborative Research and Development Grant, with F. Forbes, S.  
                                 Ruecker and J. Ducette)

## Recent Publications in Refereed Journals

Furlan, R.M.M.M., Santana, G.A., Bischof, W.F., Motta, A.R., & de Las Casas, E.B. (2019). A new method for tongue rehabilitation with computer games: Pilot Study. *Journal of Oral Rehabilitation*, 46, 518-525.

Gurtner, L. M., Bischof, W. F., & Mast, F. W. (2019). Recurrence quantification analysis of eye movements during mental imagery. *Journal of Vision*, 19(1):17, 1–17, Doi: 10.1167/19.1.17.

Street, C. N. H., Bischof, W. F., & Kingstone, A. (2018). Perspective taking and theory of mind in hide and seek. *Attention, Perception & Psychophysics*. Doi: 10.3758/s13414-017-1446-y.

Street, C. N. H., Bischof, W. F., Vellido, M. A., & Kingstone, A. (2015). Inferring others' hidden thoughts: Smart guesses in a low diagnostic world. *Journal of Behavioral Decision Making*. Advance online publication. Doi: 10.1002/bdm.1904.

Anderson, N., Anderson, F., Kingstone, A., and Bischof, W. F. (2015). A Comparison of Scanpath Comparison Methods, *Behavior Research Methods*, 47(4), 1377-1392.

Annett, M., Gupta, A., and Bischof, W.F. (2014) Exploring and understanding unintended touch during direct pen interaction. *ACM Transactions on Computer-Human Interaction*, 21(5), DOI 10.1145/267415.

Wu, D. W.-L., Anderson, N. C., Bischof, W. F., and Kingstone, A. (2014). Temporal dynamics of eye movements are related to differences in scene complexity and clutter, *Journal of Vision*, 14(9), 1-14.

Wu, D. W.-L., Bischof, W. F., and Kingstone, A. (2014). Natural gaze signaling in a social context. *Evolution & Human Behavior*, 35(3), 211-218.

Anderson, F., and Bischof, W. F. (2014). Augmented reality improves myoelectric prosthesis training. *International Journal on Disability and Human Development*, 13(3), 349-354.

Chisholm, J. D., Chapman, C. S., Amm, M., Bischof, W. F., Smilek, D., and Kingstone, A. (2014). A cognitive ethology study of first- and third-person perspectives, *PLOS One*, PLOS One, 9(3): e92696. doi:10.1371/journal.pone.0092696.

Wu, D. W.-L., Bischof, W. F., Anderson, N., Jacobson, T., and Kingstone, A. (2014). The influence of personality on social attention. *Personality and Individual Differences*, 60, 25–29.

Wu, D. W.-L., Bischof, W. F., and Kingstone, A. (2013). Looking while eating: The importance of the consequences of social interaction in social attention. *Scientific Reports*, 3,2356, DOI:10.1038/srep02356.

Wu, D. W.-L., Chapman, C. S., Walker, E., Bischof, W. F., and Kingstone, A. (2013). Tapping in shared space results in improved synchrony. *Journal of Experimental Psychology: Human Perception and Performance*, 39, 1218-1223.

Dalrymple, K., Gray, A. K., Perler, B. L., Birmingham, E., Bischof, W. F., Barton, J. J. S., and Kingstone, A. (2013). Eying the eyes in social scenes: Evidence for top-down control of stimulus selection in simultanagnosia. *Cognitive Neuropsychology*, 30, 25-40.

Bolanzadeh, N., Bischof, W. F., Flores-Mir, C., and Boulanger, P. (2013). Multi-modal Registration of 3D Maxillofacial CBCT and Photogrammetry Data over Time, *DentoMaxillofacial Radiology*, 42(2), 22027087 (41 pages).

Anderson, N., Bischof, W. F., Laidlaw, K. E. W., Risko, E. F., and Kingstone, A. (2013). Recurrence Quantification Analysis of Eye Movements, *Behavior Research Methods*, 45(3), 842-856.

Bilash, O., Cheng, I., Wong, V., Basu, A., and Bischof, W.F. (2012) Foreign language learning on mobile devices: implications for Alberta's teachers. *Notos*, 12, 25-40.

Cheng, I., Sen, A., Basu, A., Bischof, W. F., and Bilash, O. (2012). An integrated edu-media framework for collaborative learning on handhelds. *Advances in Education Research*, (6 pages).

Anderson, F., Birch, D.W., Boulanger, P., and Bischof, W. F. (2012). Sensor Fusion to Analyze and Evaluate Laparoscopic Surgical Skill, *Computer Aided Surgery*, 17, 269-283.

Mesa-Munera, E., Ramirez-Salazar, J. F., Bischof, W. F., Boulanger, P., and Branch, J. W. (2012). Influence of Material Model and Modeling Space on the precision of a finite element simulations to predict the deformation of silicone rubber. *Revista avances en Sistemas e Informatica*, 8, 63-70.

Moreno, C. A., Bischof, W. F., and Hoover, H. J. (2012). Interactive visualization of dependencies. *Computers & Education*, 58, 1296-1307.

### **Recent Conference Papers**

Furlan, R. M. M. M., Santana, G. A., Amaral, M. S., Nascimento, M. H. M., Yang, R., Bischof, W. F., Motta, A. R., and Las Casas, E. B. (2014). Jogos computacionais controlados pela língua: uma nova abordagem para reabilitação em motricidade orofacial [Computational Games controlled by language: a new approach to rehabilitation in orofacial myology], 22 Congresso Brasileiro de Fonoaudiologia.

Annett, M. K., Anderson, F., Bischof, W. F., and Gupta, A. (2014). The pen is mightier: Understanding stylus behavior while inking on tablets. *Proceedings of Graphics Interface 2014*, pp. 193-200.

Annett, M. K., Ng, A., Dietz, P., Bischof, W. F., and Gupta, A. (2014). How low should we go? Understanding the perception of latency while inking. Proceedings of Graphics Interface 2014, pp. 167-174.

Ng, A., Annett, M.K., Dietz, P., Gupta, A., and Bischof, W. F. (2014). In the Blink of an Eye: Investigating Latency Perception during Stylus Interaction. Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems, Toronto, Canada, April 26 – May 1, 2014, pp. 1103-1112.

Wu, D. W.-L., Jakobsen, T., Anderson, N.C., Bischof, W. F., and Kingstone, A. (2013). Why we should not forget about the non-social world: Subjective preferences, exploratory eye-movements, and individual differences. 35th Annual Meeting of the Cognitive Science Society, Berlin, Germany, July 31 – August 3, 2013, pp. 3801-3806.

Anderson, F. and Bischof, W. F. (2013). Learning and performance with gesture guides, ACM SIGCHI Conference on Human Factors in Computing Systems, Paris, France, April 27 – May 2, 2013, pp. 1109-1118.

Annett, M. K., and Bischof, W. F. (2013). Your Left Hand Can Do It Too! Leveraging Intermanual, Symmetric Transfer on Touchscreens, ACM SIGCHI Conference on Human Factors in Computing Systems, Paris, France, April 27 – May 2, 2013, pp. 1119-1128.

Cheng, I., Bilash, O., Bischof, W. F., and Basu, A. (2012). Next Generation Handheld Graphics Edutainment for Learning in an Adaptive Student Centric Environment: Constraints and Benefits. Eurographics, May 13 – 18, 2012, Cagliari, Sardinia, Italy. CDROM, 6 pages.

Annett, M. K., Anderson, F., and Bischof, W. F. (2012). User perspectives on multi-touch tabletop therapy. International Conference on Disability, Virtual Reality and Associated Technologies, Laval, France, September 10 – 12, 2012, 255-260.

Anderson, F., and Bischof, W. F. (2012). Augmented reality improves myoelectric prosthesis training. Venue: International Conference on Disability, Virtual Reality and Associated Technologies, Laval, France, September 10 – 12, 2012, CDROM, 9 pages.

### **Recent Book Chapters**

Bischof, W. F., Anderson, N. C. C., & Kingstone, A. (2019). Temporal methods for eye movement analysis. In: C. Klein & U. Ettinger (Eds.). Eye Movement Research: An Introduction to its Scientific Foundations and Applications. Berlin: Springer, pp. 407 - 448.

Bischof, W.F., Anderson, N. C., and Kingstone, A. (2016). Temporal Methods for Eye Movement Analysis, in: C. Klein & U. Ettinger (Eds.) An Introduction to the Scientific Foundations of Eye Movement Research and its Applications, Springer, in press.

Annett, M., Anderson, F., and Bischof, W. F. (2016). Activities and Evaluations for Technology-based Upper Extremity Rehabilitation, in: F. Hu, J. Lu, and T.Zu (Eds.) Virtual Reality Enhanced Robotic Systems for Disability Rehabilitation (pp. 307-338), Hershey, PA: IGI Global.

Anderson, F., and Bischof, W. F. (2014). Augmented reality improves myoelectric prosthesis training. In P. M. Sharkey and J. Merrick (Eds.) Virtual Reality: Rehabilitation in Motor, Cognitive and Sensorial Disorders (pp. 81-94), New York: Nova Science Publishers.

### **Recent Presentations**

Anderson, N. C., Bischof, W. F. and Kingstone, A. (2019). Beyond the Screen's Edge Part 1: Eye and Head Movements While Looking at Rotated Scenes in VR. Proceedings of the 20<sup>th</sup> European Conference on Eye Movements, Alicante, August 18-22, 74.

Bischof, W. F., Anderson, N. C., Doswell, M. T., and Kingstone, A. (2019). Beyond the Screen's Edge Part 2: Eye and Head Movements While Looking at Rotated Panoramic Scenes in VR. Proceedings of the 20<sup>th</sup> European Conference on Eye Movements, Alicante, August 18-22, 75.

Anderson, N. C., Bischof, W. F. and Kingstone, A. (2018). Turning the (Virtual) World Around: Saccade Biases and Head Rotation When Looking at Natural Scenes in a Virtual Environment. Poster presented at the 59th Annual Meeting of the Psychonomic Society, New Orleans, November 15-18, 298.

Bischof, W. F., Solman, G., and Groner, M. (2015). Generalized Recurrence Analysis of Eye Movements. European Conference on Eye Movements, Vienna, August 16-21, Journal of Eye Movement Research, 8(4), 63.

Street, C. N. H., Bischof, W. F., Vadillo, M., and Kingstone, A. (2015). Why we believe more than disbelieve: an error or a smart move? Symposium IX of the Society for Applied Research in Memory and Cognition, Victoria, B.C., Canada, 24-27 June 2015.

Furlan, R. M. M. M., Santana, G. A., Silva, C. N., Motta, A. R., Bischof, W. F., and Las Casas, E. B. (2014). Novo método para reabilitação da força e da mobilidade da língua associado a jogos digitais. Poster presented at the 22º Congresso Brasileiro de Fonoaudiologia, Joinville, SC, Brazil, October 8-11.

Furlan, R. M. M. M., Santana, G. A., Silva, C. N., Motta, A. R., Bischof, W. F., and Las Casas, E. B. (2014). New method for rehabilitation of tongue strength and mobility. Poster presented at the 7<sup>th</sup> World Congress of Biomechanics, Boston, July 6-11.

Snyder, J. J., and Bischof, W. F. (2013). Inhibition of return in everyday search. Poster presented at the 54th Annual Meeting of the Psychonomic Society, Toronto, November 14-16, 210.

Snyder, J. J., and Bischof, W. F. (2013). Looking for the key to inhibition of return in everyday search. Proceedings of the Canadian Society for Brain, Behaviour and Cognitive Science, Calgary, June 7-9, p. 17.

Bischof, W. F., Anderson, N. C., Dalrymple, K. A., and Kingstone, A. (2013). Recurrence Quantification Analysis of Abnormal Eye Movement Behaviour. European Conference on Eye Movements, Lund, August 11-16, Journal of Eye Movement Research, 6(3), 112.

Anderson, N. C., Anderson, F., Bischof, W. F., and Kingstone, A. (2013). Scanpath comparison methods: Compared. European Conference on Eye Movements, Lund, August 11-16, Journal of Eye Movement Research, 6(3), 113.

Walker, E. J., Bischof, W. F., and Kingstone, A. (2013). Take my hand: The temporal and spatial coordination of handshaking. Joint Action Meeting of the Cognitive Science Society, Berlin, July 27-29, Online Proceedings.

Anderson, F., Annett, M., and Bischof, W. F. (2012). Tabletops in Motion: The Kinetics and Kinematics of Interactive Surface Physical Therapy. Proceedings of the 2012 CHI Extended Abstracts, 2351-2356.

Anderson, N.C., Laidlaw, K.E.W., Bischof, W., and Kingstone, A. (May 2012). Recurrence Quantification Analysis of Scan Patterns. Annual meeting of the Vision Science Society, Naples, Florida, United States.

For a complete list of publications see <http://www.cs.ualberta.ca/~wfb/publications.html>