June 18, 2019

Curriculum vitae

CONCETTA F. ALBERTI

Education and Academic Career:

Sept 2016- present	**Post-doctoral Fellow, NIH funded (K99/R00 program),** Translational Vision Lab (Supervisor: P.J. Bex), Department of Psychology, Northeastern University, Boston, MA
Oct 2013 – July 2016	**Research Scientist,** Schepens Eye Research Institute and Massachusetts Eye and Ear Infirmary, Department of Ophthalmology, Harvard Medical School, Boston, MA.
Sept 2010-Feb 2013	**Post-doctoral research fellow** in low vision rehabilitation (Supervisor: A.R. Bowers), Schepens Eye Research Institute and Massachusetts Eye and Ear Infirmary, Department of Ophthalmology, Harvard Medical School, Boston, MA.
Mar 2010-May 2010	**Research Associate,** Human Technology Laboratory, Psychology Department, University of Padova.
Jan 2007-Apr 2010	**Doctoral degree** in Perception and Psychophysics, Human Technology Laboratory (Supervisor: L. Gamberini), Psychology Department, University of Padova.
Jan-July 2009	**Visiting Doctoral fellow,** Accident Research Unit (Supervisor: D. Crundall), School of Psychology, University of Nottingham, UK
Oct 2004-Oct 2006	**Master's Degree** in Cognitive Neuroscience (Supervisor: C. Casco), University of Padova (110/110 cum laude).
July-Oct 2006	**Visiting student**, Visual Perception Laboratory (Supervisor: G. Mather), Psychology Department, School of Life Sciences, University of Sussex, UK.
Sept 2001-Sept 2004	**Bachelor's Degree** in Experimental Psychology, University of Padova, IT (110/110 cum laude).

Grants:

- 2016 - Received K99 Award from NIH. This grant is awarded after a peer-review selection for two years of funded research form the National Eye Institute for a total of $200,000.

Honors and Prizes:

- 2019 - Travel Grant from Vision Science Society, VSS, Tampa, Florida.
- 2012 - Envision-Atwell Award for best presentation by young researchers in the field of visual impairment research, Association for Research in Vision and Ophthalmology (ARVO) conference, Fort Lauderdale, Florida.
- 2012 - Travel Grant from Fondazione GB Bietti per l'Oftalmologia, ARVO, Fort Lauderdale, Florida.
- 2008 - Selected to attend the Summer School on "Gaze, Communication, and Interaction Technology (GaCIT)", organised by the IST Network of Excellence COGAIN and the UCIT Graduate School (FI).
- 2007 - Selected to attend the Autumn School on "Vision and Movement" organized by the Neuroscience Research Training Groups (GRKs) and the Phillips-Universitat Marburg (DE).
- 2006 - Selected to attend the IP Erasmus Seminar "Computational Models in Perception" organised by the European Mathematical Psychology Group and the University of Glasgow (UK).

Publications

Journal articles:

- **Alberti,** C.F., Bex, P.J. (2018). Binocular contrast summation and inhibition depends on spatial frequency, eccentricity and binocular disparity. Ophthalmic and Physiological Optics. 38(5):525-537.
- **Alberti,** C.F., Goldstein, R. Peli, E., Bowers, A.R. (2017). Driving with hemianopia V: Do individuals with hemianopia spontaneously adapt their gaze scanning to differing hazard detection demands? Translational Vision Science & Technology, 6(5), 11.
- **Alberti,** C.F., Peli, E., Bowers, A.R. (2014). Driving with Hemianopia: III. Detection of stationary and approaching pedestrians in a simulator. Investigative Ophthalmology and Visual Science, 55, 368-374.
- **Alberti**, C.F., Shahar, A., Crundall, D. (2014). Are experienced drivers more likely than novice drivers to benefit from driving simulations with a wide field of view? Transportation Research Part F: Traffic Psychology and Behaviour, 27(A), 124-132.

- **Alberti**, C.F., Horowitz, T., Bronstad, P.M., Bowers, A.R. (2014). Visual attention measures predict pedestrian detection in central field loss: a pilot study. PLoSONE 9(2): e89381. doi:10.1371/journal.pone.0089381
- **Alberti**, C.F., Gamberini, L., Spagnolli, A., Varotto, D., Semenzato, L. (2012). Using eye-tracking to assess the effectiveness of a 3D Riding Simulator in training Hazard Perception. CyberPsychology, Behavior and Social Networking, 15(5), 274-276.
- Shahar, A., **Alberti**, C.F., Clarke, D., & Crundall, D. (2010). Hazard Perception as a function of target location and the field of view. Accident Analysis and Prevention, 42, 1577-1584.
- **Alberti**, C.F., Pavan, A., Campana, G. Casco, C. (2010). Segmentation by single and combined features involves different contextual influences. Vision Research, 50, 1065-1073.

Conference Articles (peer reviewed):

- **Alberti**, C.F., Furlan, S., De Sanctis, T., Salviato, T. & Gamberini, L. (2008). Accessibility to the web for the elderly: is it possibile? The proposal of Eldy software. 2nd European Workshop on Cybertherapy, Rehabilitation and e-Mental Health, 9-11
- Pavan A., **Alberti** C., Campana G., Martinelli M., Casco C. (2006). Saliency from motion and form combined. 22th Fechner Day, 22, 251-256

Conference Abstracts and Poster Presentations:

- **Alberti** CF, Bex PJ (2017) Peripheral depth estimation of disparity-defined targets. Proceedings of the 40th European Conference on Visual Perception, Perception.
- **Alberti**, C.F., Bex, P.J. (2017) Do oculomotor adaptations to a volume scotoma provide functional benefits for binocular vision? Investigative Ophthalmology and Visual Science. 58: ARVO E-Abstract 4695.
- **Alberti**, C.F., Goldstein, R., Bowers, A.R. (2016) Analysis of gaze and pedestrian eccentricity explains differences in detection of stationary and approaching pedestrians by drivers with hemianopia. Investigative Ophthalmology and Visual Science. ARVO E-Abstract 1961.
- **Alberti**, C.F., Bex, P.J. (2015) Compensatory strategies for independent binocular scotomas in simulated CFL. Investigative Ophthalmology and Visual Science. ARVO E-Abstract 2904.
- Bowers, A.R., **Alberti**, C.F., Houston, K., Goldstein, R. and Peli, E. (2015) Pilot study of gaze scanning and intersection detection failures by drivers with hemianopia. 8th International Driving Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design at Snowbird Resort at Salt Lake City, Utah.
- Bowers, A.R., **Alberti**, C.F., Houston, K., Goldstein, R. and Peli, E. (2015) Pilot study of gaze scanning and intersection detection failures by drivers with hemianopia. Investigative Ophthalmology and Visual Science.

- Bowers, A.R., **Alberti**, C.F., Bronstad, P.M., Albu, A., & Horowitz, T.S. (2012). Does dynamic attention predict hazard detection in people with central field loss? Investigative Ophthalmology and Visual Science. 53: ARVO E-Abstract 3150.
- **Alberti**, C.F., Bronstad, P.M., Hwang, A., Albu, A., Ananev, E., Goldstein, R., Peli, E., Bowers, A.R. (2012). Scanning and detection of static and moving pedestrians by drivers with hemianopia in a simulator. Investigative Ophthalmology and Visual Science 53: ARVO E-Abstract, 4356. Received Envision-Atwell Award for best presentation by a junior researcher in low vision.
- **Alberti**, C.F., Bronstad, P.M., Albu, A., Hwang, A., Goldstein, R., Peli, E., Bowers, A.R. (2011). Simulator driving with hemianopia: detection of static and moving pedestrians. Optometry and Vision Science, 88: AAO E-Abstract 115985.
- Cuturi, L.F. **Alberti**, C.F., Pavan, A. et al. (2010). Segmentation by single and combined features involves different contextual influences. Perception, 39, 138: 33th ECVP Abstract.
- Martino, F., Baù, R., Scarpetta, F., **Alberti,** C., Spagnolli A., Gamberini L. (2008). Augmenting Group Presence: A Study with Activity Feedback. Proceedings of the 11th International Workshop on Presence, 38-45.
- **Alberti**, C., Pavan, A., Casco, C. (2007). Contextual effects in search for simple and superimposed features targets. Proceedings of the Autumn School "Vision and Movement".
- Pavan, A., **Alberti**, C., Casco, C. (2007). Contextual effects in search for simple and superimposed features targets. Perception, 36, 164: 30th ECVP Abstract.
- **Alberti**, C. (2007). Pasion: the contribution of eye tracking technologies in presence studies. Proceeding of the 1st Peach Summer School, 24-25.

National and International Invited Teaching and Presentations:

- 2018- Invited Lecture, "Using extra-foveal vision in everyday life". New England College of Optometry, Boston, MA, January 2018.
- 2016- Invited Lecture, "Metodi restitutivi e compensativi nella riabilitazione visiva". Conference of the Italian Association of Ophthalmologists (Associazione Italiana Medici Oculisti), Rome, Italy, October 2016.
- 2012- Invited Lecture, "Scanning and detection of stationary and approaching pedestrians by drivers with hemianopia in a simulator". Schepens Eye Research Institute, Boston, MA, July 2012.
- 2008- Conference Presentation, Accessibility to the web for the elderly: is it possible? The proposal of Eldy software. European Workshop on Cybertherapy, Rehabilitation and e-Mental Health, Padova, Italy, October 2008.
- 2007- Invited Lecture, "Eye Tracking and Interfaces", Conference of the Italian Computer-Human Interaction Society (CHItaly), Padova, Italy, June 2007.
- 2007- Invited Lecture, "Eye Tracking and Interfaces", Presence Research in Action (Peach) Summer School, Santorini, Greece, July 2007.

Teaching and Mentorship:

Teaching of Students Courses*:

- Advanced Research Methods Course on "Eye tracking technologies", Graduate level, total of 40 hrs taught in 2 semesters, 2009-2010.
- Sensation and Perception (MA) - Guest lecturer on "Eye Movements Function and Analysis", 2010.
- Research Methods Course on "Using eye-tracking to measure attention deployment and cognitive processing", 30 hours, 2009.
- Cognitive Ergonomics (BA) - Guest lecturer, total of 15 hrs taught between 2007 and 2009.
- Communication Ergonomics (MA) - Guest lecturer, total of 12 hrs taught between 2007 and 2009.

* All courses given at University of Padova

Students Mentored*:

- 2009 Gianluca Schiavo, Graduate student, Thesis Project
- 2009 Roberto Mairo, Graduate student, Thesis Project
- 2009 Veronica Tomat, Graduate student, Thesis Project
- 2008 Teresa Brancato, Undergraduate student, Thesis Project
- 2008 Tobia Salviato, Undergraduate student, Thesis Project
- 2007 Andrea Bordignon, Undergraduate student, Thesis Project
- 2007 Christopher Cognonato, Undergraduate student, Thesis Project

* Department of Psychology, University of Padova.

Report of Education of Patients and Service to the Community:

Educational Material for Patients and the Lay Community:

- Elaborated feedback reports with individual performance evaluation and statistical comparisons for patients enrolled in clinical studies.

Grant Review and Editorial Activity:

- Reviewer for Perception; Psychnology Journal; CyberPsychology, Behavior and Social Networking; Computer Human Interaction (CHI).
- Reviewer for Italian Ministry of Health, Neuroscience Grant Call.

Professional Societies

- American Academy of Optometry
- Association for Research in Vision and Ophthalmology
- Vision Science Society

Research Support

- R00 EY018680 Bowers (PI) 2011 – 2013

NIH
The goal of the project was developing tests of functional vision to be used in clinical settings with people with central vision loss and that were related to driving performance and could potentially be used to assess fitness to drive.
Role: Co-Investigator

- DM090420 Peli (PI) Bowers (co-PI) 2011 – 2013

Department of Defense
This project develops and tests a new computerized perceptual-motor training regimen to assist with adaptation to the peripheral expansion prism (EP) glasses for people with hemianopia. Functional adaptation to change in perceived direction was tested in real and simulated walking and driving tasks. This project included a pilot study of using the EPglasses and perceptual-motor training for the rehabilitation of spatial neglect.
Role: Co-Investigator

Funded Projects

- K99 EY026130-01 Alberti (PI) 2016 -Present

NIH
This project investigates binocular visual function in peripheral retinal locations when central vision is lost due to a central scotoma. We are researching the conditions under which binocular peripheral vision confers an advantage over monocular peripheral vision because these conditions are more typical of everyday life and are currently not well understood.
Role: Principal Investigator