

Francesco Biondi PhD

HumanFactors Expert

about

francesco.biondi@utah.edu
[LinkedIn](#) | [Scholar](#)

programming

R
HTML | CSS | JavaScript
SPSS
C++
ePrime
Microsoft Office

skills

experimental design
project management
team leading
data collection
data analysis
scientific writing

interests

My professional interests involve designing easy-to-use, adaptive human-machine interfaces. My background in Human Factors and User Experience allows me to understand and measure individuals' behavior when interacting with human-machine interfaces. During my experience at Jaguar Land Rover, I have worked on the design of HMI for voice systems, warning systems, infotainment systems and crash prevention systems. I have also been heavily involved in the design of the HMI for SAE level 3 and 4 automated vehicles. My current role at the University of Utah involves developing a framework to assess drivers' interaction with automotive HMI and apply it for the assessment of the usability and demand of a large scale of infotainment and ADAS systems. One of my main research areas also involves investigating human physiology for more accurate driver monitoring systems.

experience

- 2016 **Research Assistant Professor** at University of Utah – USA
- usability and demand assessment of automotive HMI
 - infotainment and advanced assistance systems
 - managing research team
 - project management
- [AAA Newsroom](#) | [University of Utah News](#) | [New York Times](#)
- 2015-16 **HMI Human Factors Expert** at Jaguar Land Rover – UK
- innovation and roadmap
 - project management
 - experimental design and data analysis
 - key contact with suppliers and within research consortia
- [BikeSense project](#) | [HFauto](#) | [TASCC](#) | [UKAutodrive](#) | [AHEAD](#) | [AVT](#)

education

- 2012-14 **Doctorate in Applied Cognitive Psychology** at University of Padova – Italy
ADAS: Multimodal Warnings To Enhance Road Safety
- 2012-14 **Visiting Scholar** at University of Utah
- 2009-11 **M.S. in Cognitive Psychology** at University of Padova – Italy
- 2006-09 **B.S. Cognitive Science** at University of Padova – Italy

awards & professional activities

2016 HFES Jerome Ely Human Factors Article Award
2015 HFES Europe Early Career Best Paper Award
2011 Italian Young Researcher Award

Ad-hoc Reviewer

Journal of Advanced Transportation | Applied Ergonomics | Transportation Research Board Conference | CHI conference | International Journal of Human Factors

Scientific Advisory Board

2nd Int. Conference on Human Factors and Systems Interaction – Florida, USA (2016)

Research Support

2015 EPSRC I-CASE award Ph.D. scholarship – UK
2016 Seed Grant – University of Utah, USA (\$29,000)

publications

Assistance Systems: Using Multimodal Redundant Warnings to Enhance Road Safety.

F. Biondi, D. Strayer, R. Rossi, M. Gastaldi, C. Mulatti

Applied Ergonomics – 2017 [LINK](#)

Use your brain (and light) for innovative human-machine interfaces.

F. Biondi, L. Skrypchuk

Proceedings of the 2016 AHFE conference proceedings – 2016

Assessing Cognitive Distraction in the Automobile.

D. Strayer, J. Turrill, J. Cooper, J. Coleman, N. Medeiros-Ward, F. Biondi

Human Factors – 2015 [LINK](#)

Cell Phone use diminishes Self-Awareness of Impaired Driving.

D. Sanbonmatsu, D. Strayer, F. Biondi, A. Behrends, S. Moore

Psychonomic Bulletin & Review – 2015 [LINK](#)

Cognitive Distraction Impairs Drivers' Anticipatory Glances: An On-Road Study.

F. Biondi, J. Turrill, J. Coleman, J. Cooper, D. Strayer

Proceedings of the Eighth International Driving Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design. – 2015 [LINK](#)

Traffic-calming measures affecting perceived speed in approaching bends with on-field validated virtual environment.

R. Rossi, M. Gastaldi, G. Gecchele, F. Biondi, C. Mulatti,
Transportation Research Record – 2014 [LINK](#)

Beeping ADAS: reflexive effect on drivers' behavior.

F. Biondi, R. Rossi, M. Gastaldi, C. Mulatti.
Transportation Research Part F – 2014 [LINK](#)

Measuring Cognitive Distraction in the Automobile (June 2013).

D. Strayer, J. Cooper, J. Turril, J., Coleman, N. Medeiros-Ward., F. Biondi
AAA Foundation for Traffic Safety – 2013 [LINK](#)

Oppel-Kundt Illusion and lateral optic flow manipulation in affecting perceived speed in approaching roundabouts: experiments with a driving simulator.

R. Rossi, M. Gastaldi, F. Biondi, C. Mulatti
Proceedings of the 92nd Transportation Research Board meeting – 2013 [LINK](#)

Warning Sound to Affect Perceived Speed in Approaching Intersection: Experiment with aDriving Simulator.

R. Rossi, M. Gastaldi, F. Biondi, C. Mulatti
Procedia Social and Behavioral Science – 2013 [LINK](#)

Evaluating the Impact of Processing Spoken Words on Driving.

R. Rossi, M. Gastaldi, F. Biondi, C. Mulatti
Transportation Research Record – 2012 [LINK](#)

Conference Presentation

How To Drive Drivers Nuts: Effect Of Auditory, Vibrotactile And Multimodal Warnings On Perceived Urgency, Annoyance And Acceptability

Biondi F., Leo M., Gastaldi M., Rossi R., Mulatti C.
Transportation Research Board, Washington DC, USA – 2017

Heart Rate Detection For Driver Monitoring Systems

Biondi F., Coleman J., Cooper J., Strayer D.
Transportation Research Board, Washington DC, USA – 2017

Who's "driving" the self-driving car and what for?

Biondi, F. Thompson, S., Skrypchuk, L.
Jaguar Land Rover Research Conference, Heritage Motor Center, Coventry, UK. – 2015

Multimodal warnings: what, when and why?

Biondi, F.
Jaguar Land Rover Technical Specialist Conference, Coventry, UK. – 2015

**CellPhone Use Diminishes
Self-Awareness of the Adverse Effects of
Cell PhoneUse.**

Behrends, A.A., Sanbonmatsu, D.M., Strayer,
D.L., Biondi, F., & Moore, S.M.

Annual meeting of the Society for
Personality and Social Psychology, Long
Beach, CA. – 2015

**Autonomous vehicle: are you aware of
them?**

Biondi, F., Strayer, D.L., Drews, F.

Human Factors and Ergonomics Society
conference – Europe chapter. – 2014

**ADAS: redundant warnings speed up
drivers' reaction.**

Biondi, F., Strayer, D.L., Rossi, R., Gastaldi, M., & Mulatti, C.

Human Factors and Ergonomics Society conference – Europe chapter. – 2014

Does cognitive distraction alter the way we anticipate hazards on the roadway?

Biondi, F., & Strayer, D.L.

28th International Congress of Applied Psychology, Paris – 2014

**Advanced driver assistance systems: are they really safe? Measuring and reducing
the impact of warnings on drivers' distraction.**

Biondi, F., Strayer, D.L., Rossi, R., Gastaldi, M., & Mulatti, C.

28th International Congress of Applied Psychology, Paris – 2014

**Effectiveness of traffic calming measures at dangerous intersections: a validation and
a simulated study.**

R. Rossi, M. Gastaldi, F. Biondi, C. Mulatti

93rd Transportation Research Board annual meeting. Washington DC, - 2014

**Effects on lateral position of perceptual measures in affecting drivers' perceived
speed.**

R. Rossi, M. Gastaldi, F. Biondi, C. Mulatti

4th International Conference on Road Safety and Simulation. Rome, - 2013

**Warning sound to affect perceived speed in approaching roundabout: experiments
with a driving simulator.**

R. Rossi, M. Gastaldi, F. Biondi, C. Mulatti

XIX Convegno Annuale della Societa' Italiana dei Docenti di Trasporti, Padova – 2012

**Evaluating the impact on driving of the processing of spoken words: Experiments with
a driving simulator.**

R. Rossi, M. Gastaldi,, F. Biondi, C. Mulatti
91stTransportation Research Board annual
meeting. Washington DC, - 2012

**Stroop: the loneliness of the target (and
the distractor).**

Biondi, F., Mulatti, C.
XVIII Congresso nazionale dell'Associazione
Italiana di Psicologia, Chieti, Italy - 2012