**Junpeng Lao**, PhD

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**Education and Professional History:**

**2013.9 – present** Post-doc in University of Fribourg. I am supported by the Swiss National Science Foundation (n° 100014\_138627 and n° 100014\_156490/1)

**2012.9 – 2013.9** Research assistant in University of Fribourg. I was supported by National Center of Competence in Research (NCCR) Affective sciences financed by the Swiss National Science Foundation (n° 51NF40-104897).

**2009.10 – 2013.9** University of Glasgow, Ph.D in Cognitive Neuroscience, Thesis title: “Tracking the temporal dynamics of cultural perceptual diversity in visual information processing”. Advisor: Prof. Roberto Caldara and Prof. Lars Muckli.

**2005.9 – 2009.6** Sun Yat-Sen University, B. Sc. in Psychology. Thesis title: “Control deprivation and styles of thinking”. Advisor: Prof. Xinyue Zhou.

**Software and Algorithms:**

I contributed to various Open-Source Software regularly, more information could be found on Github: <https://github.com/junpenglao>

**PyMC3** (<https://github.com/pymc-devs/pymc3>) – a Python package for Bayesian statistical modelling and Probabilistic Machine Learning. It implemented advanced Markov chain Monte Carlo and variational inference algorithms. I am part of the core development team pymc\_devs.

***i*Map4** (<https://github.com/iBMLab/iMap4>) – a Matlab toolbox for statistical fixation mapping of eye movement data. It is a data-driven statistics toolbox implementing linear mixed model and non-parametric statistics based on permutation and bootstrap spatial clustering. It also has a full graphical user interface. *i*Map4 is one of the three finalists of the SMI Computing Competition in ECEM 2015.

**JAEFA** (<https://github.com/junpenglao/jaefa>)– Just Another Eye-movement Filtering Algorithm, a simple Matlab toolbox for eye movement event detection with a Convolution-based algorithm

**Preprints**

**Lao, J.** (2016). Reproducible Research with End-to-end Machine Inference Using Deep Learning and Bayesian Statistics, *Journal of Brief Ideas*, [doi: 10.5281/zenodo.203086](http://beta.briefideas.org/ideas/dc4f3d8981cbea107f013cbb8f2f2cb7)

**Journal Articles:**

Papinutto, M., **Lao, J.,** Ramon, M., Caldara, R., & Miellet, S. (2017). The Facespan—the perceptual span for face recognition. *Journal of Vision, 17(5)*:16. [doi: 10.1167/17.5.16](http://jov.arvojournals.org/article.aspx?articleid=2629823)

Garcia-Burgos, D., **Lao, J.**, Munsch, S., & Caldara, R. (2017). Visual attention to food cues is differentially modulated by gustatory-hedonic and post-ingestive attributes. *Food Research International, 97,* 199-208.[doi: 10.1016/j.foodres.2017.04.011](http://www.sciencedirect.com/science/article/pii/S096399691730159X)

**Lao, J.**, Miellet, S., Pernet, C., Sokhn, N., & Caldara, R. (2017). *i*Map4: An Open Source Toolbox for the Statistical Fixation Mapping of Eye Movement data with Linear Mixed Modeling. *Behavior Research Methods,* *49(2),* 559-575*.* [doi: 10.3758/s13428-016-0737-x](http://link.springer.com/article/10.3758/s13428-016-0737-x)

Ruffieux1, N., Ramon1, M., **Lao1, J.,** Colombo, F., Stacchi, L., Borruat, FX., Accolla, E., Annoni JM., & Caldara, R. (2016). Residual Perception of Biological Motion in Cortical Blindness. *Neuropsychologia, 93,* 301-311. [doi: 10.1016/j.neuropsychologia.2016.11.009](http://dx.doi.org/10.1016/j.neuropsychologia.2016.11.009)

1*Joint first authors*

Geangu1, E., Ichikawa1, H., **Lao1, J.,** Kanazawa, S., Yamaguchi, M. K., & Caldara2, R., & Turati2, C. (2016). Culture shapes 7-month-olds perceptual strategies in discriminating facial expressions of emotion. *Current Biology, 26,* 663–664. [doi: 10.1016/j.cub.2016.05.072](http://www.cell.com/current-biology/abstract/S0960-9822(16)30605-4)

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Bovet, J., **Lao, J.**, Bartholomée, O., Caldara, R., & Raymond, M. (2016). Mapping female bodily features of attractiveness. *Scientific Reports, 6,* 18551. [doi: 10.1038/srep18551](http://www.nature.com/articles/srep18551)

Miellet, S., **Lao, J**., & Caldara, R. (2014). An appropriate use of iMap produces correct statistical results: a reply to McManus (2013)“iMAP and iMAP2 produce erroneous statistical maps of eye-movement differences”. *Perception*,*43*, 451-457.

**Lao, J**., Vizioli, L., & Caldara, R. (2013). Culture modulates the temporal dynamics of global/local processing. *Culture and Brain, 1(2-4),* 158-174.

Romeo, M., Vizioli, L., Breukink, M., Aganloo, K., **Lao, J**., Cotrufo, S., Caldara, R., & Morley, S. (2013). A Functional Magnetic Resonance Imaging Paradigm to Identify Distinct Cortical Areas of Facial Function: A Reliable Localizer. *Plastic and reconstructive surgery*, *131(4),* 527e-533e.

Miellet, S., Zhou, X., He, L., **Lao, J**., & Caldara, R. (2012). When East meets West: gaze-contingent Blindspots abolish cultural diversity in eye movements for faces. *Journal of Eye Movement Research*, *5*, 1-12.

Zhou, X., He, L., Yang, Q., **Lao, J**., & Baumeister, R. F. (2012). Control deprivation and styles of thinking. *Journal of personality and social psychology*,*102(3),* 460.

**Conference Presentations (Selected):**

**2017.5.19 – 24** Lao, J., Stoll, C., Dye, M., Pascalis, O., & Caldara, R. (2017). Deafness Amplifies Visual Information Sampling during Face Recognition. *Journal of Vision,* 17(x): #### (17th annual meeting of Vision Sciences Society, **oral presentation**)

**2017.4.20** Lao, J. (2017). Statistical Inferences of Eye movement data using Bayesian smoothing. Bayes@Lund2017. (Lund, Sweden, **oral presentation**)

**2015.9.8 – 9** Lao, J., Miellet, S., Pernet, C., Sokhn, N., & Caldara, R. (2015). *i*Map4: An Open Source Toolbox for the Statistical Fixation Mapping of Eye Movement data with Linear Mixed Modeling. 14th Biannual congress of the Swiss Psychological Society. (Geneva, Switzerland, **oral presentation**)

**2015.8.16 – 21** Lao, J., Miellet, S., Pernet, C., Sokhn, N., & Caldara, R. (2015). *i*Map4: An Open Source Toolbox for the Statistical Fixation Mapping of Eye Movement data with Linear Mixed Modeling. 18th European Conference on Eye Movements. (Vienna, Austria, **oral presentation**)

**2013.9.11 – 12** Lao, J., He, L, & Caldara, R. (2013). Microsaccades Boost Face Identification. 13th Biannual congress of the Swiss Psychological Society. (Basel, Switzerland, **oral presentation**)

**2011.7.15 - 18** Lao, J., Vizioli, L., Miellet, S., & Caldara, R. (2011). Eyes like it, brain likes it: Tracking the neural tuning of cultural diversity in eye movements for faces. *i-Perception* 2(4) 356. (Asia-Pacific Conference on Vision, 2011, **oral presentation**)

**2011.1.9 - 13** Lao, J., Vizioli, L., Miellet, S., & Caldara, R. (2011). Eyes like it, brain likes it: Tracking the neural tuning of cultural diversity in eye movements for faces. Alpine Brain Imaging Meeting 2011. (Champéry, Switzerland, **oral presentation**)

**Teaching:**

Cognitive Neuroscience

Statistical Analysis with MATLAB

Psychology Experiment with MATLAB

**Awards:**

**2010.12** Guarantors of Brain Travel Grant supporting the attendance of the Alpine Brain Imaging Meeting in January 2011

**2010.5** Experimental Psychology Society Grindley Grant supporting the attendance of the Vision Science Society Annual Meeting in May 2010

**2009.9** UK/China PhD Scholarships for Excellence programme funded by China Scholarship Council and the Scottish Government