

## Biao Han(韩彪)

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- CONTACT INFORMATION South China Normal University  
No. 55, Zhongshan Road West  
Tianhe District, Guangzhou, Guangdong  
Guangdong, China *Mobile: +86 138 6541 7800*  
*E-mail: b.han@donders.ru.nl*
- RESEARCH INTERESTS *Predictive coding, Neural oscillations, Cortical feedback, Visual perception*
- APPOINTMENTS **School of Psychology, South China Normal University**, Guangzhou, China  
Distinguished Researcher, January 2019 - Now.  
**Donders Institute for Brain, Cognition and Behaviour**, Nijmegen, Netherlands  
Postdoctoral Scholar, *Supervisor: Floris de Lange*, May 2016 - September 2018.
- EDUCATION **CerCo CNRS & Université de Toulouse**, Toulouse, France  
Ph.D. Neuroscience, April 2016.  
*Mention: Très honorable (highest honours), Supervisor: Rufin VanRullen*  
**Computational Vision Summer School**, Freudenstadt-Lauterbad, Germany  
Summer School, Vision, July 2015.  
**Interneuron Summer School**, Amsterdam, Netherlands  
Summer School, Neuroscience, June 2014.  
**Shanghai University**, Shanghai, China  
M.S., Information and Communication Engineering, April 2012  
**Vision, Learning, and Pattern Recognition Summer School**, Chengdu, China  
Summer School, Computer Vision and Machine Learning, August 2011.
- PUBLICATIONS *Published - peer reviewed articles:*  
**Biao Han**, Pim Mostert, and Floris P. de Lange. Predictable tones elicit stimulus-specific suppression of evoked activity in auditory cortex *NeuroImage* 2019  
Lu Shen, **Biao Han**<sup>Co-first author</sup>, Lihan Chen and Qi Chen. Perceptual inference employs intrinsic alpha frequency to resolve perceptual ambiguity *PLOS Biology* 2019  
**Biao Han** and Rufin VanRullen. The rhythms of predictive coding? Pre-stimulus phase modulates the influence of shape perception on luminance judgments *Scientific Reports* 2017  
**Biao Han** and Rufin VanRullen. Shape perception enhances perceived contrast: evidence for excitatory predictive feedback? *Scientific Reports* 2016  
Hao Zhu and **Biao Han**. Visual saliency via loss coding *International Joint Conference on Neural Networks* 2014  
Hao Zhu and **Biao Han**. Bottom-up model of visual saliency: a viewpoint based on efficient coding hypothesis *International Joint Conference on Neural Networks* 2014  
Hao Zhu and **Biao Han**. Visual saliency: a manifold way of perception *International Conference on Pattern Recognition* 2012

**Biao Han**, Weiyang Yang and Yuting Zheng. An image retargeting method based on visual saliency inspired by sparse coding *Journal of Shanghai University* 2012

**Biao Han** and Hao Zhu. Bottom-up saliency based on weighted sparse coding residual *ACM International Conference on Multimedia*, 2011

***Under revision:***

**Biao Han**, Lu Shen, Zehua Wu, Bing Li, Rufin VanRullen. Pre-stimulus EEG alpha phase regulates the visual mismatch response *eNeuro*

***Forthcoming - finished projects, in the stage of writing or paper submission:***

**Biao Han** and Rufin VanRullen. Non-selective excitatory feedback and precise spike timing produce selective relative inhibition.

**Biao Han**, Matthias Ekman and Floris P. de Lange. Attention enhances local feature effect and suppresses global feature effect

Lu Shen, **Biao Han**\* and Floris P. de Lange. Apparent motion induced suppression in early visual cortex leads to stimulus masking *Corresponding author*

Lu Shen\*, **Biao Han**\*, Qi Chen and Rufin VanRullen. Feedback in occipital cortex operate on both the phase and power of alpha oscillations in humans *Co-first author*

GRANTS	China Scholarship Council Award (€43,200)	<b>2012-2015</b>
	FYSSSEN Foundation Post-doctoral Study grants (€49,920)	<b>2016-2018</b>

ACADEMIC SERVICE	<b>Organizer</b> <i>FieldTrip Workshop, South China Normal University</i>	<b>August 2016</b>
	<b>Reviewer</b> <i>Frontiers in Human Neuroscience</i> <i>Experimental Brain Research</i>	

TEACHING EXPERIENCE	<b>Udemy</b> , Online course together with Dr. Mike X Cohen <i>Main lecturer: Understand the Fourier transform</i>	<b>October 2018</b>
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	<b>Shanghai University</b> , Shanghai, China <i>Teaching Assistant for Course: C and C++ Programing</i>	<b>April to June 2010</b>
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INDUSTRIAL EXPERIENCE	<b>OMRON R&amp;D Collaborative Innovation Center</b> , Shanghai, China <i>Computer Vision Researcher</i>	<b>June to September 2012</b>
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CERTIFICATION	Software Design Engineer Certificate	<b>May 2008</b>
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EXPERTISE	Programming: <ul style="list-style-type: none"><li>• MATLAB, Python, C, C++ and others.</li></ul> Time Series Data Analysis (EEG, MEG and SEEG): <ul style="list-style-type: none"><li>• Time-Domain Analyses (ERP), Frequency-Domain Analyses (Fourier transform, Filtering), Time-frequency Analyses (Wavelets transform, Hilbert transform, ITPC, Phase Opposition, Cross-Frequency Coupling and etc.), Source reconstruction (Dipole fitting, Beamformers and etc.), Decoding (SVM, LDA and etc.)</li></ul> fMRI Data Analysis: <ul style="list-style-type: none"><li>• GLM, Freesurfer, FSL, Population Receptive Field (pRF)</li></ul>	
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