

Sébastien M. Crouzet

CIVIL STATUS Age: 30
Citizenship: French
Married, one daughter.

CONTACT INFORMATION Berlin School of Mind and Brain e-mail: seb.crouzet@gmail.com
Luisenstraße 56, 10117 Berlin, Germany web: <http://scrouzet.github.com>

CURRENT POSITION **Post-doctoral Researcher**, Charité University, Berlin, Germany
Principal Investigator: Niko Busch
Topic: Reentrant processing and visual awareness: neural and perceptual mechanisms

EDUCATION & ACADEMIC EXPERIENCE **Post-doctoral Researcher**, Brown University, Providence, RI, USA **2010-2012**
Principal Investigator: Thomas Serre
Topic: Linking behavioral and electrophysiological data to computational models

Ph.D. in Neurosciences, Université de Toulouse, CNRS, France **2010**
Advisor: Dr Simon J. Thorpe
Committee: F. Vitu-Thibault, G.A. Rousselet, O. Pascalis, B. Rossion, P-G Zanone, D. Bazalgette
Topic: Ultra-rapid recognition of objects in natural scenes.
Highest academic distinction: Très honorable avec les félicitations du jury à l'unanimité.

European Summer School in Visual Neurosciences **Sep 2008**
'From Spike to Awareness', Organisation: K. Gegenfurtner, F. Bremmer, J. Braun.
Rauischholzhausen, Germany

Master in Cognitive Science, *Graduated magna cum laude* **2006**
ENS / EHESS / Ecole Polytechnique / Paris 5 / Paris 6, France

Licence in Cognitive Science, *Graduated magna cum laude* **2004**
Université Bordeaux 2, France

DEUG in Psychology **2003**
Université Paris 5, France

Baccalauréat Scientifique, spécialité Mathématiques **2000**
Lycée Bernard Palissy, Saintes, France

PUBLICATIONS **Refereed Journal Articles**

Cauchoix M and **Crouzet SM** (2013). How plausible is a subcortical account of rapid visual recognition?. *Front. Hum. Neurosci.* 7:39. doi: 10.3389/fnhum.2013.00039

Crouzet SM, Joubert OR, Thorpe SJ, Fabre-Thorpe M (2012) Animal Detection Precedes Access to Scene Category. *PLoS ONE* 7(12): e51471. doi:10.1371/journal.pone.0051471

Crouzet SM and Thorpe SJ (2011). Low level cues and ultra-fast face detection. *Front. Psychology* 2:342. doi: 10.3389/fpsyg.2011.00342

Crouzet SM and Serre T (2011). What are the visual features underlying rapid object recognition? *Front. Psychology* 2:326. doi: 10.3389/fpsyg.2011.00326

Crouzet, S. M., Cauchoix, M. (2011). When does the visual system need to look back? *The Journal of Neuroscience*, 15 June 2011, 31(24): 8706-8707

Crouzet, S. M., Kirchner, H., & Thorpe, S. J. (2010). Fast saccades toward faces: Face detection in just 100 ms. *Journal of Vision*, 10(4):16, 1-17, <http://journalofvision.org/10/4/16/>, doi:10.1167/10.4.16.

Book Chapter

M., Fabre-Thorpe, **S. Crouzet**, G. A. Rousselet, H. Kirchner and S. J. Thorpe (2008). Catégorisation visuelle rapide: les visages sont-ils des objets spécifiques? In *Traitement et reconnaissance des visages: du percept à la personne*. E. J. Barbeau, S. Joubert and O. Felician. Marseille, Solal: 239-260.

CONFERENCE PRESENTATIONS

Imri Sofer, Kwang Ryeol Lee, Pachaya Sailamul, Sébastien Crouzet & Thomas Serre (2013) Understanding the nature of the visual representations underlying rapid categorization tasks. [Abstract]. *Journal of Vision*, 13(9), article 658.

Crouzet SM, Hviid Del Pin S, Overgaard M & Busch NA (2013) Dynamics of saccadic responses reveal how object substitution masking interferes with reentrant processing. 55th TeaP - Tagung experimentell arbeitender Psychologen (Conference of Experimental Psychologists).

Crouzet SM, Cauchoux M, Fize D & Serre T (2011) The neural basis of rapid categorization: Linking computational models and electrophysiology. NIPS 2011 workshop on machine learning and interpretation in neuroimaging.

Cauchoux M., Crouzet S., Fize D. & Serre T. (2011) Visual features and dynamics of rapid recognition in monkey visual cortex. SFN 2011

Crouzet S M, Stemmler T, Capps M, Fahle M & Serre T (2011) Single-trial decoding of binocular rivalry switches from oculometric and pupil data. Vision Science Society, Naples, Florida.

Brilhault A, Mathey M, Jolmes N, Crouzet S M & Thorpe SJ (2011) Saccades to color: an ultra-fast controllable mechanism to low-level features. Vision Science Society, Naples, Florida.

Thorpe S J, Brilhault A, Mathey M, Crouzet S M, 2010, "Colour based target selection for ultrarapid saccades: The fastest controllable selection mechanism?" *Perception* 39 ECVF Abstract Supplement, page 158

Mathey M A, Crouzet S M, Thorpe S J, 2010, "The accuracy of ultra-rapid saccades to faces" *Perception* 39 ECVF Abstract Supplement, page 171

Crouzet, S. M. & Thorpe, S. J. (2010) Power spectrum cues underlying ultra-fast saccades towards faces [Abstract]. *Journal of Vision*, 10(7): 634

Mathey, M. A., Crouzet, S. M. & Thorpe, S. J. (2010) Ultra-rapid saccades to faces : the effect of target size [Abstract]. *Journal of Vision*, 10(7): 635

Crouzet S, Mathey M, Thorpe S J (2009). Ultra-fast saccades to faces: A temporal precedence effect? *Perception* 38 ECVF Abstract Supplement, page 157.

Crouzet, S. M., Joubert, O. R., Thorpe, S. J., & Fabre-Thorpe, M. (2009). The bear before the forest, but the city before the cars: Revealing early object/background processing [Abstract]. *Journal of Vision*, 9(8):954

Fabre-Thorpe, M., Crouzet, S. M., Wu, C.-T., & Thorpe, S. J. (2009). At 130 ms you "know" where the animal is but you don't yet "know" it's a dog [Abstract]. *Journal of Vision*, 9(8):786

Thorpe, S. J., Crouzet, S. M., Macé, M. J., Bacon-Macé, N., & Fabre-Thorpe, M. (2009). Masking in a high-level gender discrimination task is essentially entirely pre-cortical [Abstract]. *Journal of Vision*, 9(8):546

S Crouzet, H Kirchner, S J Thorpe (2008). Saccading towards faces in 100 ms. What's the secret? *Perception* 37 ECVF Abstract Supplement, page 119.

S J Thorpe, H Kirchner, S Crouzet, P Bayerl, H Neumann (2008). Processing times for optic flow patterns measured by the saccadic choice task. *Perception* 37 ECVF Abstract Supplement, page 40.

Crouzet, S., Thorpe, S. J., & Kirchner, H. (2007). Category-dependent variations in visual processing time. *Journal of Vision*, 7(9):922,922a, <http://journalofvision.org/7/9/922/>, doi:10.1167/7.9.922.

Thorpe, S., Crouzet, S., & Kirchner, H. (2007). Saliency maps and ultra-rapid choice saccade tasks. *Journal of Vision*, 7(9):30, 30a, <http://journalofvision.org/7/9/30/>, doi:10.1167/7.9.30.

Simon J. Thorpe, Sébastien Crouzet, Holle Kirchner and Michèle Fabre-Thorpe (2006). Ultra-rapid face detection in natural images : implications for computation in the visual system. First French Conference on Computational Neurosciences, pp. 124-127. Abbaye des Prémontrés, Pont à Mousson, France.

Simon J. Thorpe, Sébastien Crouzet and Holle Kirchner (2006). Comparing processing speed for complex natural scenes and simple visual forms. *Perception*, vol. 35, p 128.

INVITED TALKS	<i>Invited by David Sheinberg, Brown University, Providence, RI, USA</i>		Mar 2012
	An early cortical basis for speed of sight.		
	<i>Invited by Simon J. Thorpe, CERCO-CNRS, Toulouse, France</i>		Jan 2012
	Rapid Visual Processing of Natural Scenes: Linking Behavioral and Electrophysiological Data to Computational Models.		
	<i>In-House Seminar, Neuroscience Department, Brown University, Providence, RI, USA</i>		Nov 2011
	Rapid Visual Processing of Natural Scenes: Linking Behavioral and Electrophysiological Data to Computational Models.		
	<i>Invited by Aude Oliva, MIT, Cambridge, MA, USA</i>		May 2009
	Revealing early visual processing of natural scenes using a saccade choice task.		
EDITORIAL SERVICE	Journal	# articles reviewed	
	Frontiers in Perception Science (review editor)	3	
	Animal Cognition	2	
	Cerebral Cortex	2	
	Attention, Perception, & Psychophysics	1	
	Brain Topography	1	
	IEEE Transactions on Pattern Analysis and Machine Intelligence	1	
	PLOS ONE	1	
	Psychological Science	1	
	Seeing and Perceiving	1	
TEACHING CERTIFICATION	Qualification pour la fonction de Maître de conférences - section 69 - Neurosciences		
	08/02/2012 - 31/12/2016 (numéro de qualification : 12269224957)		
TEACHING EXPERIENCE	Tutorial at the Mind & Brain Institute (6h)		Dec 2012
	<i>Mind & Brain Institute, Berlin, Germany</i>		
	Using the R environment for data analysis, statistical computing and graphics.		
	Guest lecture (2h)		2011
	<i>Computational Vision course, CLPS1520, Brown University, Providence, RI, USA</i>		
	Object recognition in natural scenes.		
	Teaching Assistant (96h over 3 years)		2006 to 2009
	<i>Department of Psychology, Université Toulouse Le Mirail, Toulouse, France</i>		
	Introduction to Neurosciences		
	Instructor (30h over 3 years)		2006 to 2009
	<i>School of Psychomotricity, Faculté de Médecine de Rangueil, Toulouse, France</i>		
	Visual system and eye movements		
	Instructor (24h over 2 years)		2006 to 2007
	<i>School of Psychomotricity, Faculté de Médecine de Rangueil, Toulouse, France</i>		
	Epistemology of neuropsychology		
	Instructor (10h)		2006
	<i>School of Psychomotricity, Faculté de Médecine de Rangueil, Toulouse, France</i>		
	Sleep, emotions		
	Marie Mathey	<i>Master student in Toulouse, France</i>	
	Rohan Katipally	<i>Undergraduate student at Brown University, Providence, USA</i>	
ACADEMIC MENTORING	Robin Martins	<i>Undergraduate student at Brown University, Providence, USA</i>	
	Simon Ludwig	<i>Master student at Freie Universität, Berlin, Germany</i>	

OFFICIAL COMMITMENTS	Organizer of the J3CN <i>Journal Club for Cognitive & Computational Neuroscience, Brown University</i> https://sites.google.com/a/brown.edu/j3cn/ Providence, USA	2010 to 2011
	Header of the Organizing Committee for the CJCSC'09 <i>French Cognitive Science Young Researcher Conference</i> http://fresco.risc.cnrs.fr/cjcsc2009/ Toulouse, France	2008 to 2009
	Header of the Young Researcher Workshop for trend forecasting in Cognitive Science <i>Part of the PIRSTEC project funded by the French National Research Agency (ANR)</i> http://pirstec.risc.cnrs.fr	2009
	Students and Post-Docs representative <i>Brain and Cognition Research Center lab council</i> Toulouse, France	2006 to 2009
	Founding member of the association inCOGnu <i>Association of cognitive science students of Toulouse</i> http://incognu.fr/ Toulouse, France	2006 to 2009
FELLOWSHIPS, GRANTS & FUNDINGS	Grant awarded to Niko Busch <i>Deutsche Forschungsgemeinschaft (DFG)</i>	Sep 2012 to Aug 2014
	Grant awarded to Thomas Serre <i>Defense Advanced Research Projects Agency (DARPA).</i> <i>I had an active participation in the monthly+trimestrial+annual reports.</i>	Sep 2010 to Jul 2012
	4th year of Ph.D. fellowship <i>Fondation pour la Recherche Médicale (FRM)</i>	Nov 2009 to May 2010
	Postgraduate scholarship <i>Délégation Générale pour l'Armement (DGA, French Ministry of Defense)</i>	Oct 2006 to Sep 2009
	Master scholarship (bourse d'excellence) <i>Université René Descartes Paris 5</i>	Sep 2005 to Jun 2006
PROFESSIONAL SOCIETIES	Society for Neuroscience Vision Science Society	
LANGUAGES	<i>French: Mother tongue</i> <i>English: Fluent</i> <i>German: Currently learning</i> <i>Spanish: Very elementary</i>	
PROFESSIONAL SKILLS	<i>Operating Systems: Advanced knowledge of Mac OS and GNU Linux.</i> <i>Programming languages: MATLAB, R, Python.</i> <i>Experimental testing: Psychtoolbox for MATLAB.</i> <i>Eye movement recording: SR Research Eyelink, SMI View Eyetracker, Chronos Eyetracker, EOG.</i> <i>EEG and iEEG analysis: Homemade MATLAB functions and EEGlab.</i> <i>Statistical Analysis: Parametric and non-parametric tests, Multivariate Pattern Analysis.</i> <i>Communication and publishing: Advanced knowledge of L^AT_EX, Adobe Illustrator & the presentation software Keynote (Mac OS); website creation and maintenance with HTML and CSS.</i>	

REFEREES

Dr Simon J. Thorpe

Ph.D. advisor

CNRS, Toulouse, France

phone: *available on request*

e-mail: simon.thorpe@cerco.ups-tlse.fr

Dr Thomas Serre

Post-doc advisor

Brown University, Providence, RI, USA

phone: *available on request*

e-mail: thomas_serre@brown.edu

Dr Niko A. Busch

Post-doc advisor

Charité University, Berlin, Germany

phone: *available on request*

e-mail: niko.busch@charite.de