

# Sébastien M. Crouzet

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

CONTACT INFORMATION      Berlin School of Mind and Brain      e-mail: [seb.crouzet@gmail.com](mailto: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

REFEREED JOURNAL ARTICLES      Cauchoux 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.**, Cauchoux, 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, <b>S. Crouzet</b> , G. A. Rousselet, H. Kirchner and S. J. Thorpe (2008). Catégorisation visuelle rapide: les visages sont-ils des objets spécifiques? In <i>Traitement et reconnaissance des visages: du percept à la personne</i> . E. J. Barbeau, S. Joubert and O. Felician. Marseille, Solal: 239-260.	
CONFERENCE PRESENTATIONS	<p>Imri Sofer, Kwang Ryeol Lee, Pachaya Sailamul, Sébastien Crouzet &amp; Thomas Serre (2013) Understanding the nature of the visual representations underlying rapid categorization tasks. [Abstract]. <i>Journal of Vision</i>, 13(9), article 658.</p> <p>Crouzet SM, Hviid Del Pin S, Overgaard M &amp; 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).</p> <p>Crouzet SM, Cauchoux M, Fize D &amp; Serre T (2011) The neural basis of rapid categorization: Linking computational models and electrophysiology. NIPS 2011 workshop on machine learning and interpretation in neuroimaging.</p> <p>Cauchoux M., Crouzet S., Fize D. &amp; Serre T. (2011) Visual features and dynamics of rapid recognition in monkey visual cortex. SFN 2011</p> <p>Crouzet S M, Stemmler T, Capps M, Fahle M &amp; Serre T (2011) Single-trial decoding of binocular rivalry switches from oculometric and pupil data. Vision Science Society, Naples, Florida.</p> <p>Brilhault A, Mathey M, Jolmes N, Crouzet S M &amp; Thorpe SJ (2011) Saccades to color: an ultra-fast controllable mechanism to low-level features. Vision Science Society, Naples, Florida.</p> <p>Thorpe S J, Brilhault A, Mathey M, Crouzet S M, 2010, "Colour based target selection for ultrarapid saccades: The fastest controllable selection mechanism?" <i>Perception</i> 39 ECVF Abstract Supplement, page 158</p> <p>Mathey M A, Crouzet S M, Thorpe S J, 2010, "The accuracy of ultra-rapid saccades to faces" <i>Perception</i> 39 ECVF Abstract Supplement, page 171</p> <p>Crouzet, S. M. &amp; Thorpe, S. J. (2010) Power spectrum cues underlying ultra-fast saccades towards faces [Abstract]. <i>Journal of Vision</i>, 10(7): 634</p> <p>Mathey, M. A., Crouzet, S. M. &amp; Thorpe, S. J. (2010) Ultra-rapid saccades to faces : the effect of target size [Abstract]. <i>Journal of Vision</i>, 10(7): 635</p> <p>Crouzet S, Mathey M, Thorpe S J (2009). Ultra-fast saccades to faces: A temporal precedence effect? <i>Perception</i> 38 ECVF Abstract Supplement, page 157.</p> <p>Crouzet, S. M., Joubert, O. R., Thorpe, S. J., &amp; Fabre-Thorpe, M. (2009). The bear before the forest, but the city before the cars: Revealing early object/background processing [Abstract]. <i>Journal of Vision</i>, 9(8):954</p> <p>Fabre-Thorpe, M., Crouzet, S. M., Wu, C.-T., &amp; Thorpe, S. J. (2009). At 130 ms you "know" where the animal is but you don't yet "know" it's a dog [Abstract]. <i>Journal of Vision</i>, 9(8):786</p> <p>Thorpe, S. J., Crouzet, S. M., Macé, M. J., Bacon-Macé, N., &amp; Fabre-Thorpe, M. (2009). Masking in a high-level gender discrimination task is essentially entirely pre-cortical [Abstract]. <i>Journal of Vision</i>, 9(8):546</p> <p>S Crouzet, H Kirchner, S J Thorpe (2008). Saccading towards faces in 100 ms. What's the secret? <i>Perception</i> 37 ECVF Abstract Supplement, page 119.</p> <p>S J Thorpe, H Kirchner, S Crouzet, P Bayerl, H Neumann (2008). Processing times for optic flow patterns measured by the saccadic choice task. <i>Perception</i> 37 ECVF Abstract Supplement, page 40.</p> <p>Crouzet, S., Thorpe, S. J., &amp; Kirchner, H. (2007). Category-dependent variations in visual processing time. <i>Journal of Vision</i>, 7(9):922,922a, <a href="http://journalofvision.org/7/9/922/">http://journalofvision.org/7/9/922/</a>, doi:10.1167/7.9.922.</p> <p>Thorpe, S., Crouzet, S., &amp; Kirchner, H. (2007). Saliency maps and ultra-rapid choice saccade tasks. <i>Journal of Vision</i>, 7(9):30, 30a, <a href="http://journalofvision.org/7/9/30/">http://journalofvision.org/7/9/30/</a>, doi:10.1167/7.9.30.</p> <p>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.</p> <p>Simon J. Thorpe, Sébastien Crouzet and Holle Kirchner (2006). Comparing processing speed for complex natural scenes and simple visual forms. <i>Perception</i>, vol. 35, p 128.</p>	
INVITED TALKS	<p><i>Invited by David Sheinberg</i>, Brown University, Providence, RI, USA An early cortical basis for speed of sight.</p> <p><i>Invited by Simon J. Thorpe</i>, CERCO-CNRS, Toulouse, France Rapid Visual Processing of Natural Scenes: Linking Behavioral and Electrophysiological Data to Computational Models.</p>	<p><b>Mar 2012</b></p> <p><b>Jan 2012</b></p>

*In-House Seminar*, Neuroscience Department, Brown University, Providence, RI, USA **Nov 2011**  
 Rapid Visual Processing of Natural Scenes: Linking Behavioral and Electrophysiological Data to Computational Models.

*Invited by Aude Oliva*, MIT, Cambridge, MA, USA **May 2009**  
 Revealing early visual processing of natural scenes using a saccade choice task.

#### EDITORIAL SERVICE

<b>Journal</b>	<b># articles reviewed</b>
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

**Instructor** (14 sessions of 90 min) **2013/2014**  
*Berlin School of Mind & Brain, Berlin, Germany*  
 Seminar on visual perception. Teaching in English language.

**Statistics Tutorial** (6h) **Dec 2012**  
*Berlin School of Mind & Brain, Berlin, Germany*  
 Using the R environment for data analysis, statistical computing and graphics. Teaching in English language.

**Guest lecture** (2h) **2011**  
*Computational Vision course, CLPS1520, Brown University, Providence, RI, USA*  
 Object recognition in natural scenes. Teaching in English language.

**Teaching Assistant** (96h over 3 years) **2006 to 2009**  
*Department of Psychology, Université Toulouse Le Mirail, Toulouse, France*  
 Introduction to Neurosciences

**Instructor** (30h over 3 years) **2006 to 2009**  
*School of Psychomotricity, Faculté de Médecine de Rangueil, Toulouse, France*  
 Visual system and eye movements

**Instructor** (24h over 2 years) **2006 to 2007**  
*School of Psychomotricity, Faculté de Médecine de Rangueil, Toulouse, France*  
 Epistemology of neuropsychology

**Instructor** (10h) **2006**  
*School of Psychomotricity, Faculté de Médecine de Rangueil, Toulouse, France*  
 Sleep, emotions

#### ACADEMIC MENTORING

Marie Mathey	Master student in Toulouse, France
Rohan Katipally	Undergraduate student at Brown University, Providence, USA
Robin Martins	Undergraduate student at Brown University, Providence, USA
Simon Ludwig	Master student at Freie Universität, Berlin, Germany

OFFICIAL COMMITMENTS	<b>Organizer of Cutting EEG 2014</b> <b>19–21 February 2014</b> <i>Member of the organizing committee for the Cutting EEG 2014: Symposium on cutting-edge EEG methods. Specifically in charge of the proceedings' publication in Journal of Neuroscience Methods.</i> <a href="http://www.mind-and-brain.de/postdoctoral-program/scientific-events/cutting-eeeg/">http://www.mind-and-brain.de/postdoctoral-program/scientific-events/cutting-eeeg/</a> Berlin, Germany
	<b>Organizer of the J3CN</b> <b>2010 to 2011</b> <i>Journal Club for Cognitive &amp; Computational Neuroscience, Brown University</i> <a href="https://sites.google.com/a/brown.edu/j3cn/">https://sites.google.com/a/brown.edu/j3cn/</a> Providence, USA
	<b>Header of the Organizing Committee for the CJCSC'09</b> <b>2008 to 2009</b> <i>French Cognitive Science Young Researcher Conference</i> <a href="http://fresco.risc.cnrs.fr/cjcsc2009/">http://fresco.risc.cnrs.fr/cjcsc2009/</a> Toulouse, France
	<b>Header of the Young Researcher Workshop for trend forecasting in Cognitive Science</b> <b>2009</b> <i>Part of the PIRSTEC project funded by the French National Research Agency (ANR)</i> <a href="http://pirstec.risc.cnrs.fr">http://pirstec.risc.cnrs.fr</a>
	<b>Students and Post-Docs representative</b> <b>2006 to 2009</b> <i>Brain and Cognition Research Center lab council</i> Toulouse, France
FELLOWSHIPS, GRANTS & FUNDINGS	<b>Founding member of the association inCOGnu</b> <b>2006 to 2009</b> <i>Association of cognitive science students of Toulouse</i> <a href="http://incognu.fr/">http://incognu.fr/</a> Toulouse, France
	<b>Grant awarded to Niko Busch</b> <b>Sep 2012 to Aug 2014</b> <i>Deutsche Forschungsgemeinschaft (DFG)</i>
	<b>Grant awarded to Thomas Serre</b> <b>Sep 2010 to Jul 2012</b> <i>Defense Advanced Research Projects Agency (DARPA).</i> <i>I had an active participation in the monthly+trimestrial+annual reports.</i>
	<b>4th year of Ph.D. fellowship</b> <b>Nov 2009 to May 2010</b> <i>Fondation pour la Recherche Médicale (FRM)</i>
	<b>Postgraduate scholarship</b> <b>Oct 2006 to Sep 2009</b> <i>Délégation Générale pour l'Armement (DGA, French Ministry of Defense)</i>
	<b>Master scholarship (bourse d'excellence)</b> <b>Sep 2005 to Jun 2006</b> <i>Université René Descartes Paris 5</i>
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

*Operating Systems:* Advanced knowledge of Mac OS and GNU Linux.  
*Programming languages:* MATLAB, R, Python.  
*Experimental testing:* Psychtoolbox for MATLAB.  
*Eye movement recording:* SR Research Eyelink, SMI View Eyetracker, Chronos Eyetracker, EOG.  
*EEG and iEEG analysis:* Homemade MATLAB functions and EEGLab.  
*Statistical Analysis:* Parametric and non-parametric tests, Multivariate Pattern Analysis.  
*Communication and publishing:* Advanced knowledge of L<sup>A</sup>T<sub>E</sub>X, Adobe Illustrator & the presentation software Keynote (Mac OS); website creation and maintenance with HTML and CSS.

REFEREES

**Dr Simon J. Thorpe**

Ph.D. advisor  
CNRS, Toulouse, France  
phone: *available on request*  
e-mail: [simon.thorpe@cerco.ups-tlse.fr](mailto: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](mailto: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](mailto:niko.busch@charite.de)