

August 30, 2010

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Married, one child (\*09/2008)

## EDUCATION

- 2003 – 2006      **Justus-Liebig University, Department of Psychology**  
*Giessen, Germany*  
Ph.D. (Dr. rer. nat.) in Psychology, “summa cum laude”  
Dissertation: Visual signals for smooth pursuit eye movements  
Advisors: Karl Gegenfurtner, Frank Bremmer, Uwe Ilg
- 1998 – 2002      **Ruprecht-Karls University, Department of Psychology**  
*Heidelberg, Germany*  
Diplom (M.A. equivalent) in Psychology  
Thesis: The role of emotions in complex problem solving  
Advisor: Joachim Funke
- 1997 – 1998      **Exeter University, Department of Psychology**  
*Exeter, England*  
Testamur (B.Sc. equivalent) in Psychology
- 1995 – 1997      **Konstanz University, Department of Psychology**  
*Konstanz, Germany*  
Vordiplom (B.A.) in Psychology

## RESEARCH EXPERIENCE

- 2008 – present      **Postdoctoral Fellow, New York University**  
*New York, NY*  
Department of Psychology, Cognition & Perception  
Advisor: Marisa Carrasco
- 2007                **Postdoctoral Fellow, Justus-Liebig University**  
*Giessen, Germany*  
Department of Psychology  
Advisor: Karl Gegenfurtner
- 2003 – 2006      **Graduate Research and Teaching Assistant, Justus-Liebig University**  
*Giessen, Germany*
- 2002 – 2003      **Graduate Research and Teaching Assistant, Ruprecht-Karls University**  
*Heidelberg, Germany*

**RESEARCH EXPERIENCE (cont.)**

1995 – 2002            **Undergraduate Student Research Assistant, Ruprecht-Karls University Heidelberg and Konstanz University**  
Projects in Experimental, Developmental, Work & Organizational Psychology

**FELLOWSHIPS AND AWARDS**

01/2008 – 03/2011    **German Research Foundation (DFG)**  
“Interaction of attention and awareness in visual processing”  
Individual Career Development Fellowship, DFG SP 1172/1-1, ~\$200,000

01/2008 – 12/2009    **German Academic Exchange Service (DAAD)**  
Postdoctoral fellowship, ~\$90,000 (declined)

10/2007                **Klaus Tschira Award for Achievements in Public Understanding of Science**  
Highly competitive prize, one prize in Neuroscience in Germany per year

03/2007                **German Psychological Society (DGPS)**  
First place in Annual Dissertation Competition in Experimental Psychology

2003 – 2006            **DFG Dissertation Scholarship** (competitive fellowship)

2003                    **German Academic Exchange Service (DAAD)**  
Short-term scholarship for “scientific training abroad for doctoral students”,  
awarded for 3-months research project at the University of Chicago, Department  
of Psychology; Advisor: Vera Maljkovic

12/2002                **Franz Emanuel Weinert Award**  
Award for best diploma thesis in 2002 by the Department of Psychology,  
Ruprecht-Karls University Heidelberg

1998 – 2002            **Konrad-Adenauer-Foundation**  
Student scholarship, awarded to less than 1% of students in Germany for “high  
academic performance, political and social commitment”

1998 – 2002            **German National Academic Foundation (Studienstiftung des deutschen  
Volkes)**  
Student scholarship, awarded to less than 1% of students in Germany and  
Switzerland for “academic excellence in the chosen field of study, and a strong  
sense of social responsibility”

**TEACHING EXPERIENCE**

09/2006                Teaching Assistant, 2. European Summer School on Visual Neuroscience,  
Rauischholzhausen, Germany

2004 – 2006            Justus-Liebig University Giessen, Germany  
Department of Psychology  
**Thinking** (2 2-hr lectures), **Thinking and Problem Solving** (12 2-hr classes)

2003                    College of Education, Heidelberg, Germany  
Department of Teacher Training  
**Thinking and Problem Solving** (12 2-hr classes)

**TEACHING EXPERIENCE (cont.)**

- 2002 – 2003           Ruprecht-Karls University Heidelberg, Germany  
Department of Psychology  
**Psychological Research Methods** (12 4-hr classes), **Visual Perception** (12 2-hr classes), **Thinking and Problem Solving** (12 2-hr classes)
- 1997                   Undergraduate Teaching Assistant, Konstanz University, Germany  
Department of Psychology  
**Developmental and Cross-Cultural Psychology** (12 2-hr exam preparation courses)

**PROFESSIONAL ACTIVITIES AND SERVICE****Symposium Organizer**

- “Action for perception: functional significance of eye movements for visual perception” at the 8th Annual Meeting of the Vision Sciences Society, Naples, FL, 2008 (with A. Montagnini)
- “Augenbewegungen und visuelle Wahrnehmung” [Eye movements and visual perception] at the 48. Tagung experimentell arbeitender Psychologen, Mainz, Germany, 2006.

**Service**

Ad-hoc reviewer for: Journal of Neurophysiology, Journal of Experimental Psychology: HPP, Vision Research, Journal of Vision, Visual Neuroscience, Attention, Perception & Psychophysics, European Journal of Cognitive Psychology

Member of student selection committee for German National Academic Foundation

**Memberships**

Vision Sciences Society (VSS); Society for Neuroscience (SfN); American Psychological Association (APA); German Psychological Society (DGPS)

**WORKSHOPS AND SUMMER SCHOOLS (selection)**

- 09/2004           1. European Summer School on Visual Neuroscience  
Rauischholzhausen, Germany
- 03/2004           2. fMRI Spring School “Functional magnetic resonance imaging in Psychological Research”  
Bender Institute of Neuroimaging, Giessen

**PUBLICATIONS****Refereed Journal Articles (11)**

- Spering, M.**, Pomplun, M., & Carrasco, M. (2010). Tracking without perceiving: A dissociation between motion perception and eye movements. *Psychological Science*, *in press*.
- Spering, M.**, Montagnini, A., & Gegenfurtner, K. R. (2008). Competition between color and luminance in target selection for smooth pursuit and saccadic eye movements. *Journal of Vision*, *8*, 1-19. (This paper has been recommended and selected as Faculty of 1000 Biology on May 28, 2009.)
- Spering, M.** & Gegenfurtner, K. R. (2008). Contextual effects on motion perception and smooth pursuit eye movements. *Brain Research*, *1225*, 76-85.
- Spering, M.** & Gegenfurtner, K. R. (2007b). Contrast and assimilation in motion perception and smooth pursuit eye movements. *Journal of Neurophysiology*, *98*, 1355-1363.
- Spering, M.** & Gegenfurtner, K. R. (2007a). Contextual effects on smooth pursuit eye movements. *Journal of Neurophysiology*, *97*, 1353-1367.
- Thaler, L., Todd, J. T., **Spering, M.**, & Gegenfurtner, K. R. (2007). Illusory bending of a rigidly moving line segment: Effects of image motion, luminance contrast and smooth pursuit eye movements. *Journal of Vision*, *7*, 1-13.
- Spering, M.**, Gegenfurtner, K. R., & Kerzel, D. (2006). Distractor interference during smooth pursuit eye movements. *Journal of Experimental Psychology: Human Perception and Performance*, *32*, 1136-1154.
- Montagnini, A., **Spering, M.**, & Masson, G. S. (2006). Predicting the 2D target velocity cannot help 2D motion integration for smooth pursuit initiation. *Journal of Neurophysiology*, *96*, 3545-3550.
- Spering, M.**, Kerzel, D., Braun, D. I., Hawken, M. J., & Gegenfurtner, K. R. (2005). Effects of contrast on smooth pursuit eye movements. *Journal of Vision*, *5*, 455-465.
- Spering, M.**, Wagener, D., & Funke, J. (2005). The role of emotions in complex problem-solving. *Cognition and Emotion*, *19*, 1252-1261.
- Ghosh, N., **Spering, M.**, Wilshaw, J., & Nagarajan, R. (2003). Diurnal activity budgets of breeding Eurasian Oystercatchers *Haematopus ostralegus* feeding on limpets on rocky shores. *Wader Study Group Bulletin*, *101/102*, 81-87.

**Manuscripts submitted or in preparation (5)**

- Debono, K., Schütz, A. S., **Spering, M.**, & Gegenfurtner, K. R. (subm.). *Receptive fields for smooth pursuit eye movements and motion perception*. (under review at Vision Research)
- Spering, M.** & Carrasco, M. (in prep.). *Attending the unseen: Effects of feature-based attention on motion perception in binocular rivalry flash suppression*.
- Spering, M.**, Kumbhani, R., & Movshon, J.A. (in prep.). *Initial ocular following response and motion perception are correlated*.
- Spering, M.**, Schütz, A. S., Braun, D. I., & Gegenfurtner, K. R. (subm.). *Keep your eyes on the ball: Smooth pursuit eye movements enhance the prediction of visual motion* (under review at J Neurophys)

**Manuscripts submitted (cont.)**

**Spering, M.**, & Montagnini, A. (subm.). *Do we track what we see? Evidence for common and independent processing of motion information for perception and smooth pursuit eye movements* (under review at Vision Research)

**Books (1)**

**Spering, M.**, & Schmidt, T. (2008). *Allgemeine Psychologie Kompakt [Introduction to Experimental Psychology]*. Weinheim, Germany: Beltz PVU. (151 pages)

**Book chapters (4)**

**Spering, M.** & Gegenfurtner, K. R. (2009, to appear). Visual signals for smooth pursuit eye movements. In J. A. Movshon & O. Braddick (Eds.), *Visual motion*. Cambridge, MA: MIT Press.

**Spering, M.** & Gegenfurtner, K. R. (2009, to appear). Motion perception and smooth pursuit eye movements. In C. Chubb (Ed.), *Festschrift for George Sperling*.

Gegenfurtner, K. R. & **Spering, M.** (2006). Visuelle Wahrnehmung [Visual Perception]. In K. Pawlik (Hrsg.), *Handbuch Psychologie* (S. 89-108). Heidelberg, Germany: Springer.

Funke, J. & **Spering, M.** (2006). Methoden der Denk- und Problemlöseforschung [Methods for research on thinking and problem solving]. In J. Funke (Hrsg.), *Enzyklopädie der Psychologie, Serie 2, Kognition, Band 8: Denken und Problemlösen* (S. 647-744). Göttingen, Germany: Hogrefe.

**Conference presentations (\* Talk; 11 talks, 18 poster presentations)****2010**

**Spering, M.** & Carrasco, M. (2010, May). *Feature-based attention enhances motion processing during dominance and suppression in binocular rivalry*. Poster session to be presented at the 10<sup>th</sup> Annual Meeting of the Vision Sciences Society, Naples, FL.

**2009**

\***Spering, M.**, Pomplun, M., & Carrasco, M. (2009, May). *Differential effects of suppressed visual motion information on perception and eye movements in binocular rivalry*. Paper presented at the 9<sup>th</sup> Annual Meeting of the Vision Sciences Society, Naples, FL.

Schütz, A. C., **Spering, M.**, Braun, D. I., & Gegenfurtner, K. R. (2009, May). *Differential Smooth pursuit eye movements and the segregation of coherent motion*. Poster session presented at the 9<sup>th</sup> Annual Meeting of the Vision Sciences Society, Naples, FL.

**2008**

**Spering, M.** & Carrasco, M. (2008, November). *Ocular following response as indicator for depth of suppression during binocular rivalry flash suppression*. Poster session presented at the 40<sup>th</sup> Annual Meeting of the Society for Neuroscience, Washington, DC.

\***Spering, M.** & Gegenfurtner, K. R. (2008, May). *Motion perception and prediction during smooth pursuit eye movements*. Paper presented at the 8<sup>th</sup> Annual Meeting of the Vision Sciences Society, Naples, FL.

**Conference presentations (cont.)**

**Spering, M.,** Schütz, A. C., & Gegenfurtner, K. R. (2008, May). *Smooth pursuit eye movements and the predictability of visual motion*. Poster session presented at the 8<sup>th</sup> Annual Meeting of the Vision Sciences Society, Naples, FL.

**2007**

**Spering, M.,** Montagnini, A., & Gegenfurtner, K. R. (2007, August). *Competition between luminance and color for target selection in pursuit and saccadic eye movements*. Poster session presented at the 30<sup>th</sup> European Conference on Visual Perception, Arezzo, Italy.

**Spering, M.,** Montagnini, A., & Gegenfurtner, K. R. (2007, August). *Competition between luminance and color for target selection in pursuit and saccadic eye movements*. Poster session presented at the 14<sup>th</sup> European Conference on Eye Movements, Potsdam, Germany.

**Spering, M.** & Gegenfurtner, K. R. (2007, July). *Contrast and assimilation in motion perception and smooth pursuit eye movements*. Poster session presented at the Gordon Conference on Oculomotor System Biology, Lewiston, ME.

\***Spering, M.** & Gegenfurtner, K. R. (2007, May). *Contrast and assimilation in motion perception and smooth pursuit eye movements*. Paper presented at the 7<sup>th</sup> Annual Meeting of the Vision Sciences Society, Sarasota, FL.

**2006**

**Spering, M.** & Gegenfurtner, K. R. (2006, October). *Motion signal integration during smooth pursuit eye movements*. Poster session presented at the 38<sup>th</sup> Annual Meeting of the Society for Neuroscience, Atlanta, GA.

\***Spering, M.** & Gegenfurtner, K. R. (2006, September). *Integration von visuellen Bewegungssignalen während glatter Augenfolgebewegungen. [Integration of visual motion signals during smooth pursuit eye movements.]* Paper presented at the 45. Kongress der Deutschen Gesellschaft fuer Psychologie, Nürnberg, Germany.

\***Spering, M.** & Gegenfurtner, K. R. (2006, August). *Visual contextual effects on smooth pursuit eye movements*. Paper presented at the 29<sup>th</sup> European Conference on Visual Perception, St. Petersburg, Russia.

\***Spering, M.** & Gegenfurtner, K. R. (2006, May). *Visual contextual effects on smooth pursuit eye movements*. Paper presented at the 6<sup>th</sup> Annual Meeting of the Vision Sciences Society, Sarasota, FL.

Montagnini, A., **Spering, M.**, & Masson, G. S. (2006, May). *Combining 1D visual motion and 2D predictive signals to control smooth pursuit eye movements*. Poster session presented at the 6<sup>th</sup> Annual Meeting of the Vision Sciences Society, Sarasota, FL.

**Spering, M.** & Gegenfurtner, K. R. (2006, March). *Visual contextual effects on smooth pursuit eye movements*. Poster session presented at the 9<sup>th</sup> Tübingen Perception Conference, Tübingen, Germany.

\***Spering, M.** & Gegenfurtner, K. R. (2006, March). *Einfluss des visuellen Kontexts auf glatte Augenfolgebewegungen. [Effect of visual context on smooth pursuit eye movements.]* Paper presented at the 48. Tagung experimentell arbeitender Psychologen, Mainz, Germany.

**2005**

**Spering, M.,** Kerzel, D., & Gegenfurtner, K. R. (2005, November). *The effect of moving distractors on smooth pursuit eye movements*. Poster session presented at the 35<sup>th</sup> Annual Meeting of the Society for Neuroscience, Washington, DC.

**Conference presentations (cont.)**

- \***Spering, M.**, Kerzel, D., & Gegenfurtner, K. R. (2005, June). *Effects of moving distractors on smooth pursuit eye movements*. Paper presented at the Gordon Research Conference on Oculomotor System Biology, Lewiston, ME.
- \***Spering, M.**, Kerzel, D., & Gegenfurtner, K. R. (2005, April). *Einfluss von bewegten Distraktoren auf horizontale Augenfolgebewegungen. [Effect of moving distractors on horizontal smooth pursuit eye movements.]* Paper presented at the 47. Tagung experimentell arbeitender Psychologen, Regensburg, Germany.
- Spering, M.**, Kerzel, D., Braun, D. I., Hawken, M. J., & Gegenfurtner, K. R. (2005, February). *Effects of contrast on smooth pursuit eye movements*. Poster session presented at the Satellite Symposium V, 6<sup>th</sup> Meeting of the German Neuroscience Society, Göttingen, Germany.
- Spering, M.**, Kerzel, D., & Gegenfurtner, K. R. (2005, February). *The effect of distractors on smooth pursuit eye movements*. Poster session presented at the 8<sup>th</sup> Tübingen Perception Conference, Tübingen, Germany.

**2004**

- \***Spering, M.**, Kerzel, D., & Gegenfurtner, K. R. (2004, April). *Glatte Augenfolgebewegungen bei niedrigem Stimuluskontrast. [Smooth pursuit eye movements at low stimulus contrast.]* Paper presented at the 46. Tagung experimentell arbeitender Psychologen, Giessen, Germany.
- Spering, M.**, Kerzel, D., Braun, D. I., Hawken, M. J., & Gegenfurtner, K. R. (2004, October). *Effects of contrast on smooth pursuit eye movements*. Poster session presented at the 34<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA.
- Spering, M.**, Kerzel, D., Braun, D. I., Hawken, M. J., & Gegenfurtner, K. R. (2004, May). *Effects of contrast on smooth pursuit eye movements*. Poster session presented at the 4<sup>th</sup> Annual Meeting of the Vision Sciences Society, Sarasota, FL.
- Spering, M.**, Kerzel, D., Neumann, D., & Gegenfurtner, K. R. (2004, February). *Smooth pursuit eye movements at low stimulus contrast around detection threshold*. Poster session presented at the 7<sup>th</sup> Tübingen Perception Conference, Tübingen, Germany.
- Spering, M.**, Kerzel, D., & Gegenfurtner, K. R. (2004, January). *Smooth pursuit eye movements at low stimulus contrast*. Poster session presented at the Workshop "Motor control for vision scientists", Lunteren, Netherlands.

**2002-2003**

- Rau, C., **Spering, M.** & Funke, J. (2003, August). *Explicating hypotheses helps solving complex problems*. Poster session presented at the Biannual Conference on Subjective Probability, Utility, and Decision Making, SPUDM 19, Zürich, Switzerland.
- \***Spering, M.** & Funke, J. (2002, September). *Spielen Emotionen wirklich eine Rolle beim Bearbeiten komplexer Probleme? [Do emotions affect the ability to solve complex problems?]* Paper presented at the 43. Kongress der Deutschen Gesellschaft für Psychologie, Berlin, Germany.

**Book reviews (in German)**

- Spering, M.** (2007). Review of „Die Kunst des wissenschaftlichen Präsentierens und Publizierens“. Spektrum Direkt. Online access <http://www.spektrumdirekt.de/artikel/865370>
- Spering, M.** (2006a). Review of F. Schwarz „Muster im Kopf“. Spektrum Direkt. Online access <http://www.wissenschaft-online.de/artikel/801952>

**Book reviews (cont.)**

- Spering, M.** (2006b). Review of G. Marcus „Der Ursprung des Geistes - Wie Gene unser Denken prägen“. Spektrum Direkt. Online access <http://www.wissenschaft-online.de/artikel/842074>.
- Spering, M.** (2006c). Review of „Sigmund Freud. Das Lesebuch“. Spektrum Direkt. Online access <http://www.wissenschaft-online.de/artikel/840773>.
- Spering, M.** (2005a). Review of A. Damasio „Spinoza Effekt“. *Spektrum der Wissenschaften, Heft 1(2005), 95-96*.
- Spering, M.** (2005b). Review of J. Hennig & P. Netter „Biopsychologische Grundlagen der Persönlichkeit“. Spektrum Direkt. Online access <http://www.wissenschaft-online.de/artikel/781866>
- Spering, M.** (2004). Review of M. Spitzer „Selbstbestimmen“. Spektrum Direkt. Online access [http://www.wissenschaft-online.de/blatt/sciguide\\_rez\\_5x5](http://www.wissenschaft-online.de/blatt/sciguide_rez_5x5)
- Spering, M.** (2003a). Review of J. Wandmacher „Einführung in die psychologische Methodenlehre“. Spektrum Direkt. Online access [http://www.wissenschaft-online.de/blatt/sciguide\\_rez\\_5x5](http://www.wissenschaft-online.de/blatt/sciguide_rez_5x5)
- Spering, M.** (2003b). Review of M. Pritzel, M. Brand & H. J. Markowitsch „Gehirn und Verhalten: Ein Grundkurs der physiologischen Psychologie“. Spektrum Direkt. Online access [http://www.wissenschaft-online.de/blatt/sciguide\\_rez\\_5x5](http://www.wissenschaft-online.de/blatt/sciguide_rez_5x5)

**Popular science (in German)**

- Spering, M.** (2008). Das denkende Auge [The thinking eye]. *Rheinpfalz am Sonntag*, 27.01.2008.
- Spering, M.** (2007). Wenn das Gehirn am Steuer sitzt [When the brain is behind the driving wheel]. *Bild der Wissenschaft, Sonderheft zum Klaus Tschira Preis fuer Verständliche Forschung*, 20-23.
- Gegenfurtner, K. R. & **Spering, M.** (2007). Vom Sinneseindruck zur zielgerichteten Handlung: Arbeiten der Forschergruppe „Wahrnehmung und Handlung“ und des Graduiertenkollegs „Gehirn und Verhalten“ an den Universitäten Giessen und Marburg [Report for the Giessen University newsletter on the research conducted in Experimental Psychology]. *Giessener Universitätsblätter*, 40, 99-106.

**Invited colloquia**

- November 11, 2009 Department of Psychology, Pennsylvania State University (by invitation from Michael Wenger)
- October 1, 2009 Department of Psychology, University of British Columbia, Canada (by invitation from James Enns)
- September 29, 2009 Department of Ophthalmology, University of British Columbia, Canada (by invitation from Jason Barton)
- June 11, 2009 Université Descartes Paris V, France (by invitation from Pascal Mamassian)
- June 10, 2009 Collège de France, Paris, France (by invitation from Alain Berthoz)
- March 6, 2009 Center for Neural Science, New York, USA (by invitation from Tony Movshon)
- December 6, 2007 Technical University Berlin, Germany (by invitation from Felix Wichmann)
- July 2, 2007 Université catholique de Louvain, Belgium (by invitation from Philippe Lefèvre)
- June 11, 2007 Hertie Institute for Clinical Brain Research, University of Tübingen (by invitation from Uwe Ilg)

**Invited colloquia (cont.)**

- January 10, 2007 Department of Psychology, University of Dresden (by invitation from Boris Velichkowsky)
- November 10, 2006 Department of Psychology, University of Düsseldorf, Germany (by invitation from Petra Störig)
- April 13, 2006 Center for Neural Science, New York University, New York (by invitation from Marisa Carrasco)
- December 12, 2005 Max-Planck-Institute for Biological Cybernetics, Tübingen, Germany (by invitation from Bernhard Schölkopf)
- April 26, 2005 CNRS Marseille, France (by invitation from Guillaume Masson)