Personal information

Name	Ronald van den Berg
Date of birth	26-01-1979
Website	www.ronaldvandenberg.org
Google scholar	http://scholar.google.co.uk/citations?user=QUDXhooAAAAJ

Education

Aug 2016	Application submitted for Docent in Psychology
2004-2009	Ph.D., Visual Perception and Computer Science, University of Groningen, Netherlands
1998-2003	M.Sc., Computer Science, University of Groningen, Netherlands

Research positions

2015-present	Forskare, Department of Psychology, University of Uppsala, Sweden
2013-2015	Postdoc, Sensorimotor Learning Laboratory, University of Cambridge, UK
2009-2012	Postdoc, Theoretical and Systems Neuroscience lab, BCM, Houston, USA

Internships

2008 (May-Aug)	Internship, Perceptual Science Group at MIT, Cambridge, USA
2003-2004	Research assistant, School of Behavioral and Cognitive Neuroscience, University of Groningen, Netherlands
2002-2003	Research internship, Det Norske Veritas, Oslo, Norway (M.Sc. thesis)

Grants

2016-2019	Marie Skłodowska Curie International Career Grant (5.8 MSEK)
2009-2011	Rubicon fellowship, Netherlands Organisation for Scientific Research (NWO) (45k EUR)

Stipends

2008	Travel stipend from School of Behavioral and Cognitive Neuroscience (BCN) (2k EUR)
2008	Travel stipend from Vereniging voor Biofysica en Biomed.Techn. (VvBBMT) (1k EUR)
2003-2004	Research stipend from School of Behavioral and Cognitive Neuroscience (BCN) (2k EUR)

Peer-reviewed articles

Summary: 21 articles; 17 first or joint-first authorships; mean journal impact factor: 5.3
^ = joint first authorship

1. Van den Berg R, Ma WJ (accepted, pending revisions). *Fechner's law in metacognition: a quantitative model of working memory confidence*. **Psychological Review**.
2. Van den Berg R^, Zylberberg A^, Kiani R, Shadlen MN, Wolpert DM (in press). *Confidence is the bridge between multi-stage decisions*. **Current Biology**.
3. Van den Berg R, Anandalingam K, Zylberberg A, Kiani R, Shadlen MN, Wolpert DM (2016). *A common mechanism underlies changes of mind about decisions and confidence*. **Elife**.
4. Bhardwaj M, Van den Berg R, Ma WJ, Josić K (2016). *Do People Take Stimulus Correlations into Account in Visual Search?* **PloS one**.
5. Thibault L, Van den Berg R, Cavanagh P, Sergent C. (2016), *Retrospective Attention Gates Discrete Conscious Access to Past Sensory Stimuli*. **PloS one**.
6. Ma WJ, Shen S, Dziugaite G, Van den Berg R (2015), *Requiem for the max rule*. **Vision Research**.
7. Van den Berg R, Awh ES, Ma WJ (2014), *Factorial comparison of working memory models.* **Psychological Review**.

8. Van den Berg R, Ma WJ (2014), *Plateau-related summary statistics are uninformative for comparing working memory models.* **Attention, Perception, and Psychophysics**.
9. Keshvari S^, Van den Berg R^, Ma WJ (2013), *No evidence for an item limit in change detection*. **PLoS Computational Biology**.
10. Mazyar H^, Van den Berg R^, Seilheimer R, Ma WJ (2013), *Independence is elusive: Set size effects on encoding precision in visual search.* **Journal of Vision**.
11. Keshvari S, Van den Berg R, Ma WJ (2012), *Probabilistic computation in perception under variability in encoding precision*. **PLoS One**.
12. Van den Berg R, Johnson A, Martinez A, Schepers AL, Cornelissen FW (2012), *Comparing crowding in human and ideal observers.* **Journal of Vision**.
13. Van den Berg R^, Shin H^, Chou WC, George R, Ma WJ (2012), *Variability in encoding precision accounts for visual short-term memory limitations*. **PNAS**.
14. Mazyar H^, Van den Berg R^, Ma WJ (2012), *Does precision decrease with set size?* **Journal of Vision**.
15. Van den Berg R, Vogel M, Josic K, Ma WJ (2012), *Optimal inference of sameness*. **PNAS**.
16. Ma WJ^, Navalpakkam V^, Beck JM^, Van den Berg R^, Pouget A (2011), *Near-optimal visual search: behavior and neural basis*. **Nature Neuroscience**.
17. Van den Berg R, Roerdink JBTM, Cornelissen FW (2010), *A neurophysiologically plausible population code model for feature integration explains visual crowding*. **PLoS Computational Biology**.
18. Van den Berg R, Cornelissen FW, Roerdink JBTM (2009), *A crowding model of visual clutter.* **Journal of Vision**.
19. Van den Berg R, Cornelissen FW, Roerdink JBTM (2008), *Perceptual dependencies in information visualization assessed by complex visual search.* **ACM Transactions on Applied Perception**.
20. Van den Berg R, Roerdink JBTM, Cornelissen FW (2007). *On the generality of crowding: Visual crowding in size, saturation, and hue compared to orientation*. **Journal of Vision**.
21. Hannus A^, Van den Berg R^, Bekkering H, Roerdink JBTM, Cornelissen FW (2006), *Visual search near threshold: Some features are more equal than others*. **Journal of Vision**.

Under review

22. Van den Berg R, Ma WJ, *A normative neural model of working memory limitations*.
23. Van den Berg R, Lindskog M, Poom L, Winman A, *Recent is more: a time-order effect in non-symbolic numerical judgment*.

Peer-reviewed letters and comments

24. Van den Berg R, Ma WJ (2012), *Robust averaging during perceptual judgment is not optimal.* Letter in Response to "Robust averaging during perceptual judgment" by De Gardelle and Summerfield. PNAS.

Peer-reviewed conference contributions (2012-present)

1. Van den Berg R, Ma WJ (2016). *A normative theory of visual working memory limitations.* CogSci 2016, Philadelphia, USA. (Poster)
2. Van den Berg R, Ma WJ (2016). *A Fechnerian model of working memory confidence.* MathPsych 2016, New Brunswick, USA. (Talk)
3. Van den Berg R, Anandalingam K, Zylberberg A, Woloszyn L, Kiani R, Shadlen M, Wolpert D (2015). *A common mechanism underlies changes of mind about decisions and confidence*. Computational and Systems Neuroscience, Salt Lake City, USA. (Talk)

4. Woloszyn L, Anandalingam K, Van den Berg R, Wolpert DM, Shadlen MN (2014). *Neural responses in parietal area MIP support a link between decision confidence and movement variability*. Society for Neuroscience, Washington DC, USA. (Poster)
5. Shin H, Van den Berg R, Ma WJ (2013). *Independent pools of visual short-term memory resource for different features*. Computational and Systems Neuroscience, Salt Lake City, USA. (Poster)
6. Shen S, Van den Berg R, Ma WJ (2013). *When is sensory precision variable?* Computational and Systems Neuroscience, Salt Lake City, USA. (Poster)
7. Bhardwaj M, Van den Berg R, Ma WJ, Josic K (2013). *Do humans account for stimulus correlations in visual perception?* Computational and Systems Neuroscience, Salt Lake City, USA. (Poster)
8. Van den Berg R, Beck JM, Ma WJ (2012). *Scientists are suboptimal in judging scientific data.* Computational and Systems Neuroscience, Salt Lake City, USA. (Poster)
9. Shin H, Van den Berg R, Ma WJ (2012). *Change localization: a new paradigm for visual short-term memory*. Computational and Systems Neuroscience, Salt Lake City, USA. (Poster)
10. Mazyar H, Van den Berg R, Ma WJ (2012). *On the precision of sensory encoding in visual search*. Computational and Systems Neuroscience, Salt Lake City, USA. (Poster)
11. Keshvari S, Van den Berg R, Ma WJ (2012). *Change detection as probabilistic inference under variable resources*. Computational and Systems Neuroscience, Salt Lake City, USA. (Poster)

Invited talks (2012-present)

1. *Models of working memory limitations and confidence*. University of Groningen, Netherlands, Oct 2016.
2. *Probabilistic inference in perception.* Seminar at L'Université Paris Descartes, Paris, France, May 2016.
3. *Introduction to Bayesian Statistics: what is it and why should I use it?* University of Uppsala, Sweden, May 2016.
4. *Models of working memory precision and confidence*. Bernstein Sparks Workshop: Active Perceptual Memory, Berlin, Oct 2015.
5. *The probabilistic brain: unconscious inference in perception and cognition*. Uppsala, Sweden, Sep 2015.
6. *Bayesian inference in perceptual decision-making.* University of Leicester, UK, 2014.
7. *When and why does encoding precision in visual search decrease with set size?* 31st BPS Cognitive Psychology Section Conference, Nottingham, UK, 2014.
8. *Descriptive and normative models of working memory*, MRC, Cambridge, UK, Feb, 2014.
9. *Probabilistic and heuristic models of decision making,* University of Uppsala, Sweden, Dec 2013.
10. *Descriptive and normative models of working memory*, Neural mechanisms of working memory limits workshop at CNS 2013, Paris, France, Jul 2013.
11. *Optimal decision making beyond cue combination*, University of Cambridge, UK, Jul 2012.
12. *Visual decision making in multi-object tasks*, University of Leuven, Belgium, Jun 2012.
13. *Change detection as probabilistic inference under variable resources*, GCC/TCN Annual Conference, Houston, USA, Feb 2012.

My research in the media

1. *Iets oplossen in drie tot zeven stappen: dat kunnen we behappen*, Financieel Dagblad (Dutch newspaper), 16-8-2016.
2. *Geheugen zonder Grenzen,*Intermediair (Dutch career magazine), 22-6-2012.
3. *Brein als detective,* Leeuwarder Courant (Dutch newspaper)*,* 25-6-2011.
4. *Het brein: een snelle en goede detective*, Het Parool (Dutch newspaper), 21-5-2011.
5. *Ons brein vindt een schaar als een detective*, Dagblad De Pers (Dutch newspaper), 20-5-2011.
6. *Bekenden zien is een kwestie van hersenstrategie,* website of Volkskrant (Dutch newspaper), 15-5-2011.
7. Interview at BNR Nieuwsradio (Dutch radio station) about my PhD thesis work, Oct 2009.
8. Interview at Omrop Fryslan (Dutch radio station) about my PhD thesis work, Oct 2009.

Reviews for scientific journals

Cognition, Cognitive Psychology, Current Biology, Emotion, Frontiers Psychology, JEP:General, JEP:HPP, Journal of Vision, Journal of Neurophysiology, Memory & Cognition, Perception, PLoS One, PLoS Comp Bio, PNAS, Psychological Research, Trends in Cognitive Sciences, Vision research, Visual Cognition.

Reviews for funding agencies

National Science Foundation (NSF, USA), National Fund for Scientific Research (FWO, Belgium).

Evaluations of thesis work

Licentiate examiner for Benjamin Koch: "Socio-cognitive influences on gaze behavior in infants", Uppsala University, 2016.

Committee memberships

2013-2015	Engineering Postdoc Committee, University of Cambridge
2006-2008	Computer infrastructure committee, University of Groningen
2007	Annual Programming Contest Committee, University of Groningen

Memberships of scientific societies

2016-present	Society for Mathematical Psychology
2016-present	Cognitive Science Society
2013-2015	Cambridge Neuroscience
2011-2012	Society for Neuroscience
2010-2011	Vision Science Society

Teaching and mentoring

Workshops and tutorials

- Modeling delayed-estimation data, tutorial at 7th Bernstein Sparks Workshop: Active Perceptual Memory, Berlin, Oct 2015.
- Introduction to probabilistic models of perception, 2-day workshop at BCN, University of Groningen, Netherlands, Oct 2011.

Course leader

- A Practical Introduction to Bayesian Statistics – Spring 2017 – Uppsala University (7.5 ECTS)
- Introduction to Cognitive Modeling – Spring 2016 – Uppsala University (7.5 ECTS)

Lecturing

- Introduction to Perception – Fall 2016 – Uppsala University (7.5 ECTS; 2 lectures)
- Guest lecture at BCN course “Auditory and Visual Perception” – Fall 2016 – University of Groningen
- Introduction to Perception – Spring 2016 – Uppsala University (7.5 ECTS; 2 lectures)
- Guest lecture at BCN course “Auditory and Visual Perception” – Fall 2015 – University of Groningen

Teaching Assistance

- 3G3 Introduction to Neuroscience - 2015 – Cambridge University
- 3G3 Introduction to Neuroscience - 2014 – Cambridge University
- Computer Vision - 2007/2008 – University of Groningen
- Imperative Programming - 2007/2008 – University of Groningen
- Imperative Programming - 2006/2007 – University of Groningen
- Object Oriented Programming - 2006/2007 – University of Groningen
- Student Colloquium - 2006/2007 – University of Groningen
- Object Oriented Programming - 2005/2006 – University of Groningen
- Introduction Informatics - 2005/2006 – University of Groningen
- Student Colloquium - 2005/2006 – University of Groningen

Supervision

Primary supervisor

E. Stengård	(Ph.D. thesis, 2016-present, Uppsala University)
J. Tronestam	(M.Sc. thesis, 2016-present, Uppsala University)
C. Bådenlid	(M.Sc. thesis, 2016-present, Uppsala University)
J. Lund	(M.Sc. thesis, 2016, Uppsala University)

Co-supervisor

K. Anandalingam	(M.Sc. thesis, 2014, University of Cambridge)
R. Seilheimer	(rotation project, 2011, Baylor College of Medicine)
J. Park	(rotation project, 2010, Baylor College of Medicine)
T. Kinney	(rotation project, 2010, Baylor College of Medicine)
S. Keshvari	(research internship, 2009-2010, Baylor College of Medicine)
H. Mazyar	(research internship, 2009-2010, Baylor College of Medicine)
A. Martinez	(M.Sc. thesis 2008; PhD student, 2008-2009, University of Groningen)
L. Harting	(M.Sc. thesis, 2007, University of Groningen)
A. Schepers	(M.Sc. thesis, 2007, University of Groningen)
R. Dam	(M.Sc. thesis, 2005, University of Groningen)