RAMAKRISHNA CHAKRAVARTHI

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education and employment

2012-present	Lecturer, School of Psychology University of Aberdeen, Scotland, UK
2009-12	Post-Doctoral Fellow; Advisor: Prof Rufin VanRullen Centre de Recherche Cerveau et Cognition, CNRS, Toulouse, France Projects: Neural mechanisms in attention and neural representation of objects using single trial EEG analyses
2007-09	Post-Doctoral Fellow; Psychology and Neural Science; Advisor: Prof Denis Pelli New York University, New York NY Projects: The role of Gestalt laws in feature integration; Perceptual factors in reading
2002-07	PhD in Psychology: Cognition, Brain and Behaviour; Advisor: Prof Patrick Cavanagh Harvard University, Cambridge MA Thesis: Mechanisms of Visual Crowding: The Role of Attention
1999-2001	M.S. in Consciousness Studies; First class with Distinction Birla Institute of Technology and Science, Pilani, India Dissertation: On the Timing of Conscious Experience: A Critical Review of Libet's Work
1993-99	M.B., B.S. (Bachelor of Medicine, Bachelor of Surgery); First class with Distinction Manipal Academy of Higher Education, Manipal, India

grants and funding

2016-	The interplay between enhancement and suppression mechanisms in feature-based attentional selection, SGSSS ESRC Doctoral Studentship awarded to Mr Plamen Antonov, ~£80,000
2016	The oscillatory nature of consciousness explored through perceptual suppression, Anderson Postgraduate (PhD) Scholarship awarded to Ms Oana Iosif, ~£60,000
2014-	Exploring the neural basis of visual crowding, Eastbio BBSRC Doctoral Training Programme awarded to Ms. Leili Soo, ~£92,000
2014-15	Neural correlates of Blindsight, Elphinstone Scholarship awarded to Mr Nicholas Hall, ~£5,000
2014	Developing Scientists Summer Placement awarded to Mr. Robert Ainsley, £1000
2013-	Mechanisms of Visual Crowding, Anderson Postgraduate (PhD) Scholarship

	awarded to Ms Josephine Reuther, ~£50,000
2012	Developing Scientists Summer Placement awarded to Mr. Sindre Henriksen, £1000
2006-07	Graduate Society Dissertation Completion Fellowship, Harvard University, $ 18,000
2007	Stimson Travel Grant for presenting at VSS conference 2007, $ 500
2006	McMasters Travel Grant for presenting at VSS conference 2006, $ 500
2005	Graduate Society Fellowship Summer Award, Harvard University, $ 3,000
2004	Mind, Brain and Behavior Graduate Student Award, Harvard University, $ 5,000
2003-04	Harvard University Graduate Summer Awards, $ 3,000/yr
2002-07	Harvard University GSAS Merit Fellowship, $ 70,000
2000-01	Sir Ratan Tata Trust Scholarship for the M.S. Program, INR 15,000

current projects

EEG	Encoding spatial locations; neural representation of object categories; Neural oscillations in perception and consciousness
Crowding	Crowding enumeration; crowding categories

teaching experience

2012-present	Level 1: Introductory Psychology II: Evolutionary Psychology module Level 2: Advanced Psychology A: Methods and Applications - Methods in vision and attention Level 3: Tutorials Masters: Professional research skills I: Web design and maintenance in academia
2013-present	Sixth Century Course on Consciousness (Levels 3 and 4)
2014-present	Level 1: Introduction to Biological Sciences: Consciousness module Level 2: Perception Level 3: Small group tutorials (once per semesters)
2004-06	Fall: Teaching Fellow, The Evolution of Human Nature. Taught by Professors Marc Hauser and Richard Wrangham, Harvard University; 2 semesters Spring: Teaching Fellow, The Human Mind. Taught by Professor Steven Pinker, Harvard University; 2 semesters

research supervision

PhD	Josephine Reuther (2013-present) Oana Iosif (2016-present) Leili Soo (2014-present; Second supervisor) Plamen Antonov (2016-present; Second supervisor)
Masters	Samuel Pitt (2013-14) Nicholas Hall (2014-15)
Level 4	Honours (research-based) thesis: 4-6 students per year
Level 3	Methodology B: Small group research projects (5-6 students per semester)

admin responsibilities

Level 3 Methods Convenor

Deputy chair, Ethics Committee

Organising Psychology Seminar Series

Member of Communications Team: Psychology Webpage maintenance + Social media outreach

Organising Perception and Attention group meetings

Personal tutor (non-academic mentorship) for 20-25 students per year

Internal and external examiner for PhD theses

professional affiliations

Society for Neuroscience, Vision Sciences Society, European Conference on Visual Perception, Scottish Vision Group

reviewer

Attention, Perception and Psychophysics, Frontiers in Consciousness Research, Frontiers in Psychology, Journal of Cognitive Neuroscience, Journal of Cognitive Neuroscience, Journal of Experimental Psychology: Human Perception and Performance, Journal of Vision, Neuroimage, Scientific Reports, Vision Research

publications

1. Jennings, B. J., Tsattalios, K., **Chakravarthi, R.**, and Martinovic, J. (2016). Combining S-cone and luminance signals adversely affects discrimination of objects within backgrounds, *Scientific Reports*, 6:20504. doi:10.1038/srep20504
2. Costa, S. L., Gonçalves, O. F., DeLuca, J. Chiaravalloti, N., **Chakravarthi, R.**, and Almeida, J. (2015). The temporal dynamics of visual processing in Multiple Sclerosis, *Applied Neuropsychology: Adult*.
3. Rosen, S., **Chakravarthi, R.** and Pelli, D. G. (2014). The Bouma law of crowding, revised: Critical spacing is equal across parts, not objects, *Journal of Vision*, 14 (6): 10, 1-15
4. Reuther, J. and **Chakravarthi, R.** (2014). Categorical membership modulates crowding: evidence from characters, *Journal of Vision*, 14 (6): 5, 1-13
5. **Chakravarthi, R.** Carlson, T. A., Chaffin, J., Turret, J., and VanRullen, R. (2014). The temporal evolution of coarse location coding of objects: Evidence for feedback. *Journal of Cognitive Neuroscience*, 26 (10): 2370-2384
6. Van Vugt, M. K., **Chakravarthi, R.** and Lachaux, J. P. (2014). For whom the bell tolls: periodic reactivation of sensory cortex in the gamma band as a substrate of visual working memory maintenance, *Frontiers in Human Neuroscience*, 8: 696
7. **Chakravarthi, R.** and VanRullen, R. (2012). Conscious updating is a rhythmic process, *Proceedings of the National Academy of Sciences, USA*, 109 (26): 10599-10604
8. Freeman, J., **Chakravarthi, R.**, and Pelli, D. G. (2012). Compulsory pooling of crowded objects, *Attention, Perception and Psychophysics*, 72 (4): 379-396
9. **Chakravarthi, R.** and Pelli, D. G. (2011). The same binding in contour integration and crowding, *Journal of Vision*, 11 (8): 10, 1-12
10. **Chakravarthi, R.** and VanRullen, R. (2011). Bullet trains and steam engines: Exogenous attention zips but endogenous attention chugs along, *Journal of Vision*, 11 (4): 12, 1-12
11. **Chakravarthi, R.** and Cavanagh, P. (2009). Recovery of a crowded object by masking the distracters: Determining the locus of feature integration, *Journal of Vision*, 9 (10): 4, 1-9
12. **Chakravarthi, R.** and Cavanagh, P. (2009). Bilateral field advantage in visual crowding, *Vision Research*, 49 (13): 1638-1646
13. Vickery, T. J., Shim, W. M., **Chakravarthi, R.**, Jiang, Y. V., and Luedeman, R. (2009). Supercrowding: Weakly masking a target expands the range of crowding, *Journal of Vision*, 9 (2): 12, 1-15
14. **Chakravarthi, R.** and Cavanagh, P. (2007). Temporal properties of the polarity advantage effect in crowding, *Journal of Vision*, 7 (11): 1-12
15. **Ramakrishna, C.** (2002). Real latencies and facilitation, *Consciousness and Cognition*, 11(2): 300-303

manuscripts in progress

1. Reuther, J. and **Chakravarthi, R.** (presubmitted). Does self-prioritisation affect perceptual processes? *Visual Cognition*
2. Reuther, J. and **Chakravarthi, R.** (in preparation). The effect of distractor expectation on visual crowding
3. Poncet, M., **Chakravarthi, R.**, and Fabre-Thorpe, M. (in preparation). The clash of visual categories

selected conference presentations

Reuther, J. and Chakravarthi, R. (2016). Target discrimination is not affected by distractor expectation. Poster presented at the European Conference on Visual Perception, Barcelona, Spain.

Soo, L., Chakravarthi, R., Antonov, P. and Andersen, S. A. (2016). Flanker stimuli suppress target processing in visual cortex beyond the range of behavioural interference. Talk presented at the European Conference on Visual Perception Barcelona Spain.

Andersen, S. K., Faivre, N., Chakravarthi, R., and Kouider, S. (2016). Feature-based attention reduces the critical spacing of visual crowding. Talk presented at the European Conference on Visual Perception Barcelona Spain.

Chakravarthi, R. and Marosi, D-M. (2015). Tempus fugit: Competitive interactions impair time perception. Talk presented at the European Conference on Vision and Perception, Liverpool, UK.

Soo, L., Chakravarthi, R., and Andersen, S. A. (2015). Visual object recognition: Combining unfavourable stimulus properties leads to a super additive decline. Poster presented at the European Conference on Vision and Perception, Liverpool, UK.

Reuther, J. and Chakravarthi, R. (2015). Higher-Level Effects in Crowding: What is Left when Low-Level attributes are controlled for? Talk presented at the European Conference on Vision and Perception, Liverpool, UK.

Reuther, J. and Chakravarthi, R. (2014). Evidence for categorical crowding. Talk presented at the 13th annual meeting of the Scottish Vision Group, Scotland, UK.

Poncet, M., Chakravarthi, R., and Fabre-Thorpe, M. (2014). The clash of visual categories. Poster presented at the 14th annual meeting of Vision Sciences Society, St Petersburg, FL.

Chakravarthi, R. and VanRullen, R. (2012). Evidence for the Lisman model of short-term memory: Modulation of theta-gamma coupling by the number of items in memory. Poster presented at the annual meeting of the Society for Neuroscience, New Orleans.

Chakravarthi, R., Carlson, T. A., Chaffin, J., Turret, J. and VanRullen, R. (2011). O brother, where art thou? Locations of 1st and 2nd order objects are represented in the same way but at different times, as revealed by single-trial decoding of EEG signals. Talk to be presented at the European Conference on Vision and Perception, Toulouse, France.

Chakravarthi, R. and VanRullen, R. (2011). Attention is a state of mind: Phase of ongoing EEG oscillations predicts the timing of attentional deployment. Poster presented at the 10th annual meeting of Vision Sciences Society, Naples.

Rosen, S., Chakravarthi, R., and Pelli, D. G. (2010). Crowding is grouping. Talk presented at the 11th annual meeting of Vision Sciences Society, Naples, FL.

Chakravarthi, R. and VanRullen, R. (2010). Beam me up Scotty! Exogenous attention teleports but endogenous attention takes the shuttle. Talk presented at the 10th annual meeting of Vision Sciences Society, Naples, FL.

Pelli, D. G., Freeman, J., and Chakravarthi, R. (2010). Crowding combines. Talk presented at the 10th annual meeting of Vision Sciences Society, Naples, FL.

Chakravarthi, R., Tillman, K., and Pelli, D. G. (2009). Features used or features available? Talk presented at the 9th annual meeting of Vision Sciences Society, Naples, FL.

Chakravarthi, R. and Pelli, D. G. (2008). What role does contour integration play in crowding? Talk presented at the 8th annual meeting of Vision Sciences Society, Naples, FL.

Vickery, T. J., Shim, W. M., Jiang, Y. V., Chakravarthi, R., and Luedeman, R. (2008). Supercrowding: Weakly masking a target greatly enhances crowding. Talk presented at the 8th annual meeting of Vision Sciences Society, Naples, FL.

Chakravarthi, R. and Cavanagh, P. (2007). The effect of distracters on enumeration in the periphery. Poster presented at the 7th annual meeting of Vision Sciences Society, Sarasota, FL.

Chakravarthi, R. and Cavanagh, P. (2006). Hemifield independence in visual crowding. Talk presented at the 6th annual meeting of Vision Sciences Society, Sarasota, FL.

Chakravarthi, R. and Cavanagh, P. (2005). Temporal properties of the polarity advantage effect in crowding. Poster presented at the 5th annual meeting of Vision Sciences Society, Sarasota, FL.

invited talks

2016	The role of higher older effects in visual crowding. Presented at UCL, London
2015	Gestalt principles and feedforward processing. Presented at the University of Liverpool
2014	The role of neural oscillations in visual processing. Presented at the University of Bangor, Wales
2013	When one's company, two's a crowd in object recognition. Presented at Workshop on crowding, EPFL, Lausanne, Switzerland
2012	One rule to bind them all. Presented at the British Science Festival, Aberdeen UK
2011	Object recognition. Presented at the School of Psychology, University of Aberdeen, Scotland
2011	When one’s company, two’s a crowd in object recognition. Presented at CerCo day Symposium, Camaran, France
2010	Object recognition and visual attention. Presented at the Center for Brain and Cognitive Sciences, University of Allahabad, India
2007	The role of attention in crowding. Presented at the Visual Attention lab, Harvard Medical School and Brigham & Women’s Hospital, Boston
2007	Mechanisms in Visual Crowding. Presented at the Cognition, Brain and Behavior Research Seminar, Harvard University
2006	The Resolution of Visual Consciousness. Presented at Mind, Brain, and Behavior Graduate Seminar Series, Harvard University

symposia and seminars organised

2015-present	School of Psychology (University of Aberdeen) Seminar series
2011	Mechanisms in crowding and blink: what can they tell us about consciousness? Symposium organized and chaired at the 14th annual meeting of Association for the Scientific Study of Consciousness, Toronto, Canada.
2005-06	Harvard Vision Lab Seminar Series. Organized bi-weekly talks by invited speakers.

public engagement

2012	British Science Festival: talk + 'Vision vibes' poster
2015	Aberdeen art Gallery: After Hours: Colour Clash; booth
2016	Insect week: The psychology of insect phobia