

Curriculum Vitae

Radoslaw Martin Cichy, Dr. rer. nat.

Research Group Leader

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EDUCATION

- | | |
|-------------|--|
| 2007 – 2011 | Bernstein Center for Computational Neuroscience
Ph.D. in Psychology (Jan 2011)
Advisor: John-Dylan Haynes |
| 2006 – 2007 | Charité University Medicine, Berlin
Laboratory Assistant at the Vision and Motor Research Group |
| 2005 – 2006 | Studienkolleg zu Berlin
Fellow |
| 2004 – 2006 | Charité University Medicine, Berlin
M.Sc. Medical Neuroscience (Jun 2006) |
| 2003 – 2004 | University of Oxford
Exchange Student, Philosophy |
| 2001 – 2004 | University Osnabrück
B.Sc. Cognitive Science, with distinction (Oct 2004)
Advisor: Achim Stephan |

ACADEMIC TRACK & APPOINTMENTS

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| 2016 – now | Free University Berlin, Germany
Research Group Leader (Emmy Noether Program of the German Science Foundation) |
| 2015 | Glasgow University
Senior Lecturer |

RESEARCH EXPERIENCE

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| 2015 – 2016 | Free University Berlin, Germany
Postdoctoral Research Associate |
| 2012 – 2015 | Massachusetts Institute of Technology
Postdoctoral Fellow
Advisor: Aude Oliva |

2011 – 2012 **Charité University Medicine, Berlin**
Postdoctoral Researcher
Advisors: Philipp Sterzer & John-Dylan Haynes

FELLOWSHIPS, AWARDS & DONATIONS

2015 – 2016 Feodor Lynen Return Scholarship (Alexander von Humboldt Foundation)
2015 Cosyne Presenter Travelling Award
2014 MIT Postdoctoral Association Travel Scholarship
2013 – 2015 Feodor Lynen Research Fellowship (Alexander von Humboldt Foundation)
2010 Scholarship of the Max Planck Institute for Human Cognitive and Brain Sciences
2007 – 2010 University Scholarship of the Berlin School of Mind&Brain (Excellence Initiative of the German State)
2005 – 2006 Hertie Foundation Fellowship
2001 – 2006 German National Merit Foundation (Studienstiftung des Deutschen Volkes)
2003 Homann price for excellence in studies (University of Osnabrück)

GRANTS & DONATIONS

2016 – 2021 *Neural dynamics of visual cognition*, Emmy Noether Award of the DFG (CI 241/1-1, 1,15M€, PI)
2016 NVIDIA academic hardware donation
2015 – 2017 *Developmental mechanisms of perception and language in the infant brain* (NSF, BCS-1514351, Advisor)
2012 – 2015 *Glass in Contemporary Architecture: Perception, Action, and Social Behaviour* (European Platform for Life Sciences, Mind Sciences, and the Humanities; Volkswagen Foundation, 85-640, 90K€, Co-PI)

INVITED TALKS

10 / 2017 Berlin School of Mind and Brain, Berlin, Germany
04 / 2017 Center for Minds, Brains and Metabolism, University of Lübeck, Germany
01 / 2017 Department of Clinical Neuroscience, Karolinska Institute, Stockholm, Sweden
01 / 2017 Vision Science Colloquium, University of Bielefeld, Germany
11 / 2016 NeuroCog Meeting, KU Leuven, Leuven, Belgium
10 / 2016 Department of Neuroscience and Biomedical Engineering, Aalto University, Finland
10 / 2016 Center for Integrative Neuroscience, Tübingen, Germany
07 / 2016 Department of Psychology, University of Giessen, Germany
06 / 2016 International Workshop for Pattern Recognition and in Neuroimaging (PRNI 2016), Trento, Italy
05 / 2016 Department of Medicine, Otto-von-Guericke-University Magdeburg, Germany
04 / 2016 Institute of Cognitive Science, Darmstadt, Germany
03 / 2016 Donders Institute, Nijmegen, Netherlands
03 / 2016 Brain Awareness Week, University of Lublin, Poland

01 / 2016	Department of Psychology, University of Amsterdam, Netherlands
12 / 2015	Department of Psychiatry, Charité University Medicine, Berlin, Germany
11 / 2015	Google DeepMind, London, UK
08 / 2015	Department of Neurology, University of Lübeck, Germany
03 / 2015	Institute of Neuroscience and Psychology, University of Glasgow, UK
11 / 2014	Department of Psychology, University of Glasgow, UK
08 / 2014	Institute for Neuroscience, UKE, Hamburg, Germany
05 / 2014	Feindel Brain Imaging Lecture Series, McGill University, Montreal, Canada
05 / 2014	OHBA Research Meeting, University of Oxford, UK
04 / 2014	Bernstein Center for Computational Neuroscience, Berlin, Germany
03 / 2014	MRC-CBU, University of Cambridge
02 / 2014	Department of Brain and Cognitive Sciences (Saxe), MIT
02 / 2014	Laboratory of Brain and Cognition Seminar, NIH
11 / 2013	Department of Brain and Cognitive Sciences (Kanwisher), MIT
06 / 2012	Visual Attention Lab Seminar, Harvard University
04 / 2012	McGovern Institute for Brain Research, MIT
05 / 2011	Center for Mind-Brain Sciences, Rovereto, Italy
04 / 2011	Department of Brain and Cognitive Sciences, MIT
03 / 2011	Brain Days, University of Lublin, Poland
02 / 2011	International Seminar of the School of Cognitive Science, Institute for Mathematics and Physics, Tehran, Iran
09 / 2010	Colloquium of the Institute of Cognitive Science, Osnabrück, Germany

ACTIVITIES

08 / 2016	Co-Organizer of ECCV (European Conference for Computer Vision) Symposium: Biological and Artificial Vision
06 / 2016	Member of Organizing Committee of International Workshop for Pattern Recognition and in Neuroimaging (PRNI 2016), Trento, Italy
03 / 2016	Organizer of Symposium at the Annual Meeting of the Visual Science Society (VSS): What do deep neural networks tell us about biological vision?

AD-HOC REVIEWING

Journals	Brain Topography, Cerebral Cortex, Cognitive Neurodynamics, Cognitive Affective and Behavioral Neuroscience, Cognitive Processing, Cognitive Science, Entropy, European Journal of Neuroscience, Frontiers, International Journal of Computer Vision, Journal of Neurophysiology, Journal of Neuroscience, Journal of Neuroscience Methods, Neuroimage, Neuropsychologia, PLOS Computational Biology, Proceedings of the National Academy of Sciences U S A, Proceedings of the Royal Society B
Conferences	NIPS, PRNI, ECCV
Grant Agencies	Deutsche Forschungsgemeinschaft
Editorship	Associate Guest Editor for PLOS Computational Biology

TEACHING

Neurotechnology in action (MIT): Guest Lecturer	2014
A look into the human brain (MIT): Guest Lecturer	2013 - 2015
Philosophy of mind (Osnabrück): Teaching Assistant	2003

PEER-REVIEWED ARTICLES

Cichy RM, Teng S (accepted). *Resolving the neural dynamics of visual and auditory scene processing in the human brain: a methodological approach* Phil Trans R Soc B

Cichy RM, Khosla A, Pantazis D, & Oliva A. (in press) *Dynamics of scene representations in the human brain revealed by magnetoencephalography and deep neural networks*. Neuroimage; doi:10.1016/j.neuroimage.2016.03.063.

Cichy, RM, Pantazis D & Oliva A. (2016) *Similarity-based fusion of MEG and fMRI reveals spatio-temporal information flow in visual object recognition*. CerebCortex 26(8): 3563-3579; doi: 10.1093/cercor/bhw135.

Cichy RM, Khosla A, Pantazis D, Torralba A & Oliva A. (2016) *Comparison of deep neural networks to spatio-temporal cortical dynamics of human visual object recognition reveals hierarchical correspondence*. SciReports 10(6):27755, doi: 10.1038/srep27755.

Cichy RM, Ramirez F, Pantazis D. (2016) *Can visual information encoded in cortical columns be decoded from magnetoencephalography data in humans?* Neuroimage 121: 193-204; doi:10.1016/j.neuroimage.2015.07.011.

Guggenmos M, Thoma V, Haynes JD, Richardson-Klavehn A, **Cichy RM***, Sterzer P*. (2015) *Spatial attention enhances object coding in local and distributed representations of lateral occipital complex*. Neuroimage 111: 149-157; doi:10.1016/j.neuroimage.2015.04.004.

Guggenmos M, Thoma V, **Cichy RM**, Haynes, JD, Sterzer P, Richardson-Klavehn R (2015) *Non-holistic coding of objects in lateral occipital complex with and without attention*. Neuroimage 107:356-363; doi: 10.1016/j.neuroimage.2014.12.013.

Christophel TB, **Cichy RM**, Hebart MN, Haynes JD (2015). *Early visual and parietal cortex encodes working memory across mental transformations*. Neuroimage, doi: 10.1016/j.neuroimage.2014.11.018.

Ramirez F, **Cichy RM**, Allefeld C, Haynes JD (2014). *The neural code for face orientation in the human fusiform face area*. J Neurosci, 34(36): 12155-12167; doi: 10.1523/JNEUROSCI.3156-13.2014.

Cichy RM, Pantazis D, Oliva A (2014). *Resolving human object recognition in space and time*. Nat Neurosci 17(3): 455-462; doi: 10.1038/NN.3635.

Cichy RM, Sterzer P, Heinzle J, Haynes JD (2013). *Uncovering principles of large-scale object representation: category preference and location encoding*. Hum Brain Mapp 34(7):1636-1651.

Cichy RM, Heinzle J, Haynes JD. (2012) *Imagery and perception share cortical representations of content and location*. Cereb Cortex 22(2): 372-380.

Cichy RM, Chen Y, Haynes, JD (2011). *Encoding the identity and location of objects in human LOC*. Neuroimage 54(3): 2297-307.

Schmidt S, **Cichy RM**, Kraft A, Brocke J, Irlbacher K, Brandt SA. (2009). *An initial transient-state and reliable measure of corticospinal excitability in TMS studies*. Clin Neurophysiol; 120(5): 987-93.

Brocke J, Schmidt S, Irlbacher K, **Cichy RM**, Brandt SA (2008). *Transcranial cortex stimulation and fMRI: electrophysiological correlates of dual-pulse BOLD signal modulation*. Neuroimage 40(2): 631-43.

* shared last authorship

CHAPTERS AND REVIEWS

Cichy RM (2016). *Review of ,Handbuch Kognitionswissenschaft; Achim Stephan, Sven Walter (Eds.)'*. Phen Cogn Sci 15:461; doi:10.1007/s11097-015-9431-1.

Heinzle, J, Anders, S, Bode, S, Bogler, C, Chen, Y, **Cichy, RM**, Hackmack, K, Kahnt, T, Kalberlah, C, Reverberi, C, Soon, SC, Tusche, A, Weygandt, M & Haynes, JD (2012). *Multivariate decoding of fMRI data – towards a content-based cognitive neuroscience*. Neuroforum, 1, 160-177.

Cichy RM (2007). *Transkranielle Hirnstimulation – Kausalität zwischen Gehirn und Geist*. Nervenheilkunde. Nervenheilkunde 26 (12): 1148-1151.

Cichy RM, Fischer L, Rettenbacher S, Tsouni G (2007). *Klosterwelten- Welt und Kloster*. Projekt Junges Europa, Hannover: Wehrhahn Verlag.

Cichy RM (2005). *The Dennettian Concept of Intentionality: Past and Present*. Publications of the Institute of Cognitive Science. Volume 8-2005, Osnabrück.

CONFERENCE ABSTRACTS & TALK/POSTER PRESENTATIONS

2016

Mohsenzadeh Y, QinS, Li Q, **Cichy RM**, Pantazis D. (2016) Neural dynamics of feedforward processing in ventral stream using a rapid serial visual presentation task. Presented at the NIH MEG-North America workshop, Bethesda, Maryland.

Bayet L, Pruitt Z, Cataldo J, **Cichy RM**, Nelson III CA, Aslin RN (2016). Time-resolved representation of words and pictures in the infant brain. Poster presented at the 4th Annual Congress of FLUX: The society for developmental cognitive neuroscience. St Louis, USA.

Chen J, Mohsenzadeh Y, Li J, Li Q, **Cichy RM**, Pantazis D. Temporal dynamics of face identity and eye gaze recognition revealed using pattern analysis of MEG signals. Poster presented at BIOMAG 2016, Seoul, Korea.

Q Sheng, Fang M, Mohsenzadeh Y, Li Q, **Cichy RM**, Pantazis D. Evoked and induced components of oriented contrast edges share a common representational structure. Poster presented at BIOMAG 2016, Seoul, Korea.

Cichy RM (2016). *A spatio-temporally resolved and algorithmically explicit account combining MEG with fMRI and neural networks*. Talk presented at The 20th International Conference on Biomagnetism, Seoul, Korea.

Pantazis D, Qin S, Mohsenzadeh Y, Li Q, **Cichy RM** (2016). *Neural representations in a rapid serial visual presentation task at 17ms per picture*. Talk presented at the Annual Meeting of the Society for Neuroscience, San Diego, USA.

Hebart MN, **Cichy RM**, Baker CI (2016). Decoding the temporal evolution of tasks and stimulus-related brain signals. Talk presented at the Annual Meeting of the Society for Neuroscience, San Diego, USA.

Groetswagers T, **Cichy RM**, Carlson TA (2016). *Predicting behavior from decoded searchlight representations shows where decodable information relates to behavior*. Talk presented at the Annual Meeting of the Society for Neuroscience, San Diego, USA.

Jozwik KM, Kriegeskorte N, **Cichy RM**, Mur M (2016). *Representation of visual features and categories across space and time in human, monkey, and convolutional neural networks*. Talk presented at the Annual Meeting of the Society for Neuroscience, San Diego, USA.

Teng S, Cichy RM, Pantazis D, Sommer V, Oliva A. (2016). *Neurodynamics of visual and auditory scene size representations*. Talk presented at the Annual Meeting of the Vision Science Society St. Pete Beach, USA.

Cichy RM, Khosla A, Pantazis D, Torralba A, Oliva A (2016). *Deep neural networks explain spatio-temporal dynamics of visual scene and object processing*. Talk presented at the Annual Meeting of the Vision Science Society St. Pete Beach, USA.

Jozwik KM, Kriegeskorte N, **Cichy RM**, Mur M. (2016). *Visual features versus categories: Explaining object representations in primate IT and deep neural networks with weighted representational modeling*. Poster presented at the Annual Meeting of the Vision Science Society St. Pete Beach, USA.

Jozwik KM, Kriegeskorte N, **Cichy RM**, Mur M. (2016). *Visual features versus categories: Explaining object representations in primate IT and deep neural networks with weighted representational modeling*. Talk presented at CAOS, Rovereto, Italy.

2015

Fang M, Li J, Li Q, **Cichy RM**, Pantazis D. (2015) *Decoding orientation of contrast edges from evoked and induced oscillatory brain activity*. Poster presented at the Annual Meeting of the Society for Neuroscience, Chicago, USA.

Li J, Fang M, Li Q, **Cichy RM**, Pantazis D. (2015) *Neural signatures of eye gaze and face identity representations in MEG data*. Poster presented at the Annual Meeting of the Society for Neuroscience, Chicago, USA.

Teng S, **Cichy RM**, Pantazis D, Sommer V, Oliva A (2015). *The neural dynamics of letter perception in blind and sighted readers*. Poster presented at the Annual Meeting of the Society for Neuroscience, Chicago, USA.

Oliva A, Khosla A, Pantazis D, Torralba A, **Cichy RM** (2015). *Deep neural networks models predict spatio-temporal cortical dynamics of visual object recognition*. Poster presented at the Annual Meeting of the Society for Neuroscience, Chicago, USA.

Cichy RM, Khosla A, Pantziz D, Oliva A (2015). *Neural dynamics in the cortical representation of scene size*. Talk presented at the Annual Meeting of the Society for Neuroscience, Chicago, USA.

Cichy RM, Pantazis D (2015). *Decoding orientation of visual stimuli from human magnetoencephalography data*. Poster presented at the Annual Meeting of the Organization of Human Brain Mapping, Honolulu, USA.

Teng S, **Cichy RM**, Pantazis D, Oliva A (2015). Common and disparate neural mechanisms of letter perception in blind and sighted readers. Poster presented at the Annual Meeting of the Organization of Human Brain Mapping, Honolulu, USA.

Cichy RM, Khosla A, Pantazis D, Torralba A, Oliva A (2015). *Mapping human visual representations in space and time by convolutional neural networks*. . J Vis 15(12):376, doi: 10.1167/15.12.376.

Teng S, **Cichy RM**, Pantazis D, Oliva A (2015). *The neural dynamics of letter perception in blind and sighted readers*. . J Vis 15(12):126, doi: 10.1167/15.12.126

Khaligh- Razavi SM, Carlin J, **Cichy RM**, Kriegeskorte N (2015). *The effects of recurrent dynamics on ventral-stream representational geometry*. J Vis 15(12):1089, doi: 10.1167/15.12.1089

Cichy RM, Khosla A, Pantazis D, Torralba A, Oliva A (2015). *Human visual representations are predicted in space and time by convolutional neural networks*. Talk presented at Cosyne 2015, Salt Lake City, Utah, USA.

2014

Cichy RM, Khosla A, Pantazis D, Torralba A, Oliva A (2014). *Convolutional neural networks predict the representational geometry embodied in the human visual processing hierarchy*.
Proc Soc Neurosci Abstr 822.16.

Cichy RM, Pantazis D (2014). Resolving human object recognition in space and time. *Presented at the Population Coding Workshop, Dartmouth University, Hanover, USA.*

Cichy RM, Pantazis D, Oliva A (2014). Expanding the limits of imaging technologies: a combined MEG and fMRI investigation of human object representations. *Presented at the Biomag Biannual Meeting, Halifax, Canada.*

Cichy RM, Pantazis D, Oliva A. (2014). Resolving human object recognition in space and time. *Talk given at the OHBM Annual Meeting, Hamburg, Germany.*

Cichy RM, Pantazis D (2014). *Decoding orientation of visual stimuli from human magnetoencephalography data.* Poster presented at the Annual Meeting of the Vision Science Society St. Pete Beach, USA.

2013

Cichy RM, Pantazis D, Oliva A (2013). Tracking temporal and spatial dynamics of visual object recognition with combined MEG and fMRI. *Perception* 42 ECVF Abstract Supplement, p. 162.

Marquardt G, **Cichy RM**, Cross ES, deSouse AA, Farne A, Leszczynski M, Patterson M, Quadflieg S (2014) Glass in Architecture: Symbol of Modernity but not yet understood? *Presented at the 45th Annual Conference of the Environmental Design Research Association, New Orleans, USA.*

Guggenmos M, **Cichy RM**, Richardson-Klavehn A, Haynes JF, Sterzer P, Thoma V (2013) Neural correlates of object representations in dependence of object format and attention. *Perception* (42) ECVF Abstract Supplement, p. 62.

Cichy RM, Pantazis D, Oliva A (2013). Resolving human object recognition in space and time: a combined MEG-fMRI study. *Proc Soc Neurosci Abstr* 640.18.

Pantazis D, Chang YT, **Cichy RM** (2013). *Audiovisual integration modulates the amplitude of MEG time series in the primary auditory cortex.* Presented at the 18th Annual Meeting of the Organization for Human Brain Mapping, Beijing, China. 3948.

2012

Christophel T, **Cichy RM**, Hebart MN, Haynes JD (2012). *The visual working memory in action: Neural coding of visual representations in working memory across rotational transformations.* *Proc Soc Neurosci Abstr* 628.04.

Cichy RM, Sterzer P, Oliva A (2012). *Encoding of alternating perception of an ambiguous figure in the human brain.* *Proc Soc Neurosci Abstr* 261.14.

Cichy RM, Bode S, Sterzer P, Haynes JD (2012). *Object recognition under little or no visibility.* *J Vis* 12(9): 522.

Ramirez F, **Cichy RM**, Allefeld C, Haynes JD (2012). *Translation-tolerant and category-selective encoding of orientation in the fusiform face area*. J Vis 12(9):1180.

2011

Momennejad I, **Cichy RM**, Haynes JD (2011). *General and delay-specific encoding of future intentions in the human brain*. Proc Soc Neurosci Abstr 855.07.

Ramirez F, **Cichy RM**, Allefeld C, Haynes JD (2011). *Category selective encoding of orientation in the fusiform face area*. Presented at the “Berlin Brain Days”, Berlin, Germany.

Cichy RM, Heinzle J, Haynes JD (2011). *Imagery and perception share cortical representations of content and location*. Proc Soc Neurosci Abstr 125.08.

2010 and before

Cichy RM, Heinzle J, Elliott L, Haynes JD (2010). *Imagery and Perception of objects share cortical representations*. Perception (39), Supplement, p. 15.

Cichy RM, Haynes JD (2009). *Decoding the what and where of object exemplars and categories*. Presented at the “Berlin Brain Days”, Dec 9-12 2009, Berlin, Germany.

Ramirez F, **Cichy RM**, Haynes JD (2009). *Orientation-encoding in the FFA is selective to faces: Evidence from multivoxel pattern analysis*. J Vis 10(7): 669.

Cichy RM, Haynes JD (2009). *Decoding the what and where of object exemplars and categories across the hemifields*. Proc Soc Neurosci Abstr 802.11.

Schmidt S, Brocke J, Irlbacher K, **Cichy RM**, Brandt SA (2006). *Functional Connectivity of the Motor System defined by Transcranial Electric Stimulation (TES)*. Klin Neurophysiol 118(4): e93.

Frehe P, **Cichy RM**, Wolf, T, Dombrowe I, Goldbach M, Normann N, Wittenberg C, Stoessel C, Sinke C, Herzog M. (2003). *Localizing Collinear Suppression*. Proceedings of EuroCogSci (03): 385.

SCIENTIFIC REFERENCES

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