

6207 Moore Hall
Dartmouth College
Hanover, NH 03755
(603) 646-9834
(603) 398-1138

career@onerussian.com
centerforopenneuroscience.org

yarikoptic

yarikoptic

in yarik

orcid.org/0000-0003-3456-2493

Yaroslav O. Halchenko

Education and Training

2012–2013

Postdoctoral Fellow

Department of Psychological & Brain Sciences, Dartmouth College
Adviser: [Dr. James V. Haxby](#)

2004–2009

Ph.D. in Computer Science

Computer Science Department, NJIT (NJ Institute of Technology)
Adviser: [Dr. Stephen J. Hanson](#), Rutgers-Newark

2000–2003

M.S. in Computer Science

Computer Science Department, UNM (University of New Mexico)
Adviser: [Dr. Barak Pearlmutter](#)

1994–1999

M.S. in Laser and Optoelectronic Engineering

Computer Systems Department, VSTU (Vinnitsia State Technical University), Ukraine

1994

Graduated with honors

Physics and Mathematical Gymnasia No.17, Ukraine

Employment

2018

Research Associate Professor, Department of Psychological & Brain Sciences, Center for Cognitive Neuroscience, Dartmouth Brain Imaging Center, Dartmouth College

- Leading the Center for Open Neuroscience (CON) ([centerforopenneuroscience.org](#)) at Psychological and Brain Sciences Department
- Leading a number of (inter)national data and computational archives and distributions:
 - PI of the distributed data management and distribution platform: DataLad ([datalad.org](#)) (NSF CRCNS) [16]
 - Co-PI of the BRAIN Initiative Distributed Archives for Neurophysiology Data Integration: DANDI ([dandi-archive.org](#)) (NIH R24)
 - The lead of the DataLad distribution ([datasets.datalad.org](#)) of over 260 TB of neural data
 - Providing historical archive of the Singularity Hub ([singularity-hub.org](#)) distribution of computational containers
 - The lead of the computation platform for neuroscience: NeuroDebian ([neuro.debian.net](#)) [39]
- Leading TR&D3 of the Center for Reproducible Neuroimaging Computation: ReproNim ([repronim.org](#)) (NIH P41)
 - Neuroimaging Computational Environments Manager: ReproMan, formerly NICEMAN ([niceman.repronim.org](#))
 - automated system for collection of MR BIDS datasets (deployed at DBIC): ReproIn/HeuDiConv ([reproin.repronim.org](#))
- Contributing to the development of data standards: BIDS [3, 24], NWB, NIDM(-PROV), etc.
- Designing and/or implementing various methodological, instrumentation, and software developments for open neuroscience: statistical learning analysis of neural data: PyMVPA ([pymvpa.org](#)) [46, 47], automated citation of software and data: DueCredit ([ducredit.org](#)), etc. Visit [centerforopenneuroscience.org/projects](#) for more information.
- Research projects in visual perception [e.g., 26, 27, 29], neuroimaging biomarkers for depression [e.g., 18, 12], and explaining the “noise” variance in MRI data [4].

2016
2018

Research Assistant Professor, [Department of Psychological & Brain Sciences](#), [Center for Cognitive Neuroscience](#), [Dartmouth Brain Imaging Center](#), Dartmouth College

2016

Adjunct Research Professor, [Department of Computer Science](#), Dartmouth College

- Working with undergraduate students (independently, as a part of the Women in Science Project, or as a thesis co-advisor)

2013
2015

Research Scientist, [Center for Cognitive Neuroscience](#), Dartmouth College

- Visual perception: effects of familiarity on face identification [35, 37]
- Participating in Haxby lab's methodological developments for neuroimaging data analysis: hyperalignment [43], RSA [38], clustering, *etc.*
- Work on PyMVPA ([pymvpa.org](#)), NeuroDebian ([neuro.debian.net](#)), DataLad ([datalad.org](#)) and other scientific software projects

2005–2009

Computing Cluster System Administrator, Rutgers-Newark, NJ

Deployment and maintenance of 27 node high availability cluster running GNU/Linux Debian OS

2003–2009

Research Assistant, [Mind/Brain RUMBA Laboratory](#), Rutgers-Newark, NJ

- Predictive decoding and fusion of the neural data from and across different imaging modalities (e.g. EEG, fMRI) to gain better understanding of perception (e.g. auditory) and cognitive (e.g. category specific processing) neuroscientific problems [48-51]
- Graphical modeling of functional brain organization [45]

2000–2002

Research Assistant, [Brain and Computation Laboratory](#), UNM Albuquerque, NM

Implementation and deployment of ICA (Independent Component Analysis) techniques for processing of MEG (Magnetoencephalography) data as a part of the DreamMon project

1996–1997

Software Developer, [Liana Company](#), Vinnytsia, Ukraine

Automated system for Planned-Economic Department of Vinnytsia Chemical Plant (Himprom)

1993–1997

Research Assistant

VSTU, Vinnytsia, Ukraine

System for diagnostics of vertebral column. System later was utilized in national hospitals of Ukraine

Technical Skills

Programming

- More than 20 years of experience with software development under GNU/Linux OS: Python, shell scripting, Version Control Systems (CVS, subversion, git, git-annex), debugging (gdb, pdb, bashdb, ddd), troubleshooting (valgrind, strace), profiling, *etc.*
- Years of use and contributions to a wide-range of Python libraries for generic (*e.g.*, NumPy, SciPy, sklearn, pandas, statsmodels) and neuroimaging-oriented (*e.g.*, nibabel, nipy, nipy) scientific Python libraries
- Experience with generic build frameworks (make, cmake), continuous integration platforms (*e.g.* buildbot, [Travis-CI](#), [AppVeyor](#))
- Varying programming experience in other functional (ELisp, Standard ML) and imperative (C/C++(g++), Java, JavaScript, Perl, PHP) languages, and computational environments (Matlab/Octave)
- Past working experience in software development on MS DOS and Windows Platforms (Turbo Pascal, VBA, Inprise Delphi) and Database design (DBE, ODBC, Postresql, MySQL)
- Strong background in object-oriented programming methods and Design Patterns
- Experienced writer of high quality well documented code. Coding practice includes peer programming, code reviews, careful troubleshooting and debugging of own code and code of others, bug triaging, profiling, versioning, unit-, doc- and regression testing, release management

- Systems Administration
- Servers and high throughput clusters administration and monitoring (DNS, NFS, SSH, NAT, Torque, Ganglia, Maui, SGE, HTCondor)
 - Automated provisioning of bare and virtualized deployments (Debian FAI, cfengine2, Ansible)

Grant Proposals Writing

- Lead Multiple NSF (CRCNS and OCI programs) and R01/R24/P41 NIH proposals
- Participant Two BD2K, two P41 (+renewal), two R01, one R25, and one R24 NIH proposals as a Co-PI, Sub-PI, or Co-I
- Pre-application Moore foundation, NSF BRAIN EAGER
- Reviewer BRAIN Initiative (Data Archives, Integration, and Standards)
- Overall Led or participated in submission of over 30 grant proposals

Current Funding








- PI NSF [#1912266](#) DataLad - a decentralized system for integrated discovery, management, and publication of digital objects of science ([datalad.org](#))
- Co-PI NIH [#1R24MH117295](#) DANDI: Distributed Archives for Neurophysiology Data Integration ([dandi-archive.org](#))
- Subcontract PI, TR&D lead NIH [#2P41EB019936-06A1](#) ReproNim: A Center for Reproducible Neuroimaging Computation. PI: Kennedy ([repronim.org](#))
- Co-I NIH [#1R01MH127199-01A1](#) Infrastructure for hyperaligning fMRI data and estimating functional topographies. PIs: Haxby, Gobbini
- Co-I NIH [#1R01MH129397-01A1](#) Personalized spatiotemporal hemodynamic response models for functional magnetic resonance imaging. PIs: Lindquist, Wager

Past Funding

- PI NSF [#1429999](#) CRCNS US-German Data Sharing: Converging catalogues, warehouses, and deployment logistics into a federated 'data distribution' ([datalad.org](#))
- Subcontract PI, TR&D lead NIH [#1P41EB019936-01A1](#) Center for Reproducible Neuroimaging Computation (CRNC) ([repronim.org](#))

Professional Activities

SERVICE & OUTREACH

-  2022 **BossDB Standards Working Group Member**, [[Data Standards](#)]
-  2023 **NWB standard Technical Advisory Board Member**, [[Data Standards](#)]
-  2022 **BIDS standard Steering Group Member**, [[Data Standards](#)]
-  2024 **Program Committee**, NWB-DANDI Remote Developer Hackathon ([neurodatawithoutborders.github.io/nwb_hackathons/HCK12_2022_Remote](#)) [[Open Science](#)] [[Data Standards](#)]
-  2021 **Member**, OHBM Technology Task Force ([www.humanbrainmapping.org/i4a/pages/index.cfm?pageid=3313](#))
-  2022 **Advisory Committee Member**, Member of the Dartmouth Brain Imaging Center (DBIC) Steering Committee ([www.dartmouth.edu/dbic](#))
-  2020 **Instigator**, "Save the OHBM 2020" Poster Hall Platform ([datalad-datasets.github.io/ohbm2020-posters/](#)) [[Open Science](#)]

2020

Participant, NWB Hackathon, Allen Institute (alleninstitute.org/what-we-do/brain-science/events-training/2020-nwb-hackathon/) [[Open Science](#)] [[Data Standards](#)]

2019

Founder/Co-PI/Developer, DANDI (dandiarchive.org) [[Open Source Software](#)][[Data Sharing](#)]
A platform for publishing, sharing, and processing neurophysiology data funded by the BRAIN Initiative.

2019

Participant, DC Code Convergence AFNI Hackathon, NIMH (codeconvergence.org) [[Open Source Software](#)]

2019

Participant, Making open neuroscience infrastructure interoperable 2.0 workshop, McGill (www.bonjourstartupmtl.ca/evenement/workshop-making-open-neuroscience-infrastructure-interoperable-2-0/) [[Open Source Software](#)]

2017

Co-organizer, Brainhack Global 2017, 2018@Dartmouth (dartmouthbrainhack.github.io) [[Open Science](#)]

2018

2017

Participant, NIMH Workshop on Open and Reproducible Neuroscience (github.com/nih-fmrif/NIMH_repro_2017_08) [[Open Science](#)] [[Data Sharing](#)][[Data Standards](#)]

2016

Participant, Open Data Ecosystem for Neuroscience (ODEN 2016) workshop (neurographics.net/2016/07/28/oden-2016) [[Open Science](#)] [[Data Sharing](#)]

2016

Participant, NIH Data Archive workshop [[Data Sharing](#)]

2015

Founding Director, Center for Open Neuroscience (centerforopenneuroscience.org) [[Open Science](#)]
A center to facilitate cooperation and dissemination of open methods, software platforms, data and methodologies in the neuroscience and beyond

2015

Founder/Leading Developer, DueCredit (github.com/ducredit/ducredit) [[Open Source Software](#)]
DueCredit aims to address the problem of inadequate citations of methods and software implementations. This project was initiated in collaboration with Matteo Visconti during OHBM 2015 hackathon

2015

Founder/Lead, Open Brain Consent (open-brain-consent.readthedocs.org) [[Data Sharing](#)]
To streamline data-sharing in neuroimaging this project approaches the problem of frequently absent or inadequate provisioning of data sharing in existing human research participant consent forms

2013

2018

Contributor, Nibotmi (nipy.bic.berkeley.edu) [[Open Science](#)]
Continuous integration (CI) service initiated by Matthew Brett (UC Berkeley) to solidify quality assurance of scientific Python projects. My contribution is in establishing CI for various projects (*e.g.*, sklearn, pandas) with accent on testing on exotic hardware platforms such as UltraSPARC

2013

Founder/PI/Leading Developer, DataLad (datalad.org) [[Open Source Software](#)][[Data Sharing](#)]
Federated de-centralized version controlled automatically crawled data distribution

- Offers unified interface to access over 10TB scientific data from various sources

2013

2015

Founder/Leading Developer, NumPy Benchmarking (yarikoptic.github.io/numpy-vbench)
NumPy is the core computational library used by Python community. I have established a service continuously benchmarking NumPy functionality across different development branches to guarantee absent performance regressions. Superseded by [official ASV benchmarks](#)

2011

Initiator/Moderator, NiPy Artwork (github.com/nipy/nipy-artwork) [[Open Science](#)]
Promotional and informative materials for Python-based scientific software projects in [neuroimaging and electrophysiology](#)

2007

Founder/Leading Developer, PyMVPA (www.pymvpa.org) [[Open Source Software](#)][[Data Sharing](#)]
A Python framework to streamline application of classical and novel statistical learning methods for the analysis of neural data. This project was initiated in collaboration with Michael Hanke.

Popularity PyMVPA has a world-wide user base and empowered numerous studies (see www.pymvpa.org/whoisusingit.html)

2007

Founder/Leading Developer, NeuroDebian (neuro.debian.net) [[Open Source Software](#)][[Data Sharing](#)]

NeuroDebian project builds atop of Debian to provide scientific community with a turnkey Free and Open-source Software (FOSS) platform for neuroscience (and beyond) [39, 58-60]

- Consulting FOSS projects on aspects of legal assurance (copyright/licenses), deployment, and quality assurance
- Integrating and maintaining (scientific) free and open-source software within the Debian GNU/Linux OS (AFNI, nibabel, nipy, PsychoPy, *etc.*)
- Mentoring and sponsoring uploads of contributions (OpenSesame, Stimfit, OpenWalnut, *etc.*) to Debian and NeuroDebian repositories

Popularity Complete number of “downloads” or installations of NeuroDebian-maintained software is impossible to assess because majority of packages is also uploaded to official Debian distribution and thus made available from any of its more than 130 derivative distributions (such as Ubuntu). Main NeuroDebian website is accessed by more than 20,000 unique IPs each month, is mirrored by 8 contributors world-wide, and receives over 900 of periodic [voluntary “popularity contest” submissions](#). See also NeuroDebian users’ testimonials (neuro.debian.net/testimonials.html)

Outreach In 2010–2018 hosted booth exhibits at annual meetings of Society for Neuroscience, and Organization for Human Brain Mapping

2005

Developer, Debian Project (www.debian.org) [[Open Source Software](#)]

A widely popular community-driven GNU/Linux distribution with over a hundred of derivative distributions and millions of users

2005

2017

Leading Developer/Maintainer, Fail2Ban Project (www.fail2ban.org) [[Open Source Software](#)]

A popular intrusion prevention system possibly having **millions** of users


2004

FOSS Contributor, [[Open Source Software](#)]

I have contributed minor fixes and improvements to nearly a hundred of FOSS projects. Visit github.com/yarikoptic and github.com/con for an overview.

EDITING AND REVIEWING

Associate editor [Frontiers in Brain Imaging Methods](#) 

Guest Editor [Python in Neuroscience II](#) special issue, [Frontiers in Neuroscience & Brain Imaging Methods](#) 

Review editor [Frontiers in Neuroinformatics](#) 

Ad-hoc reviewer for journals Brain Structure and Function (past), [Frontiers in Neuroinformatics](#), [GigaScience](#), [Human Brain Mapping](#) (past), [IEEE Transactions on Signal Processing](#) (past), [Journal of Cognitive Neuroscience](#) (past), [Journal of Machine Learning Research](#) (past), [Journal of Open Source Software \(JOSS\)](#), [Nature’s Scientific Data](#), [Neural Computation](#) (past), [NeuroImage](#) (past), [Neuroreport](#) (past), [Pattern Recognition](#) (past), [PLOS Computational Biology](#), [SPIE](#) (past)

Conference Abstracts NIPS, SciPy

MEMBERSHIPS

Active [INCF Standards for Data Sharing \(Neuroimaging taskforce\)](#), [NumFOCUS Foundation](#), [Python Software Foundation](#), [Organization for Human Brain Mapping Society for Neuroscience](#)

Past [Association for Psychological Science](#), [Ukraine Small Academy of Sciences](#)

Publications (Google Scholar h-index: 36, i10-index: 55)

WORK IN PROGRESS PREPRINTS, OPEN REVIEW



- [1] M. Feilong, S. A. Nastase, G. Jiahui, **Y. O. Halchenko**, M. I. Gobbini, and J. V. Haxby. The individualized neural tuning model: Precise and generalizable cartography of functional architecture in individual brains. *bioRxiv*, may 2022. doi: [10.1101/2022.05.15.492022](https://doi.org/10.1101/2022.05.15.492022)
- [2] J. Moore, D. Basurto-Lozada, S. Besson, J. Bogovic, E. M. Brown, J.-M. Burel, G. de Medeiros, E. E. Diel, D. Gault, S. S. Ghosh, I. Gold, **Y. O. Halchenko**, M. Hartley, D. Horsfall, M. S. Keller, M. Kit-tisopikul, G. Kovacs, A. K. Yoldaş, A. le Tournoux de la Villegeorges, T. Li, P. Liberali, M. Linkert, D. Lindner, J. Lüthi, J. Maitin-Shepard, T. Manz, M. McCormick, K. Mohamed, W. Moore, B. Özdemir,

C. Pape, L. Pelkmans, M. Prete, T. Pietzsch, S. Preibisch, N. Rzepka, D. R. Stirling, J. Striebel, C. Tischer, D. Toloudis, P. Walczysko, A. M. Watson, F. Wong, K. A. Yamauchi, O. Bayraktar, M. Haniffa, S. Saalfeld, and J. R. Swedlow. OME-zarr: a cloud-optimized bioimaging file format with international community support. *bioRxiv*, feb 2023. doi: [10.1101/2023.02.17.528834](https://doi.org/10.1101/2023.02.17.528834)


Standards

- [3] BIDS-Contributors. The Brain Imaging Data Structure (BIDS) Specification (1.7.0), 2022. <https://zenodo.org/record/6094534> 







POST-PUBLICATION PEER-REVIEWED ARTICLES

- [4] C. P. Cheng and **Y. O. Halchenko**. A new virtue of phantom MRI data: explaining variance in human participant data [version 1; peer review: 1 approved, 2 approved with reservations, 1 not approved]. *F1000Research*, 9(1131), 2020. doi: [10.12688/f1000research.24544.1](https://doi.org/10.12688/f1000research.24544.1) 
- [5] S. S. Ghosh, J.-B. Poline, D. B. Keator, **Y. O. Halchenko**, A. G. Thomas, D. A. Kessler, and D. N. Kennedy. A very simple, re-executable neuroimaging publication. *F1000Research*, 6(124), 2017. doi: [10.12688/f1000research.10783.1](https://doi.org/10.12688/f1000research.10783.1) [PDF Copy] 













EDITORIALS












- [6] M. Hanke and **Y. O. Halchenko**. A communication hub for a decentralized collaboration on studying real-life cognition. *F1000Research*, 4(62), 2015. doi: [10.12688/f1000research.6229.1](https://doi.org/10.12688/f1000research.6229.1) [PDF Copy] 









SELECTED PRE-PUBLICATION PEER-REVIEWED ARTICLES

- [7] R. Ciric, W. H. Thompson, R. Lorenz, M. Goncalves, E. E. MacNicol, C. J. Markiewicz, **Y. O. Halchenko**, S. S. Ghosh, K. J. Gorgolewski, R. A. Poldrack, and O. Esteban. TemplateFlow: FAIR-sharing of multi-scale, multi-species brain models. *Nature Methods*, 19(12):1568–1571, dec 2022. doi: [10.1038/s41592-022-01681-2](https://doi.org/10.1038/s41592-022-01681-2)  [Preprint]
- [8] A. Manelis, **Y. Halchenko**, S. Satz, R. Ragozzino, S. Iyengar, H. Swartz, and M. Levine. The interaction between depression diagnosis and BMI is related to altered activation pattern in the right inferior frontal gyrus and anterior cingulate cortex during food anticipation. *Brain and Behavior*, 12(9), aug 2022a. doi: [10.1002/brb3.2695](https://doi.org/10.1002/brb3.2695)  [Preprint]
- [9] A. Manelis, **Y. O. Halchenko**, L. Bonar, R. S. Stiffler, S. Satz, R. Miceli, C. D. Ladouceur, G. Bebko, S. Iyengar, H. A. Swartz, and M. L. Phillips. Working memory updating in individuals with bipolar and unipolar depression: fMRI study. *Translational Psychiatry*, 12(1), oct 2022b. doi: [10.1038/s41398-022-02211-6](https://doi.org/10.1038/s41398-022-02211-6) 
- [10] G. Niso, R. Botvinik-Nezer, S. Appelhoff, A. D. L. Vega, O. Esteban, J. A. Etzel, K. Finc, M. Ganz, R. Gau, **Y. O. Halchenko**, P. Herholz, A. Karakuzu, D. B. Keator, C. J. Markiewicz, C. Maumet, C. R. Pernet, F. Pestilli, N. Queder, T. Schmitt, W. Sójka, A. S. Wagner, K. J. Whitaker, and J. W. Rieger. Open and reproducible neuroimaging: From study inception to publication. *NeuroImage*, 263:119623, nov 2022. doi: [10.1016/j.neuroimage.2022.119623](https://doi.org/10.1016/j.neuroimage.2022.119623)  [Preprint]
- [11] M.-H. Bourget, L. Kametsky, S. S. Ghosh, G. Mazzamuto, A. Lazari, C. J. Markiewicz, R. Oostenveld, G. Niso, **Y. O. Halchenko**, I. Lipp, S. Takerkart, P.-J. Toussaint, A. R. Khan, G. Nilsonne, F. M. Castelli, T. B. M. , J. Cohen-Adad, S. Appelhoff, R. Blair, E. Earl, F. Feingold, A. Galassi, R. Gau, C. J. Markiewicz, and T. Salo. Microscopy-BIDS: An extension to the brain imaging data structure for microscopy data. *Frontiers in Neuroscience*, 16, 2022. doi: [10.3389/fnins.2022.871228](https://doi.org/10.3389/fnins.2022.871228) 
- [12] S. Satz, **Y. O. Halchenko**, R. Ragozzino, M. M. Lucero, M. L. Phillips, H. A. Swartz, and A. Manelis. The relationship between default mode and dorsal attention networks is associated with depressive disorder diagnosis and the strength of memory representations acquired prior to the resting state scan. *Frontiers in Human Neuroscience*, 16, feb 2022. doi: [10.3389/fnhum.2022.749767](https://doi.org/10.3389/fnhum.2022.749767) 

[†] authors have contributed equally to the article

- [13] BRAIN Initiative Cell Census Network (BICCN). A multimodal cell census and atlas of the mammalian primary motor cortex. *Nature*, 598(7879):86–102, oct 2021. doi: [10.1038/s41586-021-03950-0](https://doi.org/10.1038/s41586-021-03950-0)  [Preprint]
- [14] C. J. Markiewicz, K. J. Gorgolewski, F. Feingold, R. Blair, **Y. O. Halchenko**, E. Miller, N. Hardcastle, J. Wexler, O. Esteban, M. Goncalves, A. Jwa, and R. Poldrack. The OpenNeuro resource for sharing of neuroscience data. *eLife*, 10, oct 2021. doi: [10.7554/elife.71774](https://doi.org/10.7554/elife.71774) 
- [15] S. A. Nastase, Y.-F. Liu, H. Hillman, A. Zadbood, L. Hasenfratz, N. Keshavarzian, J. Chen, C. J. Honey, Y. Yeshurun, M. Regev, M. Nguyen, C. H. C. Chang, C. Baldassano, O. Lositsky, E. Simony, M. A. Chow, Y. C. Leong, P. P. Brooks, E. Micciche, G. Choe, A. Goldstein, T. Vanderwal, **Y. O. Halchenko**, K. A. Norman, and U. Hasson. The “narratives” fMRI dataset for evaluating models of naturalistic language comprehension. *Scientific Data*, 8(1), sep 2021. doi: [10.1038/s41597-021-01033-3](https://doi.org/10.1038/s41597-021-01033-3)  [Preprint]
- [16] **Y. Halchenko**, K. Meyer, B. Poldrack, D. Solanky, A. Wagner, J. Gors, D. MacFarlane, D. Pustina, V. Sochat, S. Ghosh, C. Mönch, C. Markiewicz, L. Waite, I. Shlyakhter, A. de la Vega, S. Hayashi, C. Häusler, J.-B. Poline, T. Kadelka, K. Skytén, D. Jarecka, D. Kennedy, T. Strauss, M. Cieslak, P. Vavra, H.-I. Ioanas, R. Schneider, M. Pflüger, J. Haxby, S. Eickhoff, and M. Hanke. DataLad: distributed system for joint management of code, data, and their relationship. *Journal of Open Source Software*, 6(63):3262, jul 2021. doi: [10.21105/joss.03262](https://doi.org/10.21105/joss.03262) 
- [17] D. A. Baranger, **Y. O. Halchenko**, S. Satz, R. Ragozzino, S. Iyengar, H. A. Swartz, and A. Manelis. Protocol for a machine learning algorithm predicting depressive disorders using the t1w/t2w ratio. *MethodsX*, 8: 101595, 2021. doi: [10.1016/j.mex.2021.101595](https://doi.org/10.1016/j.mex.2021.101595) 
- [18] A. Manelis, A. Soehner, **Y. O. Halchenko**, S. Satz, R. Ragozzino, M. Lucero, H. A. Swartz, M. L. Phillips, and A. Versace. White matter abnormalities in adults with bipolar disorder type-II and unipolar depression. *Scientific Reports*, 11(1), apr 2021. doi: [10.1038/s41598-021-87069-2](https://doi.org/10.1038/s41598-021-87069-2) 
- [19] E. Bannier, G. Barker, V. Borghesani, N. Broeckx, P. Clement, K. E. Emblem, S. Ghosh, E. Glerean, K. J. Gorgolewski, M. Havu, **Y. O. Halchenko**, P. Herholz, A. Hessel, S. Heunis, Y. Hu, C.-P. Hu, D. Huijser, M. I. Vayá, R. Jancalek, V. K. Katsaros, M.-L. Kieseler, C. Maumet, C. A. Moreau, H.-J. Mutsaerts, R. Oostenveld, E. Ozturk-Isik, N. P. L. Espinosa, J. Pellman, C. R. Pernet, F. B. Pizzini, A. Š. Trbalić, P.-J. Toussaint, M. V. di Oleggio Castello, F. Wang, C. Wang, and H. Zhu. The Open Brain Consent: Informing research participants and obtaining consent to share brain imaging data. *Human Brain Mapping*, feb 2021. doi: [10.1002/hbm.25351](https://doi.org/10.1002/hbm.25351)  [Preprint]
- [20] M. Hanke, F. Pestilli, A. S. Wagner, C. J. Markiewicz, J.-B. Poline, and **Y. O. Halchenko**. In defense of decentralized research data management. *Neuroforum*, 0(0), jan 2021. doi: [10.1515/nf-2020-0037](https://doi.org/10.1515/nf-2020-0037) 
- [21] O. Esteban, R. Ciric, K. Finc, R. W. Blair, C. J. Markiewicz, C. A. Moodie, J. D. Kent, M. Goncalves, E. DuPre, D. E. Gomez, et al. Analysis of task-based functional MRI data preprocessed with fMRIPrep. *Nature Protocols*, pages 1–17, 2020. doi: [10.1038/s41596-020-0327-3](https://doi.org/10.1038/s41596-020-0327-3)  [Preprint]
- [22] D. N. Kennedy, S. A. Abraham, J. F. Bates, A. Crowley, S. Ghosh, T. Gillespie, M. Goncalves, J. S. Grethe, **Y. O. Halchenko**, M. Hanke, C. Haselgrove, S. M. Hodge, D. Jarecka, J. Kaczmarzyk, D. B. Keator, K. Meyer, M. E. Martone, S. Padhy, J.-B. Poline, N. Preuss, T. Sincomb, and M. Travers. Everything matters: The repronim perspective on reproducible neuroimaging. *Frontiers in Neuroinformatics*, 13:1, 2019. doi: [10.3389/fninf.2019.00001](https://doi.org/10.3389/fninf.2019.00001) [PDF Copy] 
- [23] A. Wagner, **Y. O. Halchenko**, and M. Hanke. multimatch-gaze: The multimatch algorithm for gaze path comparison in python. *Journal of Open Source Software*, 4(40):1525, 2019. doi: [10.21105/joss.01525](https://doi.org/10.21105/joss.01525) [PDF Copy] 
- [24] T. Yarkoni, C. Markiewicz, A. de la Vega, K. Gorgolewski, T. Salo, **Y. O. Halchenko**, Q. McNamara, K. DeStasio, J.-B. Poline, D. Petrov, V. Hayot-Sasson, D. Nielson, J. Carlin, G. Kiar, K. Whitaker, E. DuPre, A. Wagner, L. Tirrell, M. Jas, M. Hanke, R. Poldrack, O. Esteban, S. Appelhoff, C. Holdgraf, I. Staden, B. Thirion, D. Kleinschmidt, J. Lee, M. di Castello, M. Notter, and R. Blair. Pybids: Python tools for bids datasets. *Journal of Open Source Software*, 4(40):1294, 2019. doi: [10.21105/joss.01294](https://doi.org/10.21105/joss.01294) [PDF Copy] 

- [25] S. A. Nastase, **Y. O. Halchenko**, A. C. Connolly, M. I. Gobbini, and J. V. Haxby. Neural responses to naturalistic clips of behaving animals in two different task contexts. *Frontiers in Neuroscience*, 12:316, 2018. doi: [10.3389/fnins.2018.00316](https://doi.org/10.3389/fnins.2018.00316) [PDF Copy]  [Preprint]
- [26] M. Visconti di Oleggio Castello[†], **Y. O. Halchenko**[†], J. S. Guntupalli, J. D. Gors, and M. I. Gobbini. The neural representation of personally familiar and unfamiliar faces in the distributed system for face perception. *Scientific Reports*, 7, 2017. doi: [10.1038/s41598-017-12559-1](https://doi.org/10.1038/s41598-017-12559-1) [PDF Copy]  [Preprint]
- [27] S. A. Nastase, A. C. Connolly, N. N. Oosterhof, **Y. O. Halchenko**, J. S. Guntupalli, M. Visconti di Oleggio Castello, J. Gors, M. I. Gobbini, and J. V. Haxby. Attention selectively reshapes the geometry of distributed semantic representation. *Cerebral Cortex*, 27:4277–4291, 2017 [PDF Copy]  [Preprint]
- [28] S. J. Eglén, B. Marwick, **Y. O. Halchenko**, M. Hanke, S. Sufi, P. Gleeson, R. A. Silver, A. P. Davison, L. Lanyon, M. Abrams, T. Wachtler, D. J. Willshaw, C. Pouzat, and J.-B. Poline. Toward standard practices for sharing computer code and programs in neuroscience. *Nat Neurosci*, 20(6):770–773, June 2017. doi: [10.1038/nn.4550](https://doi.org/10.1038/nn.4550) [PDF Copy]  [Preprint]
- [29] A. C. Connolly, L. Sha, J. S. Guntupalli, N. Oosterhof, **Y. O. Halchenko**, S. A. Nastase, M. V. di Oleggio Castello, H. Abdi, B. C. Jobst, M. I. Gobbini, and J. V. Haxby. How the human brain represents perceived dangerousness or "predacity" of animals. *Journal of Neuroscience*, 36(19):5373–5384, May 2016. doi: [10.1523/jneurosci.3395-15.2016](https://doi.org/10.1523/jneurosci.3395-15.2016) [PDF Copy] 
- [30] K. J. Gorgolewski, T. Auer, V. D. Calhoun, R. C. Craddock, S. Das, E. P. Duff, G. Flandin, S. S. Ghosh, T. Glatard, **Y. O. Halchenko**, D. A. Handwerker, M. Hanke, D. Keator, X. Li, Z. Michael, C. Maumet, B. N. Nichols, T. E. Nichols, J. Pellman, J.-B. Poline, A. Rokem, G. Schaefer, V. Sochat, W. Triplett, J. A. Turner, G. Varoquaux, and R. A. Poldrack. The brain imaging data structure, a format for organizing and describing outputs of neuroimaging experiments. *Scientific Data*, 3:160044, June 2016. doi: [10.1038/sdata.2016.44](https://doi.org/10.1038/sdata.2016.44) [PDF Copy]  [Preprint]
- [31] J. S. Guntupalli, M. Hanke, **Y. O. Halchenko**, A. C. Connolly, P. J. Ramadge, and J. V. Haxby. A model of representational spaces in human cortex. *Cerebral Cortex*, (6):2919–2934, June 2016. doi: [10.1093/cercor/bhw068](https://doi.org/10.1093/cercor/bhw068). PMID: 26980615 [PDF Copy] 
- [32] J. T. Vogelstein, B. Mensh, M. Häusser, N. Spruston, A. C. Evans, K. Kording, K. Amunts, C. Ebell, J. Muller, M. Telefont, S. Hill, S. P. Koushika, C. Cali, P. A. Valdés-Sosa, P. B. Littlewood, C. Koch, S. Saalfeld, A. Kepcs, H. Peng, **Y. O. Halchenko**, G. Kiar, M.-M. Poo, J.-B. Poline, M. P. Milham, A. P. Schaffer, R. Gidron, H. Okano, V. D. Calhoun, M. Chun, D. M. Kleissas, R. J. Vogelstein, E. Perlman, R. Burns, R. Haganir, and M. I. Miller. To the Cloud! a grassroots proposal to accelerate brain science discovery. *Neuron*, 92(3):622–627, 2016. doi: [10.1016/j.neuron.2016.10.033](https://doi.org/10.1016/j.neuron.2016.10.033) [PDF Copy] 
- [33] **Y. O. Halchenko** and M. Hanke. Four aspects to make science open "by design" and not as an after-thought. *GigaScience*, 4(31), 2015. doi: [10.1186/s13742-015-0072-7](https://doi.org/10.1186/s13742-015-0072-7) [PDF Copy] 
- [34] L. Sha, J. V. Haxby, H. Abdi, J. S. Guntupalli, N. N. Oosterhof, **Y. O. Halchenko**, and A. C. Connolly. The animacy continuum in the human ventral vision pathway. *Journal of Cognitive Neuroscience*, 27:4: 665–678, 2015. doi: [10.1162/jocn_a_00733](https://doi.org/10.1162/jocn_a_00733) [PDF Copy]
- [35] M. I. Gobbini, J. D. Gors, **Y. O. Halchenko**, H. C. Hughes, and C. Cipolli. Processing of invisible social cues. *Consciousness and Cognition*, 22(3):765–770, 2013a. doi: [10.1016/j.concog.2013.05.002](https://doi.org/10.1016/j.concog.2013.05.002) [PDF Copy] 
- [36] P. J. Kohler, S. V. Fogelson, E. A. Reavis, M. Meng, J. S. Guntupalli, M. Hanke, **Y. O. Halchenko**, A. C. Connolly, J. V. Haxby, and P. U. Tse. Pattern classification precedes region-average hemodynamic response in early visual cortex. *Neuroimage*, 78C:249–260, Apr. 2013. doi: [10.1016/j.neuroimage.2013.04.019](https://doi.org/10.1016/j.neuroimage.2013.04.019) [PDF Copy]
- [37] M. I. Gobbini, J. D. Gors, **Y. O. Halchenko**, C. Rogers, J. S. Guntupalli, H. Hughes, and C. Cipolli. Prioritized detection of personally familiar faces. *PLoS ONE*, 8(6), June 2013b. doi: [10.1371/journal.pone.0066620](https://doi.org/10.1371/journal.pone.0066620) [PDF Copy] 

- [38] A. C. Connolly, J. S. Guntupalli, J. Gors, M. Hanke, **Y. O. Halchenko**, Y.-C. Wu, H. Abdi, and J. V. Haxby. Representation of biological classes in the human brain. *Journal of Neuroscience*, 32(8):2608–2618, Feb. 2012. doi: [10.1523/JNEUROSCI.5547-11.2012](https://doi.org/10.1523/JNEUROSCI.5547-11.2012) [PDF Copy] 
- [39] **Y. O. Halchenko**[†] and M. Hanke[†]. Open is not enough. let’s take the next step: An integrated, community-driven computing platform for neuroscience. *Frontiers in Neuroinformatics*, 6(00022), 2012. doi: [10.3389/fninf.2012.00022](https://doi.org/10.3389/fninf.2012.00022) [PDF Copy] 
- [40] J.-B. Poline, J. L. Breeze, S. S. Ghosh, K. Gorgolewski, **Y. O. Halchenko**, M. Hanke, K. G. Helmer, D. S. Marcus, R. A. Poldrack, Y. Schwartz, J. Ashburner, and D. N. Kennedy. Data sharing in neuroimaging research. *Frontiers in Neuroinformatics*, 6(9), 2012. doi: [10.3389/fninf.2012.00009](https://doi.org/10.3389/fninf.2012.00009) [PDF Copy] 
- [41] K. Gorgolewski, C. D. Burns, C. Madison, D. Clark, **Y. O. Halchenko**, M. L. Waskom, and S. S. Ghosh. Nipype: a flexible, lightweight and extensible neuroimaging data processing framework in Python. *Front. Neuroinform.*, 5:13, 2011. doi: [10.3389/fninf.2011.00013](https://doi.org/10.3389/fninf.2011.00013) [PDF Copy] 
- [42] M. Hanke[†] and **Y. O. Halchenko**[†]. Neuroscience runs on GNU/Linux. *Front. Neuroinform.*, 5:8, 2011. doi: [10.3389/fninf.2011.00008](https://doi.org/10.3389/fninf.2011.00008) [PDF Copy] 
- [43] J. V. Haxby, J. S. Guntupalli, A. C. Connolly, **Y. O. Halchenko**, B. R. Conroy, M. I. Gobbini, M. Hanke, and P. J. Ramadge. A common, high-dimensional model of the representational space in human ventral temporal cortex. *Neuron*, 72(2):404–416, Oct. 2011. doi: [10.1016/j.neuron.2011.08.026](https://doi.org/10.1016/j.neuron.2011.08.026) [PDF Copy] 
- [44] M. Hanke[†], **Y. O. Halchenko**[†], J. V. Haxby, and S. Pollmann. Statistical learning analysis in neuroscience: aiming for transparency. *Frontiers in Neuroscience*, 4:38–43, 2010. doi: [10.3389/neuro.01.007.2010](https://doi.org/10.3389/neuro.01.007.2010) [PDF Copy] 
- [45] J. D. Ramsey, S. J. Hanson, C. Hanson, **Y. O. Halchenko**, R. A. Poldrack, and C. Glymour. Six problems for causal inference from fMRI. *Neuroimage*, 49(2):1545–58, Jan. 2010. doi: [10.1016/j.neuroimage.2009.08.065](https://doi.org/10.1016/j.neuroimage.2009.08.065) [PDF Copy]
- [46] M. Hanke, **Y. O. Halchenko**, P. B. Sederberg, S. J. Hanson, J. V. Haxby, and S. Pollmann. PyMVPA: A Python toolbox for multivariate pattern analysis of fMRI data. *Neuroinformatics*, 7:37–53, 2009a. doi: [10.1007/s12021-008-9041-y](https://doi.org/10.1007/s12021-008-9041-y) [PDF Copy]
- [47] M. Hanke[†], **Y. O. Halchenko**[†], P. B. Sederberg, E. Olivetti, I. Fründ, J. W. Rieger, C. S. Herrmann, J. V. Haxby, S. J. Hanson, and S. Pollmann. PyMVPA: A unifying approach to the analysis of neuroscientific data. *Frontiers in Neuroinformatics*, 3:3, 2009b. doi: [10.3389/neuro.11.003.2009](https://doi.org/10.3389/neuro.11.003.2009) [PDF Copy] 
- [48] R. A. Poldrack, **Y. O. Halchenko**, and S. J. Hanson. Decoding the large-scale structure of brain function by classifying mental states across individuals. *Psychological Science*, 20(11):1364–1372, Oct. 2009. doi: [10.1111/j.1467-9280.2009.02460.x](https://doi.org/10.1111/j.1467-9280.2009.02460.x). PMC2935493 [PDF Copy]
- [49] S. J. Hanson and **Y. O. Halchenko**. Brain reading using full brain support vector machines for object recognition: there is no “face” identification area. *Neural Computation*, 20:486–503, 2008. doi: [10.1162/neco.2007.09-06-340](https://doi.org/10.1162/neco.2007.09-06-340) [PDF Copy]
- [50] S. J. Hanson, C. Hanson, **Y. O. Halchenko**, T. Matsuka, and A. Zaimi. Bottom-up and top-down brain functional connectivity underlying comprehension of everyday visual action. *Brain Struct Funct*, 212(3-4): 231–44, Dec. 2007a. doi: [10.1007/s00429-007-0160-2](https://doi.org/10.1007/s00429-007-0160-2) [PDF Copy]
- [51] S. J. Hanson, R. Rebecchi, C. Hanson, and **Y. O. Halchenko**. Dense mode clustering in brain maps. *Magn Reson Imaging*, 25(9):1249–62, Nov. 2007b. doi: [10.1016/j.mri.2007.03.013](https://doi.org/10.1016/j.mri.2007.03.013) [PDF Copy]
- [52] L. I. Timchenko, Y. F. Kutaev, A. A. Gertsy, **Y. O. Halchenko**, L. V. Zahoruiko, and T. Mansur. Method for image coordinate definition on extended laser paths. In S. B. Gurevich, Z. T. Nazarchuk, and L. I. Muravsky, editors, *Optoelectronic and Hybrid Optical/Digital Systems for Image and Signal Processing*, volume 4148:1, pages 19–26. SPIE, 2000. doi: [10.1117/12.388446](https://doi.org/10.1117/12.388446). <http://link.aip.org/link/?PSI/4148/19/1> [PDF Copy]


[†] authors have contributed equally to the article

- [53] L. I. Timchenko, Y. F. Kutaev, A. A. Gertsy, L. V. Zahoruiko, **Y. O. Halchenko**, and T. Mansur. Approach to parallel-hierarchical network learning for real-time image sequence recognition. In J. W. V. Miller, S. S. Solomon, and B. G. Batchelor, editors, *Machine Vision Systems for Inspection and Metrology VIII*, volume 3836:1, pages 71–81. SPIE, 1999. doi: [10.1117/12.360283](https://doi.org/10.1117/12.360283)

PH.D. THESIS

- [54] **Y. O. Halchenko**. *Predictive Decoding of Neural Data*. PhD thesis, NJIT, Newark, NJ, USA, May 2009. <http://www.onerussian.com/Sci/thesis> [PDF Copy] 

CHAPTERS

- [55] **Y. O. Halchenko**, S. J. Hanson, and B. A. Pearlmutter. *Advanced Image Processing in Magnetic Resonance Imaging: fMRI, MRI, EEG, MEG*, chapter 8, pages 223–65. CRC Press, Boca Raton, 2005. <http://www.onerussian.com/Sci/fusion> [PDF Copy] 

INTERVIEWS

- [56] V. Sochat and **Y. O. Halchenko**. US-RSE Stories: Open up, Neuroscience! here comes NeuroDebian, 2019. <http://us-rse.org/rse-stories/2019/yaroslav/>
- [57] A. Karakuzu and N. Stikov. Open Science Topic: NeuroDebian team, 2017. <https://www.ohbmbrianmappingblog.com/blog/neurodebian>
- [58] **Y. O. Halchenko**. NeuroDebian: from disjoint tools and data to robust turnkey platform for neuroimaging and beyond, 2013. <http://www.youtube.com/watch?v=WhUrTRuMoFs>
- [59] FLOSS for Science. An interview with the NeuroDebian team, 2011. <http://www.floss4science.com/interview-neurodebian>
- [60] INCF. NeuroDebian: the value of an integrated tool suite, 2011. <http://www.incf.org/newsroom/stories/neurodebian-the-value-of-an-integrated-tool-suite>

Invited Talks

- 2022 **UTexas Austin**, *Towards The Big Data Neuroscience Nirvana*, 2022 Big Data Neuroscience Workshop, Austin, TX
datasets.datalad.org/centerforopenneuroscience/talks/2022-tx-big-neuroscience.html
- 2021 **Open Minds Pitt**, *Phantom data matter in Neuroimaging QA/QC beyond basic scanner QA*
www.youtube.com/watch?v=HcS9_LFdoPw
- 2019 **Brown University**, *Making science more open and reproducible by design, tools can help*, Providence, RI
- 2019 **UMass Medical School**, *Tales from the CON: A few studies of a curious mind*, Worcester, MA
- 2019 **MILA AI Institute**, *DataLad: Decentralized data management for collaborative, open, and reproducible science*, Montreal, Canada
- 2017 **McGill/MNI**, *DataLad – decentralized data distribution for consumption and sharing of scientific datasets*, Montreal, Canada
- 2016 **MRN**, *The road to open neuroscience: from analysis methods to software platforms*, Albuquerque, NM
- 2014 **SRI International**, *From statistical learning to an open-source, turnkey platform for neuroimaging*, Menlo Park, CA
- 2013 **SEA Software Engineering Conference**, *Open is not enough: benefits from Debian as an integrated, community-driven computing platform*, UCAR, Boulder, CO
sea.ucar.edu/event/open-not-enough-benefits-debian-integrated-community-driven-computing-platform
- University of Pennsylvania**, *Environments for efficient contemporary research in neuroimaging*, Philadelphia, PA

2012

INCF Bootcamp 2012, *Applied NeuroDebian: Python in Neuroimaging*, Munich, Germany

2011

EuroSciPy, *π 's in Debian or Scientific Debian: NumPy, SciPy and beyond*, Paris, France

2009

UC Berkeley, *Reliable Decoding of Neural Data*, Berkeley, CA

University of Hawaii at Manoa, *PyMVPA: Fathom Brain Function through Multivariate Pattern Analysis*, Honolulu, HI

Didactic Activities

2012

PBS Department, Dartmouth College, Consulting undergraduate and graduate students in application of statistical learning methodologies in their neuroimaging-based research

Mentoring Student Interns

2018-2019. Adina Wagner, Germany

2018. Taylor M. Olson, Dartmouth, WISP

2017. Oliver Contier, Germany

2017-2021. Christopher P. Cheng, Dartmouth

2015. Ana Marina Jimenez Santiago, Mexico

Undergraduate Students (Co-)Advisor

2019-2020. Mark A. Taylor, CS Department, Dartmouth College

2018-2019. Cara E. Van Uden, CS Department, Dartmouth College

Lecturer/Instructor, Various Workshops & Webinars

2021. ABCD Repronim Course (www.abcd-repronim.org)

2020-2021. Repronim webinars (www.repronim.org/webinar-series.html)

2019. MIND: Methods in Neuroscience at Dartmouth (mindsummerschool.org) summer school

2019. Training for Reproducible Neuroimaging, pre-OHBM2019, Rome, Italy

2019. [Coastal Coding for Reproducible Neuroimaging](#), Miami, FL

2018. [Training for Reproducible Neuroimaging](#), SfN2018, San Diego, CA

2018. [Training for Reproducible Neuroimaging](#), OHBM2018, Singapore

2017. [Training for Reproducible Neuroimaging](#), Symposia@SfN2017, Washington, DC

2017. Online Brain Intensive (www.onlinebrainintensive.com)

2017. MIND: Methods in Neuroscience at Dartmouth (summer-mind.github.io) summer school

2017. Workshop on Open and Reproducible Neuroscience, NIMH, Bethesda, MD, USA

2017. Nipype workshop, MIT, Cambridge, MA, USA

Co-lecturer, PyMVPA Workshops

2015. PBS Department, Dartmouth College, NH USA

2015. University of York, York UK

2014. Justus-Liebig-Universitat, Giessen Germany

2014. Hanse-Wissenschaftskolleg Institute for Advanced Study, Delmenhorst Germany

2012. Center for Behavioral Brain Sciences, Magdeburg Germany

2010. Psychology and Brain Sciences, Dartmouth College, Hanover USA

2019

Lecturer, *Introduction to Programming for Psychologists & Neuroscientists (PSYC161)*

Psychology and Brain Sciences Department, Dartmouth College

2015

Lecturer, *Introduction to Programming for Psychologists & Neuroscientists (PSYC161)*

Psychology and Brain Sciences Department, Dartmouth College

2000

Teaching Assistant, *Intermediate Programming (CS251)*

[Prof. David Ackley](#), Computer Science Department, UNM

Awards, Honors & Fellowships

1998

Fellow, *The International Scientific Fund Representatives in Ukrainian Studentship Award*

1996

Award, The Academy of Sciences of Ukraine

Project: *Information-Measuring System With Optical Transformation Biomedical Information*

1995

Fellow, *The International Soros Science Educational Program (ISSEP) Studentship Award*

6th place, ACM South-Eastern European Regional Programming Contest

1st place at VSTU

4th place, *Physics Contest among Colleges and Universities of Ukraine*

1st place at VSTU

1994



1st place, *Regional Programming Contest*

1993



3rd place, *Regional Physics Contest*

Extra Qualifications

Languages Fluent in Russian, Ukrainian and English.

Hobbies Major contributor to the Coffee Art Collection (neuro.debian.net/coffeeart.html)