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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

- Research projects in visual perception [*e.g.*, [5](#), [6](#), [8](#)]
- Methodological and software developments for statistical analysis of neural data: PyMVPA (pymvpa.org) [[25](#), [26](#)]
- Turnkey computation platform for neuroscience: NeuroDebian (neuro.debian.net) [[18](#)]
- Distributed data management and distribution platform: DataLad (datalad.org)
- Neuroimaging Computational Environments Manager (ReproMan, formerly NICEMAN (niceman.repronim.org))
- Training materials for the reproducible neuroimaging: ReproNim – Reproducible Basics (www.reproducibleimaging.org/module-reproducible-basics)
- Automated system for collection of MR BIDS datasets (deployed at DBIC): ReproIn/HeuDiConv (reproin.repronim.org)

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 [14, 16]
- Participating in Haxby lab's methodological developments for neuroimaging data analysis: hyperalignment [22], RSA [17], 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 [27-30]
- Graphical modeling of functional brain organization [24]

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 18 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, 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
Overall Led or participated in submission of over 20 grant proposals

Current Funding

Subcontract PI, Sub-project leader NIH #1P41EB019936-01A1 Center for Reproducible Neuroimaging Computation (CRNC) (repronim.org)
Co-PI NIH #1R24MH117295 DANDI: Distributed Archives for Neurophysiology Data Integration (dandi-archive.org)
PI (Starting Dec 2019) NSF #1912266 DataLad - a decentralized system for integrated discovery, management, and publication of digital objects of science (datalad.org)

Past Funding

PI NSF #1429999 CRCNS US-German Data Sharing: Converging catalogues, warehouses, and deployment logistics into a federated 'data distribution' (datalad.org)

Professional Activities

SERVICE & OUTREACH

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

2018 **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 **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/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 **Founder/Leading Developer**, NumPy Benchmarking (yarikoptic.github.io/numpy-vbench)
2015 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) [[18](#), [36-38](#)]

- 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 2010–2017 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

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

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

2017


2004

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

I have contributed minor fixes and improvements to nearly a hundred of FOSS projects. Visit www.ohloh.net/accounts/yarikoptic and <https://github.com/yarikoptic> 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), [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](#)


Past Association for Psychological Science, Society for Neuroscience, Ukraine Small Academy of Sciences

Publications (Google Scholar h-index: 23, i10-index: 32)









POST-PUBLICATION PEER-REVIEWED ARTICLES

- [1] 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

- [2] 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

- [3] 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] 
- [4] 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]
- [5] 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]
- [6] 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]
- [7] 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]
- [8] 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] 
- [9] 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]
- [10] 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] 
- [11] 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. Calì, P. A. Valdés-Sosa, P. B. Littlewood, C. Koch, S. Saalfeld, A. Kepecs, 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] 
- [12] **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] 
- [13] 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]

[†] authors have contributed equally to the article

- [14] 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] 
- [15] 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]
- [16] 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] 
- [17] 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] 
- [18] **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] 
- [19] 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] 
- [20] 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] 
- [21] 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] 
- [22] 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] 
- [23] 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] 
- [24] 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]
- [25] 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]
- [26] 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] 
- [27] 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]
- [28] 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]


[†] authors have contributed equally to the article

- [29] 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]
- [30] 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]
- [31] 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]
- [32] 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

- [33] **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


- [34] **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


- [35] A. Karakuzu and N. Stikov. Open Science Topic: NeuroDebian team, 2017. <https://www.ohbmbrianmappingblog.com/blog/neurodebian>
- [36] **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>
- [37] FLOSS for Science. An interview with the NeuroDebian team, 2011. <http://www.floss4science.com/interview-neurodebian>
- [38] 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


 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
2015. Ana Marina Jimenez Santiago, Mexico

Undergraduate Students (Co-)Advisor

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

Lecturer/Instructor, Various Workshops

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)