

Franco Pestilli Associate Professor

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Education

- 2008 Ph.D. Psychology, Cognition & Perception, New York University, NY Advisor: Marisa Carrasco.
2006 M.A. Psychology, Cognition & Perception, New York University, NY.
2000 Laurea. Experimental Psychology (*summa cum laude*), University of Rome *La Sapienza*, ITALY.

Positions

2020-	Associate Professor,	Department of Psychology, The University of Texas, Austin.
2019-20	Associate Professor,	Department of Psychological and Brain Sciences, Indiana University. Program in Neuroscience. Program in Cognitive Science.
2015-19	Assistant Professor,	Department of Psychological and Brain Sciences, Indiana University. Program in Neuroscience. Program in Cognitive Science.
2017-20	Adjunct Professor,	Department of Intelligent Systems Engineering, Indiana University. Department of Computer Science. Indiana University School of Optometry.
2013-14	Research Associate,	Stanford University, Stanford, CA.
2011-13	Postdoctoral Scientist,	Stanford University, Stanford, CA.
2008-11	Postdoctoral Fellow,	Columbia University, New York, NY.
2010	Fellow Italian Academy,	Columbia University, New York, NY.
2009	Visiting Researcher,	RIKEN Brain Science Institute, Wako, Japan.
2002-08	PhD Candidate,	New York University, New York, NY.
2002	Research Assistant,	New York University, Marisa Carrasco
2002	Adjunct Instructor,	Hunter College, CUNY, New York
2001	IT Administrator,	Atel SLR, Italy

Publications

Names of trainees (students and postdocs) are marked with Underlined text.

2020

1. Kurzawski, J.W., Mikellidou, K., Morrone, M.C. and **Pestilli, F.** The visual white matter connecting human area prostriata and the thalamus is retinotopically organized. *Brain Struct Funct* 225, 1839–1853 (2020).
<https://doi.org/10.1007/s00429-020-02096-5>
2. Kaneko, T.*, Takemura, H.*, **Pestilli, F.**, Silva, AC., Ye FQ., & Leopold, DA (2020) Spatial organization of occipital white matter tracts in the common marmoset. *Brain Structure and Function* ***shared contribution**
3. Rheault, F.; De Benedictis, A.; Daducci, A.; Maffei, C.; Tax, C.M.W.; Romascano, D.; Caverzasi, E.; Morency, F.C.; Corrivetti, F.; **Pestilli, F.**; et al. (2020) Tractostorm: The what, why, and how of tractography dissection reproducibility. *Human Brain Mapping* <https://doi.org/10.1002/hbm.24917>.
4. Ahmadi, K., Fracasso A., Puzniak, RJ, Gouws AD, Yakupo, R., Speck, O., Kaufmann, J., **Pestilli, F**, Dumoulin, SO., Morland, AB, Hoffmann, MB. (2020) Triple visual hemifield maps in a case of optic chiasm hypoplasia. *Neuroimage* 215(15) <https://doi.org/10.1016/j.neuroimage.2020.116822>

2019

5. Meija, J., Meija, A. and **F. Pestilli** (2019) Open data on industry payments to healthcare providers reveals potential hidden costs to the public. *Nature Communications*, 10, 4314
<https://doi.org/10.1038/s41467-019-12317-z>
6. Sani, L., McPherson, B.C., Stemann, H., **Pestilli, F.**,* Freiwald W.A.* (2019) Functionally defined white matter of the macaque monkey brain reveals a dorso-ventral attention network. *eLife*. DOI: 10.7554/eLife.40520 *** shared senior contribution** (Cover article)
7. Bullock, D., Takemura, H., Caiafa, C. F., Kitchell, L., McPherson, B., Caron, B., and **Pestilli, F.** (2019) Associative

white matter tracts in the posterior human brain with different degrees of investigative attention. *Brain Structure and Function*. DOI: [10.1007/s00429-019-01907-8](https://doi.org/10.1007/s00429-019-01907-8)

8. Avesani, P., Caiafa, C., McPherson, B. Saykin, A., Hayashi, S., Herschel, R., A., Garyfallidis, E., Kitchell, L., Bullock, D., Patterson, A., O'Riley, S., Olivetti, E., Sporns, O., Saykin, A., Wang, L., Dinov, I., and **Pestilli, F.** (2019) The open diffusion data derivatives, brain data upcycling via integrated publishing of derivatives and reproducible open cloud services. *Nature: Scientific Data*. DOI: [10.1038/s41597-019-0073-y](https://doi.org/10.1038/s41597-019-0073-y).
9. Rheault, F. De Benedictis, A. Daducci, A., Maffei, C., Tax, CMW., Romascano, D., Caverzasi, E., Morency, FC., Corrivetti, F., **Pestilli, F.**, Girard, G., Theaud, G., Zemmoura, I., Hau, J., Glavin, K., Jordan, KM., Pomiecko, K., Chamberland, M., Barakovic, M., Goyette, N., Poulin, P., Chenot, Q., Panesar, SS., Sarubbo, S., Petit, L., Descoteaux, M. (2019) Tractostorm: The what, why, and how of tractography dissection reproducibility. *Human Brain Mapping*. DOI: [10.1002/hbm.24917](https://doi.org/10.1002/hbm.24917)
10. Puzniak, RJ., Ahmadi, K., Kaufmann, JK., Gouws, A., Morland, AB., **Pestilli, F.**,* and Hoffmann, MB.* (2019) Quantifying nerve decussation abnormalities in the optic chiasm *Neuroimage: Clinical*. DOI: [10.1016/j.nicl.2019.102055](https://doi.org/10.1016/j.nicl.2019.102055) * **shared senior contribution**
11. Rossini PM, Di Iorio R, Bentivoglio M, Bertini G, Ferreri F, Gerloff C, Ilmoniemi R, Miraglia F, Nitsche M, **Pestilli F.** Rosanova M, Shirota Y, Tesoriero C, Ugawa Y, Vecchio F, Ziemann U & Hallett M (2019) Methodological paper on brain connectivity: an international panel of Experts from an IFCN-sponsored meeting. *Clinical Neurophysiology*. DOI: [10.1016/j.clinph.2019.06.006](https://doi.org/10.1016/j.clinph.2019.06.006).

2018

12. **Pestilli F.**, (2018) Human white matter and knowledge representation. *PLoS Biology* DOI: [10.1371/journal.pbio.2005758](https://doi.org/10.1371/journal.pbio.2005758)
13. Takemura, H., **Pestilli, F.** Weiner, KS. (2018) Comparative neuroanatomy: integrating classic and modern methods to understand association fibers in visual cortex. *Neuroscience Research*. DOI: [10.1016/B0-12-370878-8/00075-6](https://doi.org/10.1016/B0-12-370878-8/00075-6)
14. Yoshimine, S., Ogawa, S., Horiguchi, H., Terao, M., Miyazaki, A., Tsuneoka, H., Masuda, Y., and **Pestilli, F.** (2018) Age-related macular degeneration affects the optic radiation white matter projecting to locations of retinal damage. *Brain Structure and Function*. DOI: [10.1007/s00429-018-1702-5](https://doi.org/10.1007/s00429-018-1702-5)
15. Glzman, T., Bruckert, L., **Pestilli, F.**, Yecies, D.W., Guibas, L., Yeom, K. (2018) Framework for Shape Analysis of White Matter Bundles. *Neuroimage*. 167:466-477.
16. Kellar, D., Newman, S., **Pestilli, F.**, Cheng, Hu., Port, N., (2018) Comparing fMRI activation during smooth pursuit eye movements among contact sport athletes, non-contact sport athletes, and non-athletes. *Neuroimage: Clinical*. DOI: [10.1016/j.nicl.2018.01.025](https://doi.org/10.1016/j.nicl.2018.01.025)

2017

17. Caiafa C. and **Pestilli, F.** (2017) Multidimensional encoding of brain connectomes. *Nature Scientific Reports*. DOI: [10.1038/s41598-017-09250-w](https://doi.org/10.1038/s41598-017-09250-w)
18. Miller J.K., Hermes, D., **Pestilli, F.**, Wig, G.S., and Ojemann, J.O. (2017) Face percept formation in human ventral temporal cortex. *Journal of Neurophysiology*, DOI: [10.1152/jn.00113.2017](https://doi.org/10.1152/jn.00113.2017)
19. Takemura H, **Pestilli F.**, Weiner KS, Keliris GA, Landi SM, Sliwa J, Ye FQ, Barnett MA, Leopold DA, Freiwald WA, Logothetis NK, Wandell BA. (2017) Occipital white matter tracts in human and macaque. *Cerebral Cortex* 27 (6): 3346-3359. DOI: [10.1093/cercor/bhx070](https://doi.org/10.1093/cercor/bhx070).
20. Rokem, A. Takemura, H., Bock, A. Scherf, S., Bridge, H., Fine, I., Behrman, M., Wandell, B., and **Pestilli, F.** (2017) The visual white matter: Application of diffusion MRI and fiber tractography to vision science. *Journal of Vision*. 17(2):4. DOI: [10.1167/17.2.4](https://doi.org/10.1167/17.2.4)
21. K.L. Main, S. Soman, **Pestilli, F.** A. Furst, A. Noda, J. Kong, J. Cheng, J.K. Fairchild, L. Kinoshita, J. Taylor, J. Yesavage, J.W. Ashford and M. Adamson (2017) DTI metrics from the right inferior longitudinal fasciculus and thalamic tract best discriminate TBI patients from neurologically healthy controls: a receiver operator characteristic analysis of US Veterans. *NeuroImage: Clinical*.
22. Glzman, T., Solomon, J., **Pestilli, F.**, and Guibas, L. (2017) Shape descriptors as imaging biomarkers for Alzheimer's disease. *Journal of Alzheimer's disease*. 56(1): 287–295.

2016

23. Takemura, H., Caiafa, C., Wandell, B.A., and **Pestilli, F.** (2016) Ensemble tractography. *PLoS Computational Biology*. DOI: 10.1371/journal.pcbi.1004692
24. Leong, J. **Pestilli, F.**, Wu, C., Samanez-Larkin, G., and Knutson, B. (2016) Anatomical identification of the white-matter pathways between the NAc to Insular cortex. *Neuron*. 89(1): 63–69.
25. Libero LE, Berge WK, Deshpande HD, **Pestilli F.**, & Kana RK (2016) White Matter Diffusion of Major Fiber Tracts Implicated in Autism Spectrum Disorder. *Brain Connectivity*. 6(9): 691-699.
26. Aijna, S. **Pestilli, F.**, Rokem, A., and Brigde, H. (2015) Human blindsight is mediated by an intact geniculo-extrastriate pathway. *eLife*.
27. Goldstone, R. **Pestilli, F.**, and Börner, K., (2015) Self-portraits of the brain: cognitive science, data visualization, and communicating brain structure and function. *Trends in Cognitive Science*. Cover Article.

2015

28. **Pestilli, F.** (2015) Test-retest measurements and digital validation for in vivo neuroscience, *Nature: Scientific Data* 2 (140057) DOI:10.1038/sdata.2014.57.
29. Takemura, H., Yeatman, J. Rokem, A., Winawer, J., Wandell, B. and **Pestilli, F.** (2015) A major human white-matter pathway between dorsal and ventral visual cortex. *Cerebral Cortex*.
30. Allen, B., Spiegel, D., Thompson, B., **Pestilli, F.***, Rokers, B*. (2015) Altered white matter in visual pathways as a result of amblyopia. *Vision Research*. ***Equal senior contribution.**
31. Saber, G.*, **Pestilli, F.*** and Curtis, C. (2015) Saccade planning increases topographic activity in visual cortex. *The Journal of Neuroscience*. 35(1):245-252. ***Equal contribution.**
32. Gomez, J., **Pestilli, F.**, Witthoft, N., Golarai, G., Liberman, A., Poltoratski, A., Yoon, J., Grill-Spector, K. (2015) Development of high-level visual fasciculi correlates with face perception. *Neuron*. 85 (1).

2014

33. Rokem, A. Yeatman, J. **Pestilli, F.** Mezer, A. Wandell, B. (2014) Evaluating models of MRI diffusion. *PLoS one*.
34. **Pestilli, F.**, Yeatman, J. Rokem, A., Kay, K. and Wandell, B. (2014) Evaluation and statistical inference in living connectomes. *Nature Methods*. DOI:10.1038/nmeth.3098.
35. Yeatman, J.D., Weiner, K.S., **Pestilli, F.**, Rokem, A., Mezer, A., Wandell, B.A. (2014) The vertical occipital fasciculus: A century of controversy resolved by in vivo measurements. *Proceedings of the National Academy of Sciences*. 111.48: E5214-E5223.
36. Ling, S., Jehee, J., and **Pestilli, F.** (2014) A review of the mechanisms by which attentional feedback shapes visual selectivity. *Brain Structure and Function*. DOI:10.1007/s00429-014-0818-5.
37. Main, K.*, **Pestilli, F.***, Mezer, A. Yeatman, J. Martin, R. Phipps, S. Wandell, B. (2014) Speed discrimination predicts word but not pseudo-word reading rate in adults and children. *Brain and Language*. ***Equal contribution.**
38. Hara, Y., **Pestilli, F.**, and Gardner, JL (2014) Differing predictions for single-units and neuronal populations of the normalization model of attention. *Frontiers in Computational Neuroscience*.
39. Ogawa, S., Takemura, H., Horiguchi, H., Terao, M., Haji, T., **Pestilli, F.**, Yeatman, J., Tsuneoka, H., Wandell, B., Masuda, Y. (2014) White matter consequences of retinal receptor and ganglion cell damage. *Investigative Ophthalmology and Vision Science, IOVS*.

2013 and prior

40. **Pestilli, F.**, Heeger, D., Carrasco, M., & Gardner, J. (2011) Attentional enhancement via selection and pooling of early sensory responses in human visual cortex. *Neuron*. 72(5): 832–846.
41. **Pestilli, F.**, Ling, S., & Carrasco, M. (2009) A population-coding model of attention's influence on contrast response: estimating neural effects from psychophysical data. *Vision Research*. 49(7):735.
42. Montagna, B., **Pestilli, F.**, & Carrasco, M. (2009) Attention trades off spatial acuity. *Vision Research*.
43. Ferrera V, Teichert T, Grinband J, **Pestilli F.**, Dashnaw S, & Hirsch J. (2008) Functional Imaging with

Reinforcement, Eyetracking, and Physiological Monitoring *JoVE*. 21

44. **Pestilli, F.**, Viera, G., & Carrasco M. (2007) How do attention and adaptation affect contrast sensitivity? *Journal of Vision*. 7 (7):1-12.
45. Liu T., **Pestilli F.**, & Carrasco M. (2005) Transient attention enhances performance and fMRI response in human visual cortex. *Neuron*. 45 (3): 469–47.
46. **Pestilli F.** & Carrasco M. (2005) Attention enhances contrast sensitivity at cued and impairs it at uncued locations. *Vision Research*. 45 (14): 1867–75.

Peer reviewed conference articles and public archives

Names of trainees (students and postdocs) are marked with Underlined text.

1. Aminmansour, F., Patterson, A., Le, L., Peng, Y., Mitchell, D., **Pestilli, F.**, Caiafa, C.E., Greiner, R., and White, M. (2019) Learning Macroscopic Brain Connectomes via Group-Sparse Factorization. *Neural Information Processing Systems (NeurIPS)*. (acceptance rate 22%)
2. Kumar, S., Sreenivasan, V., Talukdar, P., **Pestilli, F.**, and Devarajan, S. (2019) ReAI-LiFE: Accelerating the Discovery of Individualized Brain Connectomes on GPUs, *Thirty-Third AAAI Conference on Artificial Intelligence, Honolulu, HI*.
3. Lindsey, K., Bullock, D., Hayashi S., and **Pestilli, F.** (2018) Shape Analysis of White Matter Tracts via the Laplace-Beltrami Spectrum, *Shape in Medical Imaging Workshop at MICCAI, Granada, Spain*.
4. Caiafa, C., Saykin, A., Sporns, O., and **Pestilli, F.** (2017) Tensor encoding and decomposition of brain connectomes with application to tractography evaluation. *Neural Information Processing Systems (NIPS)*. (Spotlight talk, Top 2% of all accepted submissions. NIPS acceptance rate 20%)
5. Caiafa, C., Cichocki A. **Pestilli, F.** (2017) A Sparse Tensor Decomposition with Multi-Dictionary Learning Applied to Diffusion Brain Imaging. *The Signal Processing with Adaptive Sparse Structured Representations (SPARS)*, Lisbon, Portugal.
6. Gugnani, S., Lu, X., **Pestilli, F.**, Caiafa, C., Panda, D.K. (2017) MPI-LiFE: Designing High-Performance Linear Fascicle Evaluation of Brain Connectome with MPI. *IEEE 24th International Conference on High Performance Computing (HiPC)*, Jaipur, India.
7. Caiafa, C., and **Pestilli, F.** (2015) Sparse multiway decomposition for analysis and modeling of diffusion imaging and tractography. <http://arxiv.org/abs/1505.07170>
8. Zheng, C., **Pestilli, F.**, and Rokem, A. (2014) Deconvolution of High Dimensional Mixtures via Boosting, with Application to Diffusion-Weighted MRI of Human Brain. *Neural Information Processing Systems (NIPS)*.
9. Zheng, C., **Pestilli, F.**, and Rokem, A. (2014) Quantifying error in estimates of human brain fiber directions using Earth Mover’s Distance. *arXiv:1411.5271. (NIPS – Workshop.)*

Fellowships, Honors and Awards

Awards

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| 2017 | Fellow Psychonomics Society |
| 2016 | Janet Taylor Spence Award for Transformative Early Career Achievements
Association for Psychological Science. |
| 2016 | Fellow Association for Psychological Science |
| 2016 | Japanese Society for Neuroscience, Early Career Travel Award. |
| 2016 | Exceptional Reviewer Recognition. <i>Journal of Vision</i> .
The Association for Research in Vision and Ophthalmology http://dx.doi.org/10.1167/16.8.r |
| 2016 | IU Nomination for the Blavatnik Award (only one nominee yearly for Indiana University). |

Fellowships

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|------|---|
| 2019 | Microsoft Faculty Fellowship (15 selected world-wide, the only awardee not in CS nor in Eng). |
| 2017 | Fondazione Bruno Kessler, University of Trento, ITALY. |
| 2012 | Department of Computer Science, University of Verona, ITALY. |
| 2011 | Postdoctoral Fellowship, Japanese Society for the Promotion of Science (JSPS), RIKEN, Japan. |
| 2009 | Fellowship, Italian Academy for Advanced Studies, Columbia University, NY. |
| 2008 | Computational Neuroscience: Vision – Cold Spring Harbor Laboratory, NY. |

- 2006 Summer School of Visual Neuroscience – University of Gießen, GERMANY
2002–2006 MacCracken Fellowship, Graduate School of arts and Sciences, New York University, NY.
2001 Graduate Exchange Program, University of Rome La Sapienza, ITALY.
1999 Undergraduate Exchange Program, University of Rome La Sapienza, ITALY.
1999 European Union Students Exchange Program, University of Rome, ITALY.
1998 Master Thesis National Agency for New Technologies, Energy and the Environment, ITALY.

Honors

- 2000 *Summa cum laude*, University of Rome La Sapienza, ITALY.

Travel grants

- 2015 National Academy of Sciences, Sackler Colloquium, Washington, D.C., USA.
2008, 2009 Columbia University, Department of Neuroscience.
2009 Conference on Cognitive and Neural Systems, Boston University, MA.
2005 European Conference of Visual Perception, Arezzo, ITALY.
2003, 2007 Graduate School of Arts and Sciences, New York University, NY.

Research grants

Active.

Title: Advancing science and education via a human-AI cooperation on data, analyses and publications.

Source: *Faculty Investigator Fellowship, Microsoft Corporation.*

Location: Indiana University.

Total Award Amount: \$200,000

Dates: 01/01/20-12/31/2021

PI F. Pestilli.

Title: A personalized approach to predicting long term neuro-psychiatric outcomes in TBI.

Source: *U.S. Department of Defense (special program BIG DATA).*

Location: Indiana University.

Total Award Amount: \$750,000

Dates: 08/01/20-07/30/2022

PI N. Port, co-PI I. F. Pestilli.

Title: BD Hubs: Collaborative Proposal: Midwest: Midwest Big Data Hub: Building Communities to Harness the Data Revolution.

Source: *National Science Foundation (special program BIG DATA).*

Location: Indiana University.

Total Award Amount: \$339,997

Dates: 06/01/19-05/31/2023

PI F. Pestilli. co-PI I. Kouper, V. Pentchev (Indiana University).

Title: CRCNS US-German Data Sharing Proposal: DataLad - a decentralized system for integrated discovery, management, and publication of digital objects of science

Source: *National Science Foundation*

Location: Indiana University.

Total Award Amount \$152,802 to Pestilli

PI F. Pestilli. (PI Y. Halchenko (Dartmouth) M. Hanke (Jülich, Germany).

Title: CRCNS US-France Data Sharing Proposal: Collaborative: Advancing neuroscientific discovery and training by lowering the barrier of entry to network neuroscience via open science

Source: *National Institute of Health (R01 NIBIB)*

Location: Indiana University

Total Award Amount: \$446,021

PI R. Betzel. Co-I F. Pestilli, D. Bassett (University of Pennsylvania), M. Vico-Fallani (Marseille, France).

Title: NCS-FO: Connectome mapping algorithms with application to community services for big data neuroscience.
Source: *National Science Foundation (special program The BRAIN Initiative)*.
Location: Indiana University.
Total Award Amount: \$650,000
Dates: 09/01/17-08/31/2020
PI F. Pestilli, co-PI E. Garyfallidis, R. Herschel (Indiana University), Ivo Dinov (University of Michigan), Lei Wang (Northwestern University).

Title: Brain-Life.org: A public platform for reproducible biomedical science imaging.
Source: *XSEDE Allocation, National Science Foundation (passthrough)*.
Location: Indiana University.
Total Award Amount (in credits): \$617,039
Dates: 2018/01/01-12/31
PI F. Pestilli.

Title: Workshop on Learning in Humans and Machines.
Source: *Association for Psychological Science & Psychonomics Society (Estes Fund for Teaching and Education)*.
Total Award: \$20,000
Dates: 12/01/17-05/30/2018
PI Pestilli F., co-PI Smith, L., Goldstone, R.

Title: Learning: Brains, Machines and Children
Source: *Indiana University, Area of emerging research*.
Total Award: \$3,000,000
Dates: 05/01/17-04/30/2020
PI Smith, L., co-PI Sporns, O., Crandall, D., White, M., James, K., Goldstone, R., Landy, D., Pestilli, F.

Title: Advanced Computational Neuroscience Network (ACNN).
Source: *National Science Foundation (Special Program for Big Data)*
Location: Collaborative Proposal. U. Michigan, Indiana, Northwestern, Ohio State, Case Western University
Total Award Amount: \$332,000
Dates: 09/01/16-08/31/20
PI F. Pestilli, co-PI O. Sporns, A. Saykin, (Indiana University), Lei Wang (Northwestern University, IL).

Trainees grants and Awards

Title: Sharon Stephens Brehm Excellence in Neuroscience Award.
Source: *Indiana University*.
Dates: 2020
PI: Ricardo Stuck (IU Undergraduate). Mentor: F. Pestilli.

Title: Cloud computing to advance big data neuroscience research.
Source: *Microsoft Research. Postdoctoral Fellowship*.
Location: Indiana University.
Dates: 2019.
PI: Josiah Leong. Mentor: F. Pestilli.

Title: Travel Scholarship for Women in Science.
Source: *Indiana University*.
Location: MICCAI 2018, Granada, SPAIN.
Dates: Summer 2018
PI: Lindsey Kitchell. Mentor: F. Pestilli.

Title: Research Undergraduate Experience (RUE).
Source: *National Science Foundation*.
Location: Indiana University.
Dates: Summer 2017
PI: Aman Arya (University of Washington Undergraduate). Mentor. F. Pestilli.

Title: Research Undergraduate Experience (RUE).
Source: *National Science Foundation*.
Location: Indiana University.
Dates: Summer 2017
PI: Stephen O'Riley (High-school Student, currently IU Undergraduate). Mentor. F. Pestilli.

Title: Summer Research Grant.
Source: *Hutton Honors College*.
Location: Indiana University.
Dates: Summer 2016
PI: Shiloh Cooper (IU Undergraduate). Mentor. F. Pestilli.

Title: Summer *STARS Scholarship*.
Source: Indiana University.
Location: Indiana University.
Dates: Summer 2016
PI: Ian Chavez (IU Undergraduate). Mentor. F. Pestilli.

Open science, data science projects

Brain anatomy, white matter and connections

brainlife.io Open platform for data, algorithms with seamless deployment on cloud systems and high-performance clusters for collaborative reproducible research. brainlife.io | github.com/brainlife | hub.docker.com/u/brainlife

The Brain Imaging Data Structure | <https://bids.neuroimaging.io> | <https://github.com/bids-standard/bids-bep016>

ENCODE Technology for representing brain connectomes.
github.com/brain-life/encode

LiFE Technology for mapping, evaluation and statistical inference in human connectomes.
<https://francopestilli.github.io/life>

MBA Code to generate accurate and reproducible brain anatomy images.
<https://github.com/francopestilli/mba>

LiFE_scripts Code for sharing scientific methods and knowledge on brain mapping.
https://github.com/francopestilli/life_scripts

Brain function, activity and behavior

VISTASOFT Code for brain mapping and analysis of Diffusion and BOLD imaging.
<https://github.com/francopestilli/vistasoft>

mrTools Code for analysis of brain activity and behavior.
<http://gru.stanford.edu/doku.php/mrTools/overview>

MGL Code for measuring human behavior and designing experimental protocols.
<http://gru.stanford.edu/doku.php/mgl/overview>

Mentoring

Laboratory alumni

1. Josiah Leong, Postdoc, Indiana University, 2019-2020, *Assistant Professor* University of Arkansas (Summer 2020).
2. Cesar Caiafa, Postdoc, Indiana University, 2016-2018, *Assistant Professor* University of Buenos Aires.
3. Yiming Qian, Undergraduate assistant, Indiana University, 2017-2018, *PhD student* Pennsylvania State University.
4. Shiloh Cooper, Undergraduate assistant, Indiana University, 2016-2017, *PhD student* Northwestern University.
5. Andrew Patterson, Undergraduate assistant, Indiana University, 2016-2017, *PhD student* University of Alberta.

6. Aman Arya Undergraduate assistant 2016-2017, *Masters student* Georgia Tech, *Employee* Amazon, Inc.
7. Stephen O'Riley, Undergraduate assistant 2016-2018, *Employee* PSI Services.

Postdoctoral researchers at Indiana University

- 2019 – Sophia Vinci-Booher, *Ph.D. from Indiana University.*
 2019 – Sandra Hanekamp, *Ph.D. from The University of Groeningen*
 2019 – 2020 Josiah Leong, *Ph.D. from Stanford University.*
 2016 – 2018 Cesar Caiafa.

PhD students at Indiana University

- 2016-current Bradley Caron.
 Indiana University, Department of Psychological and Brain Sciences, IN.
Awarded 2017 NSF Predoctoral Honorary Mention in the Pestilli Lab
- 2015-current Daniel Bullock.
 Indiana University, Department of Psychological and Brain Sciences, IN.
- 2015-current Brent McPherson.
 Indiana University, Department of Psychological and Brain Sciences, IN.
- 2017-2019 Lindsey Ketchell.
 Indiana University, Program in Cognitive Science, IN.
Commendation for outstanding performance on Ph.D. qualifying examinations
IUB Provost's Travel Award for Women in Science
IU Center of Excellence for Women in Technology Poster Competition
- 2015-2016 Samantha Faber.
 Indiana University, Department of Psychological and Brain Sciences, IN.
Awarded 2016 NSF Predoctoral Honorary Mention in the Pestilli Lab.

Undergraduate students at Indiana University

- 2018-20 Ricardo Stuck, Neuroscience, Indiana University.
Prospective Medical Student, Army ROTC, IU Varsity Athlete
- 2018-20 David Hunt, Neuroscience and Math, Indiana University.
- 2017-18 Yiming Qian, Psychology and Education, Indiana University.
- 2015-17 Shiloh Cooper, Neuroscience and Cognitive Science, Indiana University.
2016 Hutton Honors College Research Grant.
- 2017 Aman Arya, Mathematics, University of Washington.
Awarded, NSF, RUE at Indiana University.
- 2017-18 Stephen O'Riley, Computer Science, Indiana University.
Awarded, NSF RUE at Indiana University.
- 2016-17 Andrew Patterson, Computer Science, Indiana University.
- 2016 Ian Chavez, Psychology Major, Indiana University.
Awarded Summer 2016 STARS Fellowship (\$5,000).
Awarded McNair Research Program Fall 2016
- 2015-2017 Jack Zhang.
Cox Scholar, Cognitive Science, Indiana University.
- 2015 Samuel Pilgrim, Fall 2015, Mathematics and Cognitive Science, Indiana University.

Undergraduate, graduate students and postdocs that visited the Pestilli Lab at Indiana University

- 2019-2020 Jasleen Jolly, Graduate student, Oxford University, U.K.
 2017-2020 Giulia Berto, Graduate student, University of Trento, Italy.
 2016-2020 Ilaria Sani, Postdoc, Rockefeller University, NY.
 2016-2020 Robert Punzniak, Graduate student, University of Magdeburg, Germany.
 2016-2017 Shashank Gugnani, Graduate Student, Computer Science, Ohio State University
 2015-2018 Sandra Hanekamp, Graduate student, University of Groningen, The Netherlands
 2015 Julien Möhlen, Undergraduate student, Oxford University, Oxford, UK.

Other graduate students and postdocs mentored

2017	Shashank Gugnani,	Graduate student, Computer Science, Ohio State University, OH
2017-2018	Vineet Raichur,	Postdoc, Psychology, University of Michigan, MI
2014-2017	Tanya Glozman,	Graduate student, Electrical Engineering, Stanford University, CA.
2014	Josiah Leong,	Graduate student, Psychology, Stanford University, CA.
2012-2014	Hiromasa Takemura,	Postdoc, Psychology, Stanford University, CA.
2013-2014	Sara Aijna,	Medical Student, Oxford University, UK
2013-2014	Charles Zheng,	Graduate Student, Statistics, Stanford University, CA.
2013-2014	Jesse Gomez	Graduate Student, Neuroscience, Stanford University, CA.
2013-2014	Brian Allen	Graduate Student, Psychology, University of Wisconsin Madison, WI.
2010	Goldbarg Saber,	Graduate Student, Neuroscience, New York University, NY.

Teaching

Instructor in rank of Associate Professor at The University of Texas at Austin

2020 Fall Laboratory in Cognitive and Computational Neuroscience (Graduate and Undergraduate), PSY341K

Instructor in rank of Associate Professor at Indiana University

2020 Spring Laboratory in Cognitive Neuroscience (Undergraduate), P457

2020 Spring Introduction to Neuroscience – section on Neuroanatomy (graduate), N501

Instructor in rank of Assistant Professor at Indiana University

2019 Spring Cognitive Psychology (Undergraduate), P335

2019 Spring Introduction to Neuroscience – section on Neuroanatomy (graduate), N501

2018 Fall Cognitive Psychology (Undergraduate), P335

2018 Spring Cognitive Psychology (Undergraduate), P335

2017 Fall Cognitive Psychology (Undergraduate), P335

2017 Spring The new digital neuroanatomy. P657 github.com/francopestilli/pestilli-teaching-2017.

2016 Fall Cognitive Psychology (Undergraduate), P335

2016 Spring Statistics techniques, K310 github.com/francopestilli/stats-k310

2015 Fall Cognitive Psychology (Undergraduate), P335

2015 Spring Statistics techniques (Undergraduate), K310 github.com/francopestilli/stats-k310

Instructor prior to Indiana University

2012 Statistics and data analysis in MatLab (Graduate), talks.stanford.edu/psych-216a

Stanford University, Department of Psychology, CA. Course: co-Instructors: J. Yeatman, K.Kay.

2002 Introduction to Psychology (Undergraduate).

Hunter College, City University of New York, Department of Psychology, NY.

2002 Cognitive Processes (Undergraduate).

Hunter College, City University of New York, Department of Psychology, NY.

Guest Lecturer

2017 Network Neuroscience

Indiana University, Cognitive Science Program, IN. Instructor: O. Sporns.

2015, 2016 Cognitive Science

Indiana University, Cognitive Science Program, IN. Instructor: P. Todd.

2013 Perception

Stanford University, Department of Psychology, CA. Instructor: K. Grill-Spector.

2012 Cognitive Neuroscience

Stanford University, Department of Psychology, CA. Instructor: S. McClure, Ph.D.

2010 Magnetic Resonance Imaging

Columbia University, Department of Radiology, NY. Instructor: J. Hirsch, Ph.D.

2009 Seminar in Attention and Awareness

Columbia University, Department of Psychology, NY. Instructor: H. Lau, Ph.D.

Teaching Assistant prior to Indiana University

- 2006 Laboratory in Perception New York University, Department of Psychology, NY. Instructor: D. Pelli.
- 2004 Perception New York University, Department of Psychology, NY. Instructor: D. Heeger.
- 2003 Introduction to Psychology New York University, Department of Psychology, NY. Instructor: Phelps.

Scientific and academic service

Editorial Board Member

- Scientific Data (*Nature Publishing Group*) Editor Andrew Hufton.
- Scientific Reports (*Nature Publishing Group*) Editor Richard White
- Brain Structure and Function (*Springer*) Editors Karl Zilles and Laszlo Zaborszky.

Previous

- 2016-2019 Cognitive Processing (*Springer*) Editor M. Olivetti-Belardinelli.

Guest or Acting Editor

- Started 2018 PNAS Proceedings of the National Academy of Science.
- Started 2018 Nature Scientific Data.
- 2016-2018 Cognitive Processing.

Scientific reviewer

- PNAS Proceedings of the National Academy of Science
- Nature Neuroscience
- Nature Methods
- Nature Communications
- Nature Scientific Reports
- Nature Scientific Data
- Journal of Neuroscience
- Cerebral Cortex
- PLoS Biology
- PLoS Computational Biology
- Brain Structure and Function
- Human Brain Mapping
- Journal of Alzheimer Disease
- Brain Imaging and Behavior
- Journal of Vision
- Vision Research
- Frontiers in Human Neuroscience
- Visual Neuroscience
- Neuroscience and Neuroeconomics
- Journal of Cognitive Psychology
- Neuroscience
- Investigative Ophthalmology & Visual Science
- NIPS (Neural Information processing systems)
- Journal of Magnetic Resonance Imaging
- Neuroimage
- Transaction in Medical Imaging
- Attention Perception and Psychophysics

Grant reviewer

- 2020 The National Institute of Mental Health (NIH). *BRAIN Initiative Panel member.*
- 2019 The National Science Foundation (NSF). *NSF Panel member.*
- 2018 The National Science Foundation (NSF). *NSF Panel member.*
- 2018 The National Science Foundation (NSF) *Ad-hoc reviewer.*
- 2016 The National Science Foundation (NSF) Information and intelligent systems (IIS). *Ad-hoc reviewer.*
- 2015-2019 European Research Council - ERC Advanced Grants. *Ad-hoc reviewer.*
- 2015, 2016, 2017, 2018 The Italian National Institute of Health (Ministero della Sanita). *Ad-hoc reviewer.*
- 2015, 2016 Israeli Science Foundation 2015-present). *Ad-hoc reviewer.*

Prizes and Awards Reviewer

- 2019, 2019 The Association for Psychological Science (APS). APS Rising Stars Selection Committee member.

University level service

- 2018-current Indiana University Program in Neuroscience (PNS) Executive Board Member.

- 2018-current Indiana University Network science Institute (IUNI) Advisory Board Member.
- 2015-2017 Indiana University Neuroimaging Center Database Management System. nims.uits.iu.edu
- 2016, 2018 IU Hutton Honors College Selection for Undergraduate Awards (Rhodes, Mitchell scholarships). Selected 2016 Rhodes Scholar Morgan Mohr honorsandawards.iu.edu/search-awards/honoree.shtml?honoreeID=8041

Department level service: Psychological and Brain

- 2016-2020 PBS Space Committee.
- 2017 PBS Ad Hoc member POSTCOM Committee for PBS Faculty Retreat.
- 2015, 2016, 2017 and 2018 PBS Technological Advisory Committee.
- 2017 EAR Search Committee (*Successful hire of Richard Betzel as IU faculty*).
- 2018 PBS Diversity hire for Social Psychology (*Successful hire of Amanda Diekman and Kurt Hugenberg as IU faculty*).

Scientific meetings organizer

2020

- *NSF Workshop on Big Data Neuroscience*
Virtual Meeting, September 3 http://neurosciencenetwork.org/ACNN_Workshop_2020.html
- *Association for Psychological Science 32nd Annual Convention (Program Committee)*
May 19-20, 2020, Chicago, IL. <https://www.psychologicalscience.org/conventions/annual> (CANCELLED)

2019

- *NSF Workshop on Big Data Neuroscience*
Ann Arbor, MI, September 19-20 http://neurosciencenetwork.org/ACNN_Workshop_2019.html

2018

- *BrainHack Global*, Bloomington, IN, May 2-4 <https://brainhack.sice.indiana.edu>
- *APS Workshop on Learning Human and Machines*
Bloomington, IN, May 14-15 <http://www.indiana.edu/~earbmc/LIHAM/>
- *Midwest Cognitive Science Conference*,
Bloomington, IN, May 11-13 <http://www.indiana.edu/~pcl/mwcoisci>
- *NSF Workshop on Big Data Neuroscience*
Cleveland, OH, September 7-9 neurosciencenetwork.org/ACNN_Workshop_2018.html

2017

- *NSF Workshop on Big Data Neuroscience*
Bloomington, IN, September 5-6 neurosciencenetwork.org/ACNN_Workshop_2017.html
- *BrainHack Global*, Bloomington, IN,
<https://www.soic.indiana.edu/news/story.html?story=IU-ISE-set-to-host-Brainhack-Global-Bloomington>

2016

- *NSF Workshop on Big Data Neuroscience*
Ann Arbor, MI, September neurosciencenetwork.org/ACNN_Workshop_2016.html
- *Vision Social Chair, Society for Neuroscience San Diego.*
- *Advances in computational neuroanatomy: Symposium held at Annual meeting of the Japanese Society for Neuroscience Yokohama, JAPAN, July.*

2015

- *Linking behavior to cortical activity: Symposium at the Annual meeting of the Vision Science Society, St. Pete, FL, May.*

2014

- *The visual white-matter matters: Symposium at the Annual meeting of the Vision Science Society, St. Pete, FL, May.*
- *Neurotechniques: New Approaches to Understanding Mind, Brain and Behavior.*
Italian Academy for Advanced Studies, Columbia University, NY.
http://www.italianacademy.columbia.edu/events_calendar.html
- *Vision Lunch:* Department of Psychology, Stanford University, Stanford, CA.

http://vistalab.stanford.edu/newIm/index.php/Vision_Lunch

Professional affiliations and international working groups

- Global Brain Consortium <https://globalbrainconsortium.org/>
- International Brain Initiative <http://www.internationalbraininitiative.org/>
- Organization for Human Brain Mapping.
- The Society for Neuroscience.
- The Vision Sciences Society.
- The International Society for Magnetic Resonance in Medicine (ISMRM).
- Association for Psychological Society (APS).
- The Psychonomics Society

Student representative

- 2009-2011 Program in Cognition & Perception, Department of Psychology, NYU, New York, NY.

Student coordinator

- Organization for Human Brain Mapping, New York, NY (2004).
- First International Workshop on Attention, San Miniato, ITALY (2005).

News and media

My work has been featured several times on the official Indiana University Psychological and Brain Sciences outreach magazine.

<https://magazine.psych.indiana.edu/winter-2017/features/head-in-the-clouds.html>

<http://psych.indiana.edu/update-winter-2015/beyond-average-vision.html>

2020

Microsoft Faculty Fellowship

March 10, 2020 Mentioned in the American Psychological Association Newsletter <https://www.apa.org/pubs/newsletters>

<https://news.iu.edu/stories/2020/02/iub/releases/27-neuroscientist-pestilli-microsoft-investigator-fellowship-cloud-computing.html>

<https://itnews.iu.edu/articles/2020/Pestilli-awarded-200,000-Microsoft-Investigator-Fellowship-.php>

<https://news.iu.edu/stories/2019/06/iub/04-tool-accelerates-brain-research.html>

brainlife.io

<https://www.hpcwire.com/off-the-wire/iu-to-acquire-fastest-university-owned-ai-supercomputer/>

2019

The attentive brain

<http://bpod.mrc.ac.uk/archive/2019/1/23>

Research on big data in healthcare

<https://news.iu.edu/stories/2019/09/iub/releases/20-health-care-industry-payments-medical-providers.html>

2018

Midwest Cognitive Science Conference and Workshop on Learning in Human and Machines

<https://news.iu.edu/stories/2018/05/iub/29-hosts-cutting-edge-conference-at-the-crossroads-of-human-and-machine-learning.html>

Human brain shape analysis on supercomputers

<https://itnews.iu.edu/articles/2018/IU%20PhD%20student%20set%20to%20understand%20the%20shape%20of%20human>

n%20white%20matter%20through%20high-performance%20computing.php

BrainHack Global Event

<https://news.iu.edu/stories/2018/05/iub/01-brainhack-global-conference.html>

Sports related brain research

http://www.thehoosiertopics.com/news/2018-05-02/Front_Page/Brain_differences_in_contact_vs_noncontact_sports.html

<https://www.technologynetworks.com/neuroscience/news/brain-differences-found-in-athletes-playing-contact-vs-noncontact-sports-299489>

<https://news.iu.edu/stories/2018/04/iub/releases/05-brain-differences-in-athletes-playing-contact-vs-noncontact-sports.html>

2017

NSF BRAIN Initiative Award

https://www.nsf.gov/news/special_reports/brain/initiative/

<https://news.iu.edu/stories/2017/08/iub/10-science-brain-initiative.html>

<https://www.psychologicalscience.org/policy/nsf-program-awards-1-million-in-research-grants-to-two-psychological-scientists.html>

https://www.eurekalert.org/pub_releases/2017-08/nsf-nfn080817.php

Big Data for Psychological and Brain Science

<https://magazine.psych.indiana.edu/features/head-in-the-clouds.html>

Big Data for Psychological and Brain Science

<https://magazine.psych.indiana.edu/features/head-in-the-clouds.html>

Indiana University's University Information Technologies Services and Research Technologies

<https://www.youtube.com/watch?v=lhp1HWPefk8>

Microsoft Research Award

<https://news.iu.edu/stories/2017/06/iub/12-science-azure-awards.html>

<https://www.microsoft.com/en-us/research/blog/nsf-big-data-innovation-hubs-collaboration>

Indiana University Emerging Areas of Research

<http://news.indiana.edu/releases/iu/2017/01/emerging-areas-of-research-award.shtml>

2016

Association for Psychological Science Early Career Award

<http://www.psychologicalscience.org/index.php/publications/observer/2016/may-june-16/aps-janet-taylor-spence-award-for-transformative-early-career-contributions-5.html>

<http://www.idsnews.com/article/2016/02/two-recognized-for-contributions-in-psychology>

<http://news.indiana.edu/releases/iu/2016/01/pestilli-lewis-association-for-psychological-science-honors.shtml>

NSF Big Data Neuroscience Award

https://www.nsf.gov/news/news_summ.jsp?cntn_id=189864

<https://www.hpcwire.com/2016/09/28/nsf-backs-big-data-spokes-10m-grants/>

http://www.ncsa.illinois.edu/news/story/nsf_awards_connect_midwest_big_data_hub_and_scientists_to_solve_regional_ch

Precision brain science

<http://psych.indiana.edu/update/beyond-average-vision.html>

Pebbles Memorial Lecture

<https://www.youtube.com/watch?v=YaUetDHCpHs>

White matter predicts economic decisions

<http://news.stanford.edu/news/2016/january/addiction-brain-connection-010716.html>

Re-discovering A Lost Part of the Brain

<https://academicminute.org/2016/01/franco-pestilli-indiana-university-re-discovering-a-lost-part-of-the-brain>

<https://www.insidehighered.com/audio/2016/01/11/rediscovering-lost-part-brain>

2015

Alzheimer's Disease and Aging (CTSI GLUE grant)

<http://news.medicine.iu.edu/releases/2015/09/indiana-ctsi-glue-awards.shtml>

A major human white matter pathway rediscovered

<http://academicminute.org/2016/01/franco-pestilli-indiana-university-re-discovering-a-lost-part-of-the-brain/>

<http://news.indiana.edu/releases/iu/2015/09/lost-brain.shtml>

<http://www.theguardian.com/science/neurophilosophy/2014/nov/17/major-brain-pathway-rediscovered>

<http://news.stanford.edu/news/2014/november/mystery-brain-imaging-112014.html>

White matter pathways dedicated to human face recognition

<http://news.stanford.edu/news/2015/january/face-blind-brain-013015.html>

Indiana University Faculty spotlight

<http://inside.indiana.edu/spotlights-profiles/faculty-staff/2015-08-19-new-faculty.shtml>

2014

Stanford University news: New technology to map the human connectome

<http://news.stanford.edu/news/2014/september/brain-communicate-wandell-091014.html>

<http://medicalxpress.com/news/2014-09-scientists-white-human-brain.html>

<http://neurosciencenews.com/white-matter-brain-mapping-technology-1316>

References

Olaf Sporns,	Indiana University,	+1 (812) 855-2772,	osporns@indiana.edu
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Linda Smith,	-	+1 (812) 855-6052,	smith4@indiana.edu
Jason Gold,	-	+1 (812) 855-4635,	jgold@indiana.edu
Robert Goldstone,	-	+1 (812) 855-4853,	rgoldsto@indiana.edu
Katy Börner,	-	+1 (812) 855-3256,	katy@indiana.edu
Craig Stewart,	-	+1 (812) 829-4185,	stewart@iu.edu
Aina Puce,	-	+1 (812) 856-0417,	ainapuce@indiana.edu
Brian Wandell,	Stanford University,	+1 (650) 725 2466,	wandell@stanford.edu
Justin Gardner,	-	+1 (650) 725-2417,	jlg@stanford.edu
Kalanit Grill-Spector,	-	+1 (212) 998 7868,	kalanit@stanford.edu
Vincent Ferrera,	Columbia University,	+1 (212) 543 6931, Ext. 303,	vpf3@columbia.edu
Michael Goldberg,	-	+1 (212) 543 6931, Ext. 301,	meg2008@columbia.edu
Marisa Carrasco,	New York University,	+1 (212) 998 3828,	marisa.carrasco@nyu.edu
David Heeger,	-	+1 (212) 998 7868,	david.heeger@nyu.edu
Anthony Movshon,	-	+1 (212) 998-7880,	movshon@nyu.edu

Extra academic

2011-2014 Stanford University Alpine Club

2009-2010 Member, Columbia University Cycling Club

Franco Pestilli Curriculum Vitae 2020

2001 Consultant ATEL, a boutique Information Technology consulting firm based in ITALY.
1994 Finalist Track and Field, European Team Championships, Warsaw, Poland (4th position),
1991-1994 Gold Medalist Track & Field and Cross-country Nationals, ITALY.