Daniel Yasumasa Takahashi
Brain Institute
Federal University of Rio Grande do Norte
(Jun 2023)

Personal Information

Address	Instituto do Cérebro, UFRN, Natal, RN -Brazil
Email	takahashiyd@gmail.com, takahashiyd@neuro.ufrn.br
Website	https://ethogenesis.science/

Positions held

2019 – Assistant Professor
Brain Institute
Federal University of Rio Grande do Norte, Natal, RN Brazil

2015 – 2019 Associate Research Scholar
Princeton Neuroscience Institute
Princeton University, Princeton, NJ USA

2010 – 2015 Postdoctoral Research Fellow
Princeton Neuroscience Institute
Princeton University, Princeton, NJ USA

2009 - 2010 Postdoctoral Research Fellow
Institute of Mathematics and Statistics
Universidade de São Paulo, USP, São Paulo, Brazil

2009 - 2009 Postdoctoral Research Fellow
Instituto de Matemática Pura e Aplicada, IMPA, São Paulo, Brazil

Education

2004 - 2009 PhD in Bioinformatics (Theoretical Neuroscience)
Universidade de São Paulo, USP, Sao Paulo, Brazil
Universidade de São Paulo
Thesis: Measures of information flow in neuroscience (advisors: Koichi Sameshima and Luiz Antonio Baccalá)

2004 - 2008	BSc in Applied Mathematics Universidade de São Paulo, USP, Sao Paulo, Brazil Senior thesis: Schwartz kernel theorem (advisor: Paulo Domingos Cordaro)
1998 - 2003	MD Universidade de São Paulo, USP, Sao Paulo, Brazil Graduation thesis: Applying artificial neural network in the diagnosis of Alzheimer's disease (advisor: Koichi Sameshima)

Honors and Awards

2018	Young Investigator Award from Brazilian Association of Bioinformatics and Computation Biology
2018	Cosyne travel award
2010-2012	Pew Latin American Fellowship
2009-2010	FAPESP Fellowship
2007	Travel Grant Award - 10th Tamagawa-Riken Dynamic Brain Forum
2006	Best Work Award - I Latin American School on Computational Neuroscience
2004-2008	CAPES Fellowship
2002	Oswaldo Cruz Award in medical research – Honorable mention
1998-2003	CNPq Fellowship
1997	Bronze medal – Brazilian Mathematical Olympiad

In the media

My research findings were covered by several national and international news media:
BBC News, BBC World Service Science in Action Radio, National Geographic News Watch, Daily Mail UK, Decoded Science, The Independent, Wired, io9, Science, Nature, National Public Radio, Deutschlandfunk, Science News, Journal da FAPESP, Estadão.

Invited talks

2023 –UFABC Mathematics seminar, São Paulo, *Brazil*
2022 – ESI Systems Neuroscience Conference - The ever-changing brain: Through development and evolution, Frankfurt, *Germany*
2022 – Gordon Research Conferences – Neural Mechanism of Acoustic Communication, Massachusetts, *USA*
2022 – CSHL Genetics & Neurobiology of Language, New York, *USA*
2021 – Connecting Brain Lecture Series (Max Planck Institute for Brain Research), *webinar*
2021 – XLIX Escola de Verão em Matemática da UnB, *webinar*

2020 - Seminário de Psicobiologia da UFRN, *webinar*
2020 - Seminar on Probability and Stochastic Process IME-USP, *webinar*
2020 - Probability Webinar IM-UFRJ, *webinar*
2020 - Mathematics and Neurobiology Intertwined, *webinar*
2020 - Dias Probabilísticos no Fundão, UFRJ, Rio de Janeiro, *Brazil*
2019 - ICe House Symposium, UFRN, Natal, *Brazil*
2019 - Brain Institute Seminar, UFRN, Natal, *Brazil*
2019 – Simpósio de Psicobiologia, Natal, *Brazil*
2019 - Neurocolloquium, Tübingen, *Germany*
2019 - InDiQ, Université Paris-Saclay, Orsay, *France*
2019 - LLR seminar, École Polytechnique, Palaiseau, *France*
2019 - Pararel Decision Processing seminar, Princeton University, Princeton, *USA*
2019 - Presidential seminar on Society and Neuroscience, Columbia University, New York, *USA*
2019 - Princeton Neuroscience in-house Seminar, Princeton University, Princeton, *USA*
2018 - Society for Neuroscience Annual Meeting, San Diego, *USA*
2018 - X-meeting 2018, São Paulo, *Brazil*
2018 - Fifty Years of Thermodynamic Formalism, Leiden, *Netherland*
2018 - International Congress of Neuroethology, Brisbane, *Australia*
2018 – Université Paris-Sud, Orsay, *France*
2018 – IMEC, Leuven, *Belgium*
2018 – Psychology Department, Indiana University, Bloomington, *USA*
2018 – LASCON, University of São Paulo, *Brazil*
2017 – SciBr, Boston University, Boston, *USA*
2016 – Marmoset Conference, Tokyo, *Japan*
2016 – Department of Life Sciences, University of Tokyo, Tokyo, *Japan*
2016 – Physics Department, Universidad Autónoma de San Luis Potosí, San Luis Potosí, *Mexico*
2016 – Riken Brain Science Institute, Saitama, *Japan*
2016 – International Congress of Psychology, Yokohama, *Japan*
2016 - Workshop on Evo-Devo of Vocal Learning and Plasticity, Tokyo, *Japan*
2016 - Second Neuromat Workshop, São Paulo, *Brazil*
2016 - Friedrich Miescher Institute for Biomedical Research, Basel, *Switzerland*
2016 – Neuroscience and Social Decision Seminar, Princeton University, *USA*
2015 – Institute of Mathematical Sciences and Computation, USP São Carlos, São Paulo, *Brazil*
2015 – Workshop on Stochastic chains, Hitting Times, Return Times, Long Range Dependence, UFSCAR, São Paulo, *Brazil*
2014 - First Neuromat Workshop, São Paulo, *Brazil*
2014 - Neuroscience and Social Decision Seminar, Princeton University, *USA*
2013 – Workshop on Statistical Methods for Neuronal Data, Paris, *France*
2013 – Department of Mathematics, Laboratoire J.A. Dieudonné, Université de Nice, Nice, *France*
2012 - Annual Meeting of the Pew Biomedical Sciences Programs, Panama, *Panama*
2012 – BRhyCoCo, New York University, *USA*
2012 – IBRG meeting, Princeton University, *USA*
2011 – Workshop on Chains and Systems with Interactions of Variable Range, São Paulo, *Brazil*
2011 – NUMEC Workshop, São Paulo, *Brazil*
2010 – Department of Mathematics, Universidade Federal do Rio de Janeiro, Rio de Janeiro, *Brazil*
2010 – Instituto de Matemática Pura e Aplicada (IMPA), Rio de Janeiro, *Brazil*
2009 - Jorma's Razor I, São Paulo, *Brazil*

2009 – NUMEC Workshop, São Paulo, *Brazil*
2009 – Department of Mathematics, Universitá degli Roma Tre, Rome, *Itali*
2008 – International Brain Research Organization (IBRO)/LARC Conference, Rio de Janeiro, *Brazil*
2006 – CONICYT-INSERM Workshop "Networks in Cognitive Systems", Complex System Institute, Valparaiso, *Chile*

Reviewer

Ad hoc reviewer for National Science Foundation (NSF)
Ad hoc reviewer for Leakey Foundation Research Grant
Ad hoc reviewer for scientific journals: Science, Nature Communication, Current Biology, Plos Biology, Plos Computational Biology, Animal Behaviour, Open Biology, Biology Letters, IEEE Transactions on Biomedical Engineering, Entropy, Frontiers in Psychology, Scientific Report, Biology Direct, Plos One, Frontiers in Neuroscience, Games, Entropy, Journal of Experimental Biology, Royal Society Open Science, American Journal of Primatology, BMC Biology

Articles

Google scholar = https://scholar.google.com/citations?user=DyIxrZUAAAAJ&hl=en

Vocal communication

Zhang YS, **Takahashi DY**, El Hady A, Ghazanfar AA (2022)
Active neural coordination of motor behaviors with internal states.
PNAS, 119 e2201194119

Narayanan DZ, **Takahashi DY**[#], Kelly LM, Hlavaty SI, Huang J, Ghazanfar AA[#] (2022)
Prenatal development of neonatal vocalizations.
eLife **11**:e78485.

Varella TT, Zhang YS, **Takahashi DY**[#], & Ghazanfar AA[#] (2022).
A mechanism for punctuating equilibria during mammalian vocal development.
PLoS computational biology, *18*(6), e1010173.

Takahashi DY, El Hady A, Zhang YS, Liao DA, Montaldo G, Urban A, Ghazanfar AA (2022)
Social-vocal brain networks in a non-human primate.
bioRxiv 2021.12.01.470701; doi: https://doi.org/10.1101/2021.12.01.470701

Zhang YS, **Takahashi DY**, El Hady A, Liao DA, Ghazanfar AA (2022)
Active neural coordination of motor behaviors with internal states.
bioRxiv 2021.12.10.472142; doi: https://doi.org/10.1101/2021.12.10.472142

Varella TT, Zhang YS, **Takahashi DY**[#], Ghazanfar AA[#] (2022)
A mechanism for punctuating equilibria during mammalian vocal development.
Plos Computational Biology, doi: 10.1371/journal.pcbi.1010173

Sliwa J, Mallet M, Christiaens M, **Takahashi DY** (2022)
Neural basis of multi-sensory communication in primates.
Ethology Ecology & Evolution, v. 34, 322-43.

Ghazanfar AA, Kelly LM, **Takahashi DY**, Winters S, Terret R, Higham JP (2020)
Domestication phenotype linked to vocal behavior in marmoset monkeys.
Current Biology, doi: 10.1016/j.cub.2020.09.049

Zhang YS, **Takahashi DY**, Liao DA, Ghazanfar AA[#] and Elemans CPH[#] (2019)
Vocal state change through laryngeal development.
Nature Communications, 10:4592 doi: 10.1038/s41467-019-12588-6

Gustison ML, Borjon JI, **Takahashi DY**[#], Ghazanfar AA[#] (2019)
Vocal and locomotor coordination develops in association with arousal state.
eLife, e41853, doi: 10.7554/eLife.41853

Ghazanfar AA, Liao DA, **Takahashi DY** (2019)
Volition and learning in primate vocal behavior.
Animal Behaviour, doi: 10.1016/j.anbehav.2019.01.021

Sliwa J, **Takahashi DY**, Shepherd SV (2018)
Mécanismes neuronaux pour la communication chez les primates.
Revue de Primatologie, 9, doi: 10.4000/primatologie.2950

Takahashi DY[#], Liao DA, Ghazanfar AA[#] (2017)
Vocal learning via social reinforcement by infant marmoset monkeys
Current Biology, v. 27, 1844-1852, doi: 10.1016/j.cub.2017.05.004

Teramoto Y, **Takahashi DY**[#], Holmes P[#], Ghazanfar AA[#] (2017)
Vocal development in a Waddington landscape.
eLife, 6:e20782. doi: 10.7554/eLife.20782

Borjon JI, **Takahashi DY**[#], Cervantes DC, Ghazanfar AA[#] (2016)
Arousal dynamics drive vocal production in marmoset monkeys.
Journal of Neurophysiology, v. 116, 753-764.

Takahashi DY, Fenley AR, Ghazanfar AA (2016)
Early development of turn-taking with parents shapes vocal acoustics in infant marmoset monkeys.
Philosophical Transaction of Royal Society B, v. 371, doi: 10.1098/rstb.2015.0370

Takahashi DY[#], Fenley AR, Teramoto, Y, Narayanan DZ, Borjon JI, Holmes P, Ghazanfar AA[#] (2015)

The developmental dynamics of marmoset monkey vocal production.
Science, v. 349, 730-734.

Choi JY, **Takahashi DY**[#], Ghazanfar AA[#] (2015)
Cooperative vocal control in marmoset monkeys via vocal feedback.
Journal of Neurophysiology, v. 114, 274-283.

Ghazanfar AA, **Takahashi DY** (2014)
The evolution of speech: vision, rhythm, cooperation.
Trends in Cognitive Sciences, v. 18, 543-553.

Ghazafar AA, **Takahashi DY** (2014)
Facial expressions and the evolution of the speech rhythm.
Journal of Cognitive Neuroscience, v. 26, 1196-1207

Takahashi DY[#], Narayanan DZ, Ghazanfar AA[#] (2013)
Coupled oscillator dynamics of vocal turn-taking in monkeys.
Current Biology, v. 23, 2162-2168.

Ghazanfar AA, **Takahashi DY**, Mathur NA, Fitch WT (2012)
Cineradiography of monkey lipsmacking reveals the putative origins of speech dynamics.
Current Biology, v. 22, p. 1176-1186.

Stochastic processes

Chazottes J-R, Gallo S, **Takahashi DY** (2022)
Gaussian concentration bounds for stochastic chains of unbounded memory.
Annals of Applied Probability, *in press*

Gallo S, Iacobelli G, Ost G, **Takahashi DY** (2021)
Self-Switching Markov Chains: Emerging dominance phenomena.
Stochastic Processes and their Applications, v. 143, 254-84.

Gallesco C, **Takahashi DY** (2021)
Mixing rates for potentials of non-summable variations.
Ergodic Theory and Dynamical System, doi: 10.1017/etds.2021.65

Gallesco C, Gallo S, **Takahashi DY** (2018)
Dynamic uniqueness for stochastic chains with unbounded memory.
Stochastic Processes and their Applications, doi: 10.1016/j.spa.2017.06.004

Gallo S, **Takahashi DY** (2014)
Attractive regular stochastic chains: perfect simulation and phase transition.
Ergodic Theory and Dynamical System, v. 34, 1567-1586

Gallesco C, Gallo S, **Takahashi DY** (2014)

Explicit estimates in the Bramson-Kalikow model.
Nonlinearity, v. 27, 2281-2296.

Gallo S, Lerasle M, **Takahashi DY** (2013)
Markov approximations of chains of infinite order in the $bar{d}$-metric.
Markov Processes and Related Fields, v. 19, 51-82.

Statistical methods for connectivity analysis - theory

Ost G, **Takahashi DY** (2022)
Sparse Markov Models for High-dimensional Inference.
arXiv preprint arXiv:2202.08007

Baccalá LA, **Takahashi DY**, Sameshima, K (2016)
Directed Transfer function: Unified asymptotic theory and some of its implications.
IEEE Transactions of Biomedical Engineering, v. 63, 2450-2460.

Takahashi DY and Lerasle M (2016)
Sharp oracle inequalities and slope heuristic for specification probabilities estimation in discrete random fields.
Bernoulli, v. 22, 325-344.

Sameshima K, **Takahashi DY**, Baccalá LA (2015)
On statistical performance of Granger-causal connectivity estimators.
Brain informatics, doi: 10.1007/s40708-015-0015-1

Takahashi DY, Galves A, Orlandi E (2015)
Identifying interacting pairs of sites in Ising models on a countable set.
Brazilian Journal of Probability and Statistics, v. 29, 443-459.

Takahashi DY, Baccalá LA, Sameshima K (2014)
Canonical information flow decomposition among neural structure subsets.
Frontiers in Neuroinformatics, doi: 10.3389/fninf.2014.00049 c

Baccalá LA, de Brito CS, **Takahashi DY**, Sameshima K (2013)
Unified asymptotic theory for all partial directed coherence forms.
Philosophical Transactions of the Royal Society A, v. 371, 20120158

Takahashi DY, Lerasle M (2011)
An oracle approach for interaction neighborhood estimation in random fields.
Electronic Journal of Statistics, v. 5, p. 534-571.

Takahashi DY, Baccalá LA, Sameshima K (2010)
Information theoretic interpretation of frequency domain connectivity measures.
Biological Cybernetics, v.103, p. 463-469.

Takahashi DY, Baccalá L, Sameshima K (2008)

Partial directed coherence asymptotics for VAR processes of infinite order.
International Journal of Bioelectromagnetism, v. 10, p. 31-36.

Takahashi DY, Baccalá LA, Sameshima K (2007)
Connectivity Inference via Partial Directed Coherence.
Journal of Applied Statistics, v. 34, p. 1259-1273.

Statistical methods for connectivity analysis – application

Guzman GE, **Takahashi DY**, Fujita A (2022)
A fast parameter estimator for large complex networks.
Journal of Complex Network, v. 10, doi: 10.1093/comnet/cnac022

Raphaldini B, Teruya AS, Raupp CF, Silva-Dias PL, **Takahashi DY** (2021)
Inference of the topology of geomagnetic field multipole interactions.
The European Physical Journal Special Topics, doi: 10.1140/epjs/s11734-021-00201-1

Raphaldini B, Teruya AS, Raupp CF, Silva-Dias PL, **Takahashi DY** (2021)
Information flow between MJO-related waves: a network approach on the wave space.
The European Physical Journal Special Topics, doi: 10.1140/epjs/s11734-021-00170-5

Raphaldini B, Teruya AS, Dias PLS, Massaroppe L, **Takahashi DY** (2020)
Stratospheric ozone and QBO interaction with the tropical troposphere on intraseasonal and interannual time-scales: a wave interaction perspective.
Earth System Dynamics, v.12, p.83-101.

Fujita A, Silva EL, Santos SDS, Bando SY, Soares GE, **Takahashi DY** (2019)
A semi-parametric statistical test to compare complex networks.
Journal of Complex Networks, cnz028, doi:10.1093/comnet/cnz028

Fujita A, **Takahashi DY**, Balardin JB, Vidal MC, Sato JR (2017)
Correlation between graphs with an application to brain network analysis.
Computational Statistics & Data Analysis, v. 109, 76-92

Fujita A, Vidal MC, **Takahashi DY** (2017)
A statistical method to distinguish functional brain networks.
Frontiers in Neuroscience, v. 11, doi:10.3389/fnins.2017.00066

Vidal MC, Sato JR, Balardin JB, **Takahashi DY**, Fujita A (2017)
ANOCVA in R: A Software to Compare Clusters between Groups and Its Application to the Study of Autism Spectrum Disorder.
Frontiers in Neuroscience, v. 11, doi:10.3389/fnins.2017.00016

Fujita A, **Takahashi DY**, Patriota AG, Sato JR (2014)

A non-parametric statistical test to compare clusters with applications in functional magnetic resonance imaging data.
Statistics in Medicine, v. 33, 4949-4962.

Fujita A, **Takahashi DY**, Patriota A (2014)
A non-parametric method to estimate the number of clusters.
Computational Statistics and Data Analysis, v. 73, 27-39.

Santos SS, **Takahashi DY**, Nakata A, Fujita A (2013)
A comparative study of statistical methods used to identify dependencies between gene expression signals.
Briefing in Bioinformatics, v. 15, 906-918.

Sato JR., **Takahashi DY**, Hoexeter, MQ, Massirer KM, Fujita A (2013)
Measuring network's entropy in ADHD: A new approach to investigate neuropsychiatric disorders.
Neuroimage, v. 77, 44-51.

Takahashi DY, Sato JR, Ferreira CE, Fujita A (2012)
Discriminating different classes of biological networks by analyzing the graphs spectra distribution.
PLoS ONE, v. 7(12): e49949. doi:10.1371/journal.pone.0049949

Sato JR , **Takahashi DY**, Arcuri SM, Sameshima K, Morettin PA, Baccalá, LA (2009)
Frequency domain connectivity identification: An application of partial directed coherence in fMRI.
Human Brain Mapping, v. 30, 452-461.

Dzirasa K., Ramsey AJ, **Takahashi DY**, Stapleton J, Potes JM, Williams JK, Gainetdinov RR, Sameshima K, Caron MG, Nicolelis MAL (2009)
Hyperdopaminergia and NMDA Receptor Hypofunction Disrupt Neural Phase Signaling.
The Journal of Neuroscience, v. 29, 8215-8224.

Sato JR, Felix MM, **Takahashi DY**, Amaro Jr E, Brammer MJ, Morettin PA (2006)
A method to produce evolving functional connectivity maps during the course of an fMRI experiment using wavelet based time-varying Granger causality.
NeuroImage, v. 31, 187-196.

Sato JR, **Takahashi DY**, Cardoso EF, Martin MGM, Amaro Jr E, Morettin PA (2006)
Intervention Models in Functional Connectivity Identification Applied to fMRI.
International Journal of Biomedical Imaging, doi: 10.1155/IJBI/2006/27483

Alzheimer disease

Raicher I, Shimizu M, **Takahashi DY**, Nitrini R, Caramelli P (2008)
Alzheimer's disease diagnosis disclosure in Brazil: a survey of specialized physicians' current practice and attitudes.
International Psychogeriatrics, v. 20, 471-481.

Shimizu M, Raicher I, **Takahashi DY**, Caramelli P, Nitrini R (2008)
Disclosure of the diagnosis of Alzheimer's disease: caregivers' opinions in a Brazilian sample.
Arquivos de Neuro-Psiquiatria, v. 66, 625-630.

Raicher I, **Takahashi DY**, Kanda PAM, Nitrini R, Anghinah R (2008)
qEEG spectral peak in Alzheimer's disease: a possible tool for treatment follow-up.
Dementia & neuropsychologia, v. 2, 9-12.

Vittielo AP, Ciriaco JG, **Takahashi DY**, Nitrini R, Caramelli P (2007)
Brief cognitive evaluation of patients attended in a general neurological outpatient clinic.
Arquivos de Neuro-Psiquiatria, v. 65, 299-303.

Nitrini R,Caramelli P, Herrera E, Castro I, Bahia VS, Anghinah R, Caixeta L, Radanovic M, Charchat-Fichman H, Porto CS, Carthery MT, Hartmann APBJ, Huang N, Smid J, Lima P, **Takahashi DY**, Takada LT (2005)
Mortality from dementia in a community-dwelling Brazilian population.
International Journal of Geriatric Psychiatry, v. 20, 247-253.

Nitrini R, Caramelli P, Herrera E, Bahia VS, Caixeta L, Radanovic M, Anghinah R, Charchat-Fichman H, Porto CS, Carthery MT, Hartmann APBJ, Huang N, Smid J, Lima P, Takada LT, **Takahashi DY** (2005)
Incidence of dementia in a community-dwelling Brazilian population.
Alzheimer Disease and Associated Disorders, v. 18, 241-246.

Anghinah R, Caramelli P, **Takahashi DY**, Nitrini R, Sameshima K (2005)
EEG alpha band coherence analysis in healthy adults: preliminary results.
Arquivos de Neuro-Psiquiatria, v. 63, 83-86.

Hartmann APBJ, Almeida SM, Livramento JA, Nitrini R, **Takahashi DY**, Caramelli P (2004)
Hyperphosphorylated tau protein in the cerebrospinal fluid of patients with Alzheimer's disease and other dementias: preliminary findings.
Arquivos de Neuro-Psiquiatria, v. 62, 751-755.

Diagnosis in medicine

Lopes RI, Nogueira L, Albertotti CJ, **Takahashi DY**, Lopes RN (2008)
Comparison of of virtual cystoscopy and transabdominal ultrasonography with conventional cystoscopy for bladder tumor detection.
Journal of Endourology, v. 22, 1725-1729.

Sameshima K, **Takahashi DY**, Baccalá, LA (2005)
Avaliando a complexidade da dinâmica cardiovascular por entropia amostral.
Revista Brasileira de Hipertenção, v. 12, 27-32.

Costa GGO, Ctenas BB, **Takahashi DY**, Mion O, Mello JJF, Butugan O (2005)
Comparação entre a Rinometria Acústica, 'Peak Flow'Nasal Inspiratório e sua Correlação com Sintomas e Sinais Clínicos de Rinite.
Arquivos de Otorrinolaringorologia, v. 9, 203-211.

Book Chapters

Sliwa J, **Takahashi DY**, Shepherd SV (2017)
Neural mechanisms of communication
In: The Wiley Handbook of Evolutionary Neuroscience, ed: Shepherd, Wiley-Blackwell, 444-477

Ghazanfar AA, **Takahashi DY** (2016)
The evo-devo of vocal communication: insights from marmoset monkeys
In: Evolution of nervous systems, ed: Kaas, Academic Press, 317-324

Santos SS, **Takahashi DY**, Sato JR, Ferreira CE, Fujita A (2016)
Statistical Methods in Graphs: Parameter Estimation, Model Selection, and Hypothesis Test
Mathematical Foundations and Applications of Graph Entropy, v. 98, 183-202

Takahashi DY, Baccalá LA, Sameshima K (2014)
Information partial directed coherence
In: Methods in Brain Connectivity Inference through Multivariate Time Series Analysis, ed: Baccalá, Sameshima. CRC Press, 75-86.

Baccalá LA, **Takahashi DY**, Sameshima K (2014)
Asymptotic PDC properties
In: Methods in Brain Connectivity Inference through Multivariate Time Series Analysis, ed: Baccalá, Sameshima, CRC Press, 113-131.

Baccalá LA, **Takahashi DY**, Sameshima K (2006)
Computer intensive testing for the influence between time-series
In: Handbook of Time Series Analysis ed: Wilterhalter; Schelter; Timmer, Springer, 411-435.

Sameshima K, **Takahashi DY** (2004)
Métodos Quantitativos em Medicina
In: Métodos Quantitativos em Medicina ed: Massad, Ortega, Silveira. Manole, v.1, 493-526.

Takahashi DY, Charchat H, Nitrini R, Caramelli P, Sameshima K (2000)
Exploração de redes neurais artificiais no auxílio ao diagnóstico neuropsicológico da doença de Alzheimer.
In: Anais do I congresso de lógica aplicada à tecnologia – LAPTEC 1, Plêiade, v.1, 359-371.

Articles Published in Peer-Reviewed Proceedings

Biazzi RB, Fujita A, **Takahashi DY** (2021)
Predicting soft robot's locomotion fitness.
Proceedings of the Genetic and Evolutionary Computation Conference Companion 2021, 81-82.

Takahashi DY, Narayanan DZ, Ghazanfar AA (2013)
Development of self-monitoring essential for vocal interaction in marmoset monkeys
ICDL-EPIROB Conference, doi: 10.1109/DevLrn.2013.6652553

Takahashi DY, Narayanan DZ, Ghazanfar AA (2013)
A computational model for vocal exchange dynamics and their development in marmoset monkeys
ICDL-EPIROB Conference, doi: 10.1109/DevLrn.2012.6400844

Brito SC, Baccalá LA, **Takahashi DY**, Sameshima K (2010)
Asymptotic behavior of generalized partial directed coherence
IEEE Engineering in Medicine and Biology Society. Conf. , v.1, p.1718 - 1721.

Takahashi DY, Baccalá LA, Sameshima K (2010)
Frequency domain connectivity: an information theoretic perspective
IEEE Engineering in Medicine and Biology Society. Conf. , v.1, p.1726 - 1729.

Baccalá LA, **Takahashi DY**, Sameshima K (2007)
Generalized Partial Directed Coherence
InternationalConference on Digital Signal Processing, v.1. p.162 - 166

Takahashi DY, Charchat H, Caramelli P, Nitrini R, Sameshima K (2000)
Análise da não-linearidade do modelo diagnóstico neuropsicológico da doença de Alzheimer por redes neurais artificiais
Anais do VII congresso brasileiro de informática em saúde

Comments

Takahashi DY (2019)
Vocal learning: shaping by social reinforcement
Current Biology, v.29, R125-R127

Takahashi DY (2018)
Animal communication: chit-chat in meerkats
Current Biology, v.28, R1298-R1300

Takahashi DY, Ghazanfar AA (2014)
Vocal communication is multi-sensorimotor coordination within and between individuals
Behavioral and Brain Sciences, v.37, 572-573.

Research Supports

Current supports

2022-2025 – CNPq DAAD (co-PI)
Complex random networks

2013-2023 –FAPESP 2013/ 07699-0 (collaborator)
Center for Neuromathematics.

Completed supports
2016-2018 - FAPESP 2016/13422-9 (collaborator)
Statistical methods on graphs applied in life science.

2014-2016 – CNPq 462064/2014-0 (collaborator)
Finitary coding and chains of long memory

2012-2014 – USP project (collaborator)
Mathematics, computation, language, and the brain

2012-2014 – CNPq 480108/2012-9 (collaborator)
Stochastic modeling of the brain activity

2008-2009 – FAPESP 2008/08171-0 (PI)
Modeling neuronal population by interactive particle system of variable length interaction