

Lenk, K, Satuvuori, E, Lallouette, J, Ladrón-de-Guevara, A, Berry, H & Hyttinen, JAK 2020, 'A Computational Model of Interactions Between Neuronal and Astrocytic Networks: The Role of Astrocytes in the Stability of the Neuronal Firing Rate', *Frontiers in Computational Neuroscience*, vol. 13, 92. <https://doi.org/10.3389/fncom.2019.00092>

Otterpohl, JR, Emmert-Streib, F & Pawelzik, K 2001, 'A constrained HMM-based approach to the estimation of perceptual switching dynamics in pigeons', *Neurocomputing*, vol. 38-40, pp. 1495-1501. [https://doi.org/10.1016/S0925-2312\(01\)00511-2](https://doi.org/10.1016/S0925-2312(01)00511-2)

Pursiainen, S, Agsten, B, Wagner, S & Wolters, CH 2017, 'Advanced boundary electrode modeling for tES and parallel tES/EEG', *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, vol. 26, no. 1, pp. 37-44. <https://doi.org/10.1109/TNSRE.2017.2748930>

Ylä-Outinen, L, Tanskanen, JMA, Kapucu, FE, Hyysalo, A, Hyttinen, JAK & Narkilahti, S 2019, Advances in Human Stem Cell-Derived Neuronal Cell Culturing and Analysis. in *In Vitro Neuronal Networks: From Culturing Methods to Neuro-Technological Applications*. Advances in Neurobiology, vol. 22, Springer New York LLC, pp. 299-329. [https://doi.org/10.1007/978-3-030-11135-9\\_13](https://doi.org/10.1007/978-3-030-11135-9_13)

Hagman, S, Kolasa, M, Basnyat, P, Helminen, M, Kähönen, M, Dastidar, P, Lehtimäki, T & Elovaara, I 2015, 'Analysis of apoptosis-related genes in patients with clinically isolated syndrome and their association with conversion to multiple sclerosis', *JOURNAL OF NEUROIMMUNOLOGY*, vol. 280, pp. 43-48. <https://doi.org/10.1016/j.jneuroim.2015.02.006>

Chen, K & Zhang, Z 2018, 'A Primal Neural Network for Online Equality-Constrained Quadratic Programming', *Cognitive Computation*, vol. 10, no. 2, pp. 381-388. <https://doi.org/10.1007/s12559-017-9510-4>

Miinalainen, T, Rezaei, A, Us, D, Nüßing, A, Engwer, C, Wolters, CH & Pursiainen, S 2019, 'A realistic, accurate and fast source modeling approach for the EEG forward problem', *NeuroImage*, vol. 184, no. 1, pp. 56-67. <https://doi.org/10.1016/j.neuroimage.2018.08.054>

Pantsar, T, Rissanen, S, Dauch, D, Laitinen, T, Vattulainen, I & Poso, A 2018, 'Assessment of mutation probabilities of KRAS G12 missense mutants and their long-timescale dynamics by atomistic molecular simulations and Markov state modeling', *PLoS Computational Biology*, vol. 14, no. 9, e1006458. <https://doi.org/10.1371/journal.pcbi.1006458>

Ormiskangas, J, Valtonen, O, Kivekäs, I, Dean, M, Poe, D, Järnstedt, J, Lekkala, J, Harju, T, Saarenrinne, P & Rautiainen, M 2020, 'Assessment of PIV performance in validating CFD models from nasal cavity CBCT scans', *Respiratory Physiology and Neurobiology*, vol. 282, 103508. <https://doi.org/10.1016/j.resp.2020.103508>

Tenhunen, M, Hasan, J & Himanen, SL 2015, 'Assessment of respiratory effort during sleep with noninvasive techniques', *Sleep Medicine Reviews*, vol. 24, pp. 103-104. <https://doi.org/10.1016/j.smrv.2015.08.010>

Basnyat, P, Hagman, S, Kolasa, M, Koivisto, K, Verkkoniemi-Ahola, A, Airas, L & Elovaara, I 2015, 'Association between soluble L-selectin and anti-JCV antibodies in natalizumab-treated relapsing-remitting MS patients', *Multiple Sclerosis and Related Disorders*, vol. 4, no. 4, pp. 334-338. <https://doi.org/10.1016/j.msard.2015.06.008>

Klapper, SD, Garg, P, Dagar, S, Lenk, K, Gottmann, K & Nieweg, K 2019, 'Astrocyte lineage cells are essential for functional neuronal differentiation and synapse maturation in human iPSC-derived neural networks', *Glia*, vol. 67, no. 10, pp. 1893-1909. <https://doi.org/10.1002/glia.23666>

Vuorio, J, Vattulainen, I & Martinez-Seara, H 2017, 'Atomistic fingerprint of hyaluronan-CD44 binding', *PLoS Computational Biology*, vol. 13, no. 7, e1005663. <https://doi.org/10.1371/journal.pcbi.1005663>

Nevalainen, O, Auvinen, A, Ansakorpi, H, Raitanen, J & Isojärvi, J 2014, 'Autoimmunity-related immunological serum markers and survival in a tertiary care cohort of adult patients with epilepsy', *EPILEPSY RESEARCH*, vol. 108, no. 9, pp. 1675-1679. <https://doi.org/10.1016/j.epilepsyres.2014.08.014>

Hyppönen, J, Hakala, A, Annala, K, Zhang, H, Peltola, J, Mervaala, E & Kälviäinen, R 2020, 'Automatic assessment of the myoclonus severity from videos recorded according to standardized Unified Myoclonus Rating Scale protocol and using human pose and body movement analysis', *Seizure*, vol. 76, pp. 72-78. <https://doi.org/10.1016/j.seizure.2020.01.014>

Tanskanen, JMA, Kapucu, FE, Vätkki, I & Hyttinen, JAK 2016, Automatic objective thresholding to detect neuronal action potentials. in *Proceedings of 2016 24th European Signal Processing Conference (EUSIPCO)*. pp. 662-666, European Signal Processing Conference, 1/01/00. <https://doi.org/10.1109/EUSIPCO.2016.7760331>

Spruijt-Metz, D, Hekler, E, Saranummi, N, Intille, S, Korhonen, I, Nilsen, W, Rivera, DE, Spring, B, Michie, S, Asch, DA, Sanna, A, Salcedo, VT, Kukakfa, R & Pavel, M 2015, 'Building new computational models to support health behavior change and maintenance: new opportunities in behavioral research', *Translational Behavioral Medicine*, vol. 5, no. 3, pp. 335-346. <https://doi.org/10.1007/s13142-015-0324-1>

Mokkila, S, Postila, PA, Rissanen, S, Juhola, H, Vattulainen, I & Róg, T 2017, 'Calcium Assists Dopamine Release by Preventing Aggregation on the Inner Leaflet of Presynaptic Vesicles', *ACS Chemical Neuroscience*, vol. 8, no. 6, pp. 1242-1250. <https://doi.org/10.1021/acchemneuro.6b00395>

Kreutzer, J, Ylä-Outinen, L, Mäki, A, Ristola, M, Narkilahti, S & Kallio, P 2017, 'Cell culture chamber with gas supply for prolonged recording of human neuronal cells on microelectrode array', *Journal of Neuroscience Methods*, vol. 280, pp. 27-35. <https://doi.org/10.1016/j.jneumeth.2017.01.019>

Waris, MA, Iosifidis, A & Gabbouj, M 2017, 'CNN-based edge filtering for object proposals', *Neurocomputing*, vol. 266, pp. 631-640. <https://doi.org/10.1016/j.neucom.2017.05.071>

Gavas, RD, Tripathy, SR, Chatterjee, D & Sinha, A 2018, 'Cognitive load and metacognitive confidence extraction from pupillary response', *Cognitive Systems Research*, vol. 52, pp. 325-334. <https://doi.org/10.1016/j.cogsys.2018.07.021>

Špakov, O 2012, Comparison of eye movement filters used in HCI. in *Proceedings - ETRA 2012: Eye Tracking Research and Applications Symposium*. pp. 281-284, 7th Eye Tracking Research and Applications Symposium, ETRA 2012, Santa Barbara, CA, United States, 28/03/12. <https://doi.org/10.1145/2168556.2168616>

Tohka, J, Moradi, E, Huttunen, H, Alzheimer's Disease Neuroimaging Initiative & Alzheimer's Disease Neuroimaging Initiative 2 2016, 'Comparison of Feature Selection Techniques in Machine Learning for Anatomical Brain MRI in Dementia', *Neuroinformatics*, vol. 14, no. 3, pp. 279-296. <https://doi.org/10.1007/s12021-015-9292-3>

Acar, GO, Kivekäs, I, Hanna, BM, Huang, L, Gopen, Q & Poe, DS 2014, 'Comparison of stapedotomy minus prosthesis, circumferential stapes mobilization, and small fenestra stapedotomy for stapes fixation', *OTOLOGY AND NEUROTOLOGY*, vol. 35, no. 4. <https://doi.org/10.1097/MAO.0000000000000280>

Acimovic, J, Mäki-Marttunen, T & Linne, M-L 2010, Computational modeling of growth in cortical cultures using the NETMORPH simulation tool. in *Neuroscience 2010, 40th Annual Meeting, San Diego, USA, 13-17 November 2010*. pp. 2 p, The 40th SfN annual meeting, San Diego, United States, 13/11/10.

Acimovic, J, Mäki-Marttunen, T & Linne, M-L 2011, Computational study of structural changes in neuronal networks during growth: a model of dissociated neocortical cultures. in J-M Fellous & A Prinz (eds), *Twentieth Annual Computational Neuroscience Meeting: CNS\*2011*. vol. 12 (Suppl 1), P203, Annual Computational Neuroscience Meeting CNS, vol. 12, BioMed Central, Stockholm, pp. P203, Twentieth Annual Computational Neuroscience Meeting: CNS\*2011, Stockholm, Sweden, 23/07/11. <https://doi.org/10.1186/1471-2202-12-S1-P203>

Acimovic, J, Teppola, H, Selinummi, JJ & Linne, M-L 2009, Computational tools for assessing the properties of 2D neural cell cultures. in D Johnson (ed.), *Eighteenth Annual Computational Neuroscience Meeting: CNS\*2009*. vol. 10 (Suppl 1), P170, BioMed Central, Berlin, pp. P170, Eighteenth Annual Computational Neuroscience Meeting: CNS\*2009, Berlin, Germany, 13/07/09.

Enkavi, G, Mikkolainen, H, Güngör, B, Ikonen, E & Vattulainen, I 2017, 'Concerted regulation of npc2 binding to endosomal/lysosomal membranes by bis(monoacylglycerol)phosphate and sphingomyelin', *PLoS Computational Biology*, vol. 13, no. 10, e1005831. <https://doi.org/10.1371/journal.pcbi.1005831>

Pelkonen, A & Yavich, L 2012, 'Cortical spreading depression in alpha-synuclein knockout mice', *SYNAPSE*, vol. 66, no. 1, pp. 81-84. <https://doi.org/10.1002/syn.20980>

Malmivaara, K, Ohman, J, Kivisaari, R, Hernesniemi, J & Siironen, J 2011, 'Cost-effectiveness of decompressive craniectomy in non-traumatic neurological emergencies', *European Journal of Neurology*, vol. 18, no. 3, pp. 402-409. <https://doi.org/10.1111/j.1468-1331.2010.03162.x>

Sharma, V, Dixit, D, Ghosh, S & Sen, E 2011, 'COX-2 regulates the proliferation of glioma stem like cells', *NEUROCHEMISTRY INTERNATIONAL*, vol. 59, no. 5, pp. 567-571. <https://doi.org/10.1016/j.neuint.2011.06.018>

Acimovic, J, Teppola, H, Mäki-Marttunen, TM & Linne, M-L 2018, 'Data-driven study of synchronous population activity in generic spiking neuronal networks: How much do we capture using the minimal model for the considered phenomena?' Paper presented at Brain and Mind Symposium 2018, Helsinki, Finland, 20/10/18 - 21/10/18, .

Acimovic, J, Teppola, H, Mäki-Marttunen, TM & Linne, M-L 2018, 'Data-driven study of synchronous population activity in generic spiking neuronal networks: How much do we capture using the minimal model for the considered phenomena?', *BMC Neuroscience*, vol. 19, no. Suppl 2, pp. 68-69.

Tavakoli, HR, Borji, A, Kannala, J & Rahtu, E 2020, Deep audio-visual saliency: Baseline model and data. in SN Spencer (ed.), *Proceedings ETRA 2020 Short Papers - ACM Symposium on Eye Tracking Research and Applications, ETRA 2020*, 3, ACM, ACM Symposium on Eye Tracking Research and Applications, Stuttgart, Germany, 2/06/20. <https://doi.org/10.1145/3379156.3391337>

Möttönen, T, Katisko, J, Haapasalo, J, Tähtinen, T, Kiekara, T, Kähärä, V, Peltola, J, Öhman, J & Lehtimäki, K 2015, 'Defining the anterior nucleus of the thalamus (ANT) as a deep brain stimulation target in refractory epilepsy: Delineation using 3 T MRI and intraoperative microelectrode recording', *NeuroImage: Clinical*, vol. 7, pp. 823-829. <https://doi.org/10.1016/j.nicl.2015.03.001>

Kolasa, M, Hakulinen, U, Brander, A, Hagman, S, Dastidar, P, Elovaara, I & Sumelahti, M-L 2019, 'Diffusion tensor imaging and disability progression in multiple sclerosis: A 4-year follow-up study', *Brain and Behavior*, vol. 9, no. 1, e01194. <https://doi.org/10.1002/brb3.1194>

Salminen, AV, Manconi, M, Rimpilä, V, Luoto, TM, Koskinen, E, Ferri, R, Öhman, J & Polo, O 2013, 'Disconnection between periodic leg movements and cortical arousals in spinal cord injury', *JOURNAL OF CLINICAL SLEEP MEDICINE*, vol. 9, no. 11, pp. 1207-1209. <https://doi.org/10.5664/jcsm.3174>

Hagman, S, Raunio, M, Rossi, M, Dastidar, P & Elovaara, I 2011, 'Disease-associated inflammatory biomarker profiles in blood in different subtypes of multiple sclerosis: Prospective clinical and MRI follow-up study', *JOURNAL OF NEUROIMMUNOLOGY*, vol. 234, no. 1-2, pp. 141-147. <https://doi.org/10.1016/j.jneuroim.2011.02.009>

Iosifidis, A, Tefas, A & Pitas, I 2015, 'Distance-based human action recognition using optimized class representations', *Neurocomputing*, vol. 161, pp. 47-55. <https://doi.org/10.1016/j.neucom.2014.10.088>

Iosifidis, A, Tefas, A & Pitas, I 2015, 'DropELM: Fast neural network regularization with Dropout and DropConnect', *Neurocomputing*, vol. 162, pp. 57-66. <https://doi.org/10.1016/j.neucom.2015.04.006>

Berry, J, Frederiksen, R, Yao, Y, Nymark, S, Chen, J & Cornwall, C 2016, 'Effect of rhodopsin phosphorylation on dark adaptation in mouse rods', *Journal of Neuroscience*, vol. 36, no. 26, pp. 6973-6987. <https://doi.org/10.1523/JNEUROSCI.3544-15.2016>

- Juuti-Uusitalo, K, Nieminen, M, Treumer, F, Ampuja, M, Kallioniemi, A, Klettner, A & Skottman, H 2015, 'Effects of cytokine activation and oxidative stress on the function of the human embryonic stem cell-derived retinal pigment epithelial cells', *Investigative Ophthalmology and Visual Science*, vol. 56, no. 11, pp. 6265-6274. <https://doi.org/10.1167/iovs.15-17333>
- Pelkonen, A, Kallunki, P & Yavich, L 2013, 'Effects of exogenous alpha-synuclein on stimulated dopamine overflow in dorsal striatum', *Neuroscience Letters*, vol. 554, pp. 141-145. <https://doi.org/10.1016/j.neulet.2013.08.072>
- Mäki-Marttunen, TM, Acimovic, J, Ruohonen, KP & Linne, M-L 2011, Effects of local structure of neuronal networks on spiking activity in silico. in J-M Fellous & A Prinz (eds), *Twentieth Annual Computational Neuroscience Meeting: CNS\*2011*. vol. 12 (Suppl 1), BioMed Central, Stockholm, pp. P202, Twentieth Annual Computational Neuroscience Meeting: CNS\*2011, Stockholm, Sweden, 23/07/11.
- Mäki-Marttunen, T, Acimovic, J, Ruohonen, K & Linne, M-L 2011, Effects of structure on spontaneous activity in simulated neuronal networks. in *Proceedings of Mathematical Neuroscience (ICMS 2011), April 11-13, 2011, Edinburgh, Scotland*. Mathematical Neuroscience, Edinburgh, United Kingdom, 11/04/11.
- Basnyat, P, Natarajan, R, Vistbakka, J, Lehtikangas, M, Airas, L, Matinlauri, I, Elovaara, I & Hagman, S 2015, 'Elevated levels of soluble CD26 and CD30 in multiple sclerosis', *Clinical and Experimental Neuroimmunology*, vol. 6, no. 4, pp. 419-425. <https://doi.org/10.1111/cen3.12253>
- Acimovic, J 2011, Emergence of global and local structural features during development of neuronal networks. in *Proceedings of the Eighth International Workshop on Computational Systems Biology, WCSB 2011, June 6-8, 2011, Zürich, Switzerland*. TICSP Series, vol. 57, TICSP, Tampere, Eight International Workshop on Computational Systems Biology, WCSB 2011, June 6-8, Zurich, Switzerland. TICSP series, 1/01/11.
- Sonkajärvi, E, Rytty, S, Alahuhta, S, Suominen, K, Kumpulainen, T, Ohtonen, P, Karvonen, E & Jäntti, V 2018, 'Epileptiform and periodic EEG activities induced by rapid sevoflurane anaesthesia induction', *Clinical Neurophysiology*, vol. 129, no. 3, pp. 638-645. <https://doi.org/10.1016/j.clinph.2017.12.037>
- Otterpohl, JR, Haynes, JD, Emmert-Streib, F, Vetter, G & Pawelzik, K 2001, 'Erratum: Extracting the dynamics of perceptual switching from 'noisy' behaviour: An application of hidden Markov modelling to pecking data from pigeons (Journal of Physiology Paris (2000) 94:5-6 (555-567) PII: S0928425700010950)', *Journal of Physiology: Paris*, vol. 95, no. 1-6, pp. 497. [https://doi.org/10.1016/S0928-4257\(01\)00091-2](https://doi.org/10.1016/S0928-4257(01)00091-2)
- Kivekäs, I, Pöyhönen, L, Aarnisalo, A, Rautiainen, M & Poe, D 2015, 'Eustachian tube mucosal inflammation scale validation based on digital video images', *OTOLOGY AND NEUROTOLOGY*, vol. 36, no. 10, pp. 1748-1752. <https://doi.org/10.1097/MAO.0000000000000895>
- Tenhunen, M, Huupponen, E, Hasan, J, Heino, O & Himanen, SL 2015, 'Evaluation of the different sleep-disordered breathing patterns of the compressed tracheal sound', *Clinical Neurophysiology*, vol. 126, no. 8, pp. 1557-1563. <https://doi.org/10.1016/j.clinph.2014.11.003>
- Franco, P & Värri, A 2015, 'Experiments of the sonification of the sleep electroencephalogram', *Finnish Journal of eHealth and eWelfare*, vol. 7, no. 2-3, pp. 65-74.
- Melkas, S, Sibolt, G, Oksala, NKJ, Putaala, J, Pohjasvaara, T, Kaste, M, Karhunen, PJ & Erkinjuntti, T 2012, 'Extensive white matter changes predict stroke recurrence up to 5 years after a first-ever ischemic stroke', *CEREBROVASCULAR DISEASES*, vol. 34, no. 3, pp. 191-198. <https://doi.org/10.1159/000341404>
- Otterpohl, JR, Haynes, JD, Emmert-Streib, F, Vetter, G & Pawelzik, K 2000, 'Extracting the dynamics of perceptual switching from 'noisy' behaviour: An application of hidden Markov modelling to pecking data from pigeons', *Journal of Physiology: Paris*, vol. 94, no. 5-6, pp. 555-567. [https://doi.org/10.1016/S0928-4257\(00\)01095-0](https://doi.org/10.1016/S0928-4257(00)01095-0)

Iosifidis, A 2015, 'Extreme learning machine based supervised subspace learning', *Neurocomputing*, vol. 167, pp. 158–164. <https://doi.org/10.1016/j.neucom.2015.04.083>

Pajarinen, J, Peltonen, J & Uusitalo, MA 2011, 'Fault tolerant machine learning for nanoscale cognitive radio', *Neurocomputing*, vol. 74, no. 5, pp. 753-764. <https://doi.org/10.1016/j.neucom.2010.10.007>

Mäkinen, M, Joki, T, Ylä-Outinen, L, Skottman, H, Narkilahti, S & Äänismaa, R 2013, 'Fluorescent probes as a tool for cell population tracking in spontaneously active neural networks derived from human pluripotent stem cells', *Journal of Neuroscience Methods*, vol. 215, no. 1, pp. 88-96. <https://doi.org/10.1016/j.jneumeth.2013.02.019>

Oschmann, F, Berry, H, Obermayer, K & Lenk, K 2018, 'From in silico astrocyte cell models to neuron-astrocyte network models: A review', *BRAIN RESEARCH BULLETIN*, vol. 136, pp. 76-84. <https://doi.org/10.1016/j.brainresbull.2017.01.027>

Kauppi, J-P, Pajula, J, Niemi, J, Hari, R & Tohka, J 2017, 'Functional brain segmentation using inter-subject correlation in fMRI', *Human Brain Mapping*, vol. 38, no. 5, pp. 2643-2665. <https://doi.org/10.1002/hbm.23549>

Hyrskykari, A, Istance, H & Vickers, S 2012, Gaze gestures or dwell-based interaction? in *Proceedings - ETRA 2012: Eye Tracking Research and Applications Symposium*. pp. 229-232, 7th Eye Tracking Research and Applications Symposium, ETRA 2012, Santa Barbara, CA, United States, 28/03/12. <https://doi.org/10.1145/2168556.2168602>

Kangas, J, Rantala, J, Majaranta, P, Isokoski, P & Raisamo, R 2014, Haptic feedback to gaze events. in *Proceedings of the Symposium on Eye Tracking Research and Applications, ETRA 2014*. Association for Computing Machinery, pp. 11-18, 8th Symposium on Eye Tracking Research and Applications, ETRA 2014, Safety Harbor, FL, United States, 26/03/14. <https://doi.org/10.1145/2578153.2578154>

Pajula, J & Tohka, J 2016, 'How Many Is Enough? Effect of Sample Size in Inter-Subject Correlation Analysis of fMRI', *Computational Intelligence and Neuroscience*, vol. 2016, 2094601. <https://doi.org/10.1155/2016/2094601>

Sun, L, Peräkylä, J, Polvivaara, M, Öhman, J, Peltola, J, Lehtimäki, K, Huhtala, H & Hartikainen, KM 2015, 'Human anterior thalamic nuclei are involved in emotion-attention interaction', *NEUROPSYCHOLOGIA*, vol. 78, pp. 88-94. <https://doi.org/10.1016/j.neuropsychologia.2015.10.001>

Angleraud, A, Houbre, Q, Kyrki, V & Pieters, R 2018, Human-robot interactive learning architecture using ontologies and symbol manipulation. in *RO-MAN 2018 - 27th IEEE International Symposium on Robot and Human Interactive Communication: August 27-31, 2018, Nanjing, China*. IEEE RO-MAN, IEEE, pp. 384-389, IEEE INTERNATIONAL SYMPOSIUM ON ROBOT AND HUMAN INTERACTIVE COMMUNICATION, 1/01/00. <https://doi.org/10.1109/ROMAN.2018.8525580>

Hartikainen, KM, Sun, L, Polvivaara, M, Brause, M, Lehtimäki, K, Haapasalo, J, Möttönen, T, Väyrynen, K, Ogawa, KH, Öhman, J & Peltola, J 2014, 'Immediate effects of deep brain stimulation of anterior thalamic nuclei on executive functions and emotion-attention interaction in humans', *JOURNAL OF CLINICAL AND EXPERIMENTAL NEUROPSYCHOLOGY*, vol. 36, no. 5, pp. 540-550. <https://doi.org/10.1080/13803395.2014.913554>

Rimpiläinen, V, Koulouri, A, Lucka, F, Kaipio, JP & Wolters, CH 2019, 'Improved EEG source localization with Bayesian uncertainty modelling of unknown skull conductivity', *NeuroImage*, vol. 188, pp. 252-260. <https://doi.org/10.1016/j.neuroimage.2018.11.058>

Lehtimäki, M, Paunonen, L & Linne, M-L 2018, 'Improvement of computational efficiency of a biochemical plasticity model', *BMC Neuroscience*, vol. 19, no. Suppl 2, P130, pp. 66-66. <https://doi.org/10.1186/s12868-018-0452-x#Sec613>

Tran, DT, Iosifidis, A & Gabbouj, M 2018, 'Improving efficiency in convolutional neural networks with multilinear filters', *Neural Networks*, vol. 105, pp. 328-339. <https://doi.org/10.1016/j.neunet.2018.05.017>

Emmert-Streib, F 2013, 'Influence of the experimental design of gene expression studies on the inference of gene regulatory networks: Environmental factors', *PeerJ*, vol. 2013, no. 1, e10. <https://doi.org/10.7717/peerj.10>

Emmert-Streib, F 2006, 'Influence of the neural network topology on the learning dynamics', *Neurocomputing*, vol. 69, no. 10-12, pp. 1179-1182. <https://doi.org/10.1016/j.neucom.2005.12.070>

Sciaccia, MFM, Romanucci, V, Zarrelli, A, Monaco, I, Lolicato, F, Spinella, N, Galati, C, Grasso, G, D'Urso, L, Romeo, M, Diomede, L, Salmons, M, Bongiorno, C, Di Fabio, G, La Rosa, C & Milardi, D 2017, 'Inhibition of A $\beta$  Amyloid Growth and Toxicity by Silybins: The Crucial Role of Stereochemistry', *ACS Chemical Neuroscience*, vol. 8, no. 8, pp. 1767-1778. <https://doi.org/10.1021/acchemneuro.7b00110>

Dixit, D, Sharma, V, Ghosh, S, Mehta, VS & Sen, E 2012, 'Inhibition of Casein kinase-2 induces p53-dependent cell cycle arrest and sensitizes glioblastoma cells to tumor necrosis factor (TNF $\alpha$ )-induced apoptosis through SIRT1 inhibition', *CELL DEATH AND DISEASE*, vol. 3, no. 2, e271. <https://doi.org/10.1038/cddis.2012.10>

Mäki-Marttunen, TM, Acimovic, J, Ruohonen, KP & Linne, M-L 2012, In silico study on structure and dynamics in bursting neuronal networks. in *Neuroscience 2012; 42nd Annual Meeting, New Orleans, USA, October 14-18, 2012.*, 300.26/DDD70, Society for Neuroscience (SfN), The 42nd Annual Meeting of the Society for Neuroscience, SFN 2012, New Orleans, LA, USA, 13-17 October 2012, New Orleans, United States, 14/10/12.

Iosifidis, A, Tefas, A & Pitas, I 2013, 'Learning sparse representations for view-independent human action recognition based on fuzzy distances', *Neurocomputing*, vol. 121, pp. 344-353. <https://doi.org/10.1016/j.neucom.2013.05.021>

Špakov, O, Isokoski, P & Majaranta, P 2014, Look and lean: Accurate head-assisted eye pointing. in *Proceedings of the Symposium on Eye Tracking Research and Applications, ETRA 2014*. Association for Computing Machinery, pp. 35-42, 8th Symposium on Eye Tracking Research and Applications, ETRA 2014, Safety Harbor, FL, United States, 26/03/14. <https://doi.org/10.1145/2578153.2578157>

Satuvuori, E, Mulansky, M, Bozanic, N, Malvestio, I, Zeldenrust, F, Lenk, K & Kreuz, T 2017, 'Measures of spike train synchrony for data with multiple time scales', *Journal of Neuroscience Methods*, vol. 287, pp. 25-38. <https://doi.org/10.1016/j.jneumeth.2017.05.028>

Natarajan, R, Einarsdottir, E, Riutta, A, Hagman, S, Raunio, M, Mononen, N, Lehtimäki, T & Elovaara, I 2012, 'Melatonin pathway genes are associated with progressive subtypes and disability status in multiple sclerosis among Finnish patients', *JOURNAL OF NEUROIMMUNOLOGY*, vol. 250, no. 1-2, pp. 106-110. <https://doi.org/10.1016/j.jneuroim.2012.05.014>

Lolicato, F, Juhola, H, Zak, A, Postila, PA, Saukko, A, Rissanen, S, Enkavi, G, Vattulainen, I, Kepczynski, M & Róg, T 2020, 'Membrane-Dependent Binding and Entry Mechanism of Dopamine into Its Receptor', *ACS Chemical Neuroscience*, vol. 11, no. 13, pp. 1914-1924. <https://doi.org/10.1021/acchemneuro.9b00656>

Heikkinen, H, Vinberg, F, Nymark, S & Koskelainen, A 2011, 'Mesopic background lights enhance dark-adapted cone ERG flash responses in the intact mouse retina: A possible role for gap junctional decoupling', *Journal of Neurophysiology*, vol. 105, no. 5, pp. 2309-2318. <https://doi.org/10.1152/jn.00536.2010>

Iantovics, LB, Emmert-Streib, F & Arik, S 2017, 'MetrIntMeas a novel metric for measuring the intelligence of a swarm of cooperating agents', *Cognitive Systems Research*, vol. 45, pp. 17-29. <https://doi.org/10.1016/j.cogsys.2017.04.006>

Kaipio, ML, Cheour, M, Öhman, J, Salonen, O & Näätänen, R 2013, 'Mismatch negativity abnormality in traumatic brain injury without macroscopic lesions on conventional MRI', *NeuroReport*, vol. 24, no. 8, pp. 440-444. <https://doi.org/10.1097/WNR.0b013e32836164b4>

Teppola, H, Sarkanen, JR, Jalonen, TO & Linne, M-L 2016, 'Morphological Differentiation Towards Neuronal Phenotype of SH-SY5Y Neuroblastoma Cells by Estradiol, Retinoic Acid and Cholesterol', *Neurochemical Research*, vol. 41, no. 4, pp. 731-747. <https://doi.org/10.1007/s11064-015-1743-6>

Nevalainen, O, Auvinen, A, Ansakorpi, H, Artama, M, Raitanen, J & Isojärvi, J 2012, 'Mortality by clinical characteristics in a tertiary care cohort of adult patients with chronic epilepsy', *EPILEPSIA*, vol. 53, no. 12. <https://doi.org/10.1111/epi.12006>

Juhola, H, Postila, PA, Rissanen, S, Lolicato, F, Vattulainen, I & Róg, T 2018, 'Negatively Charged Gangliosides Promote Membrane Association of Amphipathic Neurotransmitters', *Neuroscience*, vol. 384, pp. 214-223. <https://doi.org/10.1016/j.neuroscience.2018.05.035>

Välkki, IA, Lenk, K, Mikkonen, JE, Kapucu, FE & Hyttinen, JAK 2017, 'Network-wide adaptive burst detection depicts neuronal activity with improved accuracy', *Frontiers in Computational Neuroscience*, vol. 11, 40. <https://doi.org/10.3389/fncom.2017.00040>

Acimovic, J 2009, 'Neural networks, cell cultures and some older work on data analysis.' Paper presented at Okinawa Computational Neuroscience Course 2009, Japan, 15/06/09 - 2/07/09, .

Wortha, SM, Bloechle, J, Ninaus, M, Kiili, K, Lindstedt, A, Bahnmueller, J, Moeller, K & Klein, E 2020, 'Neurofunctional plasticity in fraction learning: An fMRI training study', *Trends in Neuroscience and Education*, vol. 21, 100141. <https://doi.org/10.1016/j.tine.2020.100141>

Pelkonen, A & Yavich, L 2011, 'Neuromuscular pathology in mice lacking alpha-synuclein', *Neuroscience Letters*, vol. 487, no. 3, pp. 350-353. <https://doi.org/10.1016/j.neulet.2010.10.054>

Sharma, V, Bala, A, Deshmukh, R, Bedi, KL & Sharma, PL 2012, 'Neuroprotective effect of RO-20-1724-a phosphodiesterase4 inhibitor against intracerebroventricular streptozotocin induced cognitive deficit and oxidative stress in rats', *PHARMACOLOGY BIOCHEMISTRY AND BEHAVIOR*, vol. 101, no. 2, pp. 239-245. <https://doi.org/10.1016/j.pbb.2012.01.004>

Xiao, L, Liao, B, Li, S & Chen, K 2018, 'Nonlinear recurrent neural networks for finite-time solution of general time-varying linear matrix equations', *Neural Networks*, vol. 98, pp. 102-113. <https://doi.org/10.1016/j.neunet.2017.11.011>

Iosifidis, A, Mygdalis, V, Tefas, A & Pitas, I 2016, 'One-Class Classification based on Extreme Learning and Geometric Class Information', *Neural Processing Letters*, pp. 1-16. <https://doi.org/10.1007/s11063-016-9541-y>

Mäki-Marttunen, TM, Acimovic, J, Ruohonen, KP & Linne, M-L 2013, On the effect of network structure and synaptic mechanisms on sustained bursting activity. in G Cymbalyuk & A Prinz (eds), *Twenty Second Annual Computational Neuroscience Meeting: CNS\*2013*. vol. Volume 14 Suppl 1, BioMed Central, Paris, France, pp. P247, Twenty Second Annual Computational Neuroscience Meeting: CNS\*2013, Paris, France, 13/07/13.

Ju, YSE, Alexandrov, LB, Gerstung, M, Martincorena, I, Nik-Zainal, S, Ramakrishna, M, Davies, HR, Papaemmanuil, E, Gundem, G, Shlien, A, Bolli, N, Behjati, S, Tarpey, PS, Nangalia, J, Massie, CE, Butler, AP, Teague, JW, Vassiliou, GS, Green, AR, Du, MQ, Unnikrishnan, A, Pimanda, JE, Teh, BTE, Munshi, N, Greaves, M, Vyas, P, El-Naggar, AK, Santarius, T, Collins, VP, Grundy, R, Taylor, JA, Hayes, DN, Malkin, D, Foster, CS, Warren, AY, Whitaker, HC, Brewer, D, Eeles, R, Cooper, C, Neal, D, Visakorpi, T, Isaacs, WB, Bova, GS, Flanagan, AM, Futreal, PA, Lynch, AG, Chinnery, PF, McDermott, U, Stratton, MR & Campbell, PJ 2014, 'Origins and functional consequences of somatic mitochondrial DNA mutations in human cancer', *eLIFE*, vol. 3. <https://doi.org/10.7554/eLife.02935>

Rönkkö, T & Timonen, H 2019, 'Overview of Sources and Characteristics of Nanoparticles in Urban Traffic-Influenced Areas', *Journal of Alzheimer's Disease*, vol. 72, no. 1, pp. 15-28. <https://doi.org/10.3233/JAD-190170>

Emmert-Streib, F & Glazko, GV 2011, 'Pathway analysis of expression data: Deciphering functional building blocks of complex diseases', *PLoS Computational Biology*, vol. 7, no. 5, e1002053. <https://doi.org/10.1371/journal.pcbi.1002053>

Polinati, PP, Ilmarinen, T, Trokovic, R, Hyotylainen, T, Otonkoski, T, Suomalainen, A, Skottman, H & Tyniina, T 2015, 'Patient-specific induced pluripotent stem cell—derived RPE cells: Understanding the pathogenesis of retinopathy in long-chain 3-hydroxyacyl-CoA dehydrogenase deficiency', *Investigative Ophthalmology and Visual Science*, vol. 56, no. 5, pp.

3371-3382. <https://doi.org/10.1167/iovs.14-14007>

Saurus, P, Kuusela, S, Lehtonen, E, Hyvönen, ME, Ristola, M, Fogarty, CL, Tienari, J, Lassenius, MI, Forsblom, C, Lehto, M, Saleem, MA, Groop, PH, Holthöfer, H & Lehtonen, S 2015, 'Podocyte apoptosis is prevented by blocking the Toll-like receptor pathway', *CELL DEATH AND DISEASE*, vol. 6, no. 5, e1752. <https://doi.org/10.1038/cddis.2015.125>

Sibolt, G, Curtze, S, Melkas, S, Pohjasvaara, T, Kaste, M, Karhunen, PJ, Oksala, NKJ, Vataja, R & Erkinjuntti, T 2013, 'Post-stroke depression and depression-executive dysfunction syndrome are associated with recurrence of ischaemic stroke', *CEREBROVASCULAR DISEASES*, vol. 36, no. 5-6, pp. 336-343. <https://doi.org/10.1159/000355145>

Moradi, E, Khundrakpam, B, Lewis, JD, Evans, AC & Tohka, J 2017, 'Predicting symptom severity in autism spectrum disorder based on cortical thickness measures in agglomerative data', *NeuroImage*, vol. 144, no. A, pp. 128–141. <https://doi.org/10.1016/j.neuroimage.2016.09.049>

Rezaei, A, Koulouri, A & Pursiainen, S 2020, 'Randomized Multiresolution Scanning in Focal and Fast E/MEG Sensing of Brain Activity with a Variable Depth', *Brain Topography*, vol. 33, no. 2, pp. 161-175. <https://doi.org/10.1007/s10548-020-00755-8>

Špakov, O & Gizatdinova, Y 2014, Real-time hidden gaze point correction. in *Proceedings of the Symposium on Eye Tracking Research and Applications, ETRA 2014*. Association for Computing Machinery, pp. 291-294, 8th Symposium on Eye Tracking Research and Applications, ETRA 2014, Safety Harbor, FL, United States, 26/03/14. <https://doi.org/10.1145/2578153.2578200>

Javanainen, M, Enkavi, G, Guixà-González, R, Kulig, W, Martinez-Seara, H, Levental, I & Vattulainen, I 2019, 'Reduced level of docosahexaenoic acid shifts GPCR neuroreceptors to less ordered membrane regions', *PLoS Computational Biology*, vol. 15, no. 5, e1007033. <https://doi.org/10.1371/journal.pcbi.1007033>

Iosifidis, A, Tefas, A & Pitas, I 2014, 'Regularized extreme learning machine for multi-view semi-supervised action recognition', *Neurocomputing*, vol. 145, pp. 250-262. <https://doi.org/10.1016/j.neucom.2014.05.036>

Puhakka, IJA & Peltola, MJ 2020, 'Salivary cortisol reactivity to psychological stressors in infancy: A meta-analysis', *PSYCHONEUROENDOCRINOLOGY*, vol. 115, 104603. <https://doi.org/10.1016/j.psyneuen.2020.104603>

Sibolt, G, Curtze, S, Melkas, S, Pohjasvaara, T, Kaste, M, Karhunen, PJ, Oksala, NKJ & Erkinjuntti, T 2015, 'Severe cerebral white matter lesions in ischemic stroke patients are associated with less time spent at home and early institutionalization', *INTERNATIONAL JOURNAL OF STROKE*, vol. 10, no. 8, pp. 1192-1196. <https://doi.org/10.1111/ijvs.12578>

Mäki-Marttunen, TM, Acimovic, J, Ruohonen, KP & Linne, M-L 2012, Significance of graph theoretic measures in predicting neuronal network activity. in *Proceedings of The 9th annual Computational and Systems Neuroscience meeting (COSYNE 2012)*, I-15, Salt Lake City, pp. 55-55, The 9th annual Computational and Systems Neuroscience meeting , Salt Lake City, United States, 23/02/12.

Heikkilä, H & Räihä, KJ 2012, Simple gaze gestures and the closure of the eyes as an interaction technique. in *Proceedings - ETRA 2012: Eye Tracking Research and Applications Symposium*. pp. 147-154, 7th Eye Tracking Research and Applications Symposium, ETRA 2012, Santa Barbara, CA, United States, 28/03/12. <https://doi.org/10.1145/2168556.2168579>

Ilvesmäki, T, Koskinen, E, Brander, A, Luoto, T, Öhman, J & Eskola, H 2017, 'Spinal cord injury induces widespread chronic changes in cerebral white matter', *Human Brain Mapping*, vol. 38, no. 7, pp. 3637-3647. <https://doi.org/10.1002/hbm.23619>

Bron, EE, Smits, M, van der Flier, WM, Vrenken, H, Barkhof, F, Scheltens, P, Papma, JM, Steketee, RME, Méndez Orellana, C, Meijboom, R, Pinto, M, Meireles, JR, Garrett, C, Bastos-Leite, AJ, Abdulkadir, A, Ronneberger, O, Amoroso, N, Bellotti, R, Cárdenas-Peña, D, Álvarez-Meza, AM, Dolph, CV, Iftekharruddin, KM, Eskildsen, SF, Coupé, P, Fonov, VS, Franke, K, Gaser, C, Ledig, C, Guerrero, R, Tong, T, Gray, KR, Moradi, E, Tohka, J, Routier, A, Durrleman, S, Sarica, A,



- Di Fatta, G, Sensi, F, Chincarini, A, Smith, GM, Stoyanov, ZV, Sørensen, L, Nielsen, M, Tangaro, S, Inglese, P, Wachinger, C, Reuter, M, van Swieten, JC, Niessen, WJ & Klein, S 2015, 'Standardized evaluation of algorithms for computer-aided diagnosis of dementia based on structural MRI: The CADDementia challenge', *NeuroImage*, vol. 111, pp. 562-579. <https://doi.org/10.1016/j.neuroimage.2015.01.048>
- Angleraud, A, Houbre, Q & Pieters, R 2019, 'Teaching semantics and skills for human-robot collaboration', *Paladyn*, vol. 10, no. 1, pp. 318-329. <https://doi.org/10.1515/pjbr-2019-0025>
- Sharmin, S, Špakov, O & Rähä, KJ 2012, 'The effect of different text presentation formats on eye movement metrics in reading', *JOURNAL OF EYE MOVEMENT RESEARCH*, vol. 5, no. 3, 3.
- Acimovic, J, Mäki-Marttunen, T & Linne, M-L 2015, 'The effects of neuron morphology on graph theoretic measures of network connectivity: The analysis of a two-level statistical model', *Frontiers in Neuroanatomy*, vol. 9, no. June, 76. <https://doi.org/10.3389/fnana.2015.00076>
- Saarela, C, Karrasch, M, Ilvesmäki, T, Parkkola, R, Rinne, JO & Laine, M 2016, 'The relationship between recognition memory for emotion-laden words and white matter microstructure in normal older individuals', *NeuroReport*, vol. 27, no. 18, pp. 1345-1349. <https://doi.org/10.1097/WNR.0000000000000704>
- Istance, H, Vickers, S & Hyrskykari, A 2012, The validity of using non-representative users in gaze communication research. in *Proceedings - ETRA 2012: Eye Tracking Research and Applications Symposium*. pp. 233-236, 7th Eye Tracking Research and Applications Symposium, ETRA 2012, Santa Barbara, CA, United States, 28/03/12. <https://doi.org/10.1145/2168556.2168603>
- Gracia-Tabuenca, J, Seppä, V-P, Jauhiainen, M, Paasilta, M, Viik, J & Karjalainen, J 2020, 'Tidal breathing flow profiles during sleep in wheezing children measured by impedance pneumography', *Respiratory Physiology and Neurobiology*, vol. 271, 103312. <https://doi.org/10.1016/j.resp.2019.103312>
- Faisal, A, Gillberg, J, Leen, G & Peltonen, J 2013, 'Transfer learning using a nonparametric sparse topic model', *Neurocomputing*, vol. 112, pp. 124-137. <https://doi.org/10.1016/j.neucom.2012.12.038>
- Akkil, D, Isokoski, P, Kangas, J, Rantala, J & Raisamo, R 2014, TraQuMe: A tool for measuring the gaze tracking quality. in *Proceedings of the Symposium on Eye Tracking Research and Applications, ETRA 2014*. Association for Computing Machinery, pp. 327-330, 8th Symposium on Eye Tracking Research and Applications, ETRA 2014, Safety Harbor, FL, United States, 26/03/14. <https://doi.org/10.1145/2578153.2578192>
- Teppola, H, Aćimović, J & Linne, ML 2019, 'Unique Features of Network Bursts Emerge From the Complex Interplay of Excitatory and Inhibitory Receptors in Rat Neocortical Networks', *FRONTIERS IN CELLULAR NEUROSCIENCE*, vol. 13, 377. <https://doi.org/10.3389/fncel.2019.00377>
- Alarautalahti, V, Ragauskas, S, Hakkarainen, JJ, Uusitalo-Järvinen, H, Uusitalo, H, Hyttinen, J, Kalesnykas, G & Nymark, S 2019, 'Viability of Mouse Retinal Explant Cultures Assessed by Preservation of Functionality and Morphology', *Investigative ophthalmology & visual science*, vol. 60, no. 6, pp. 1914-1927. <https://doi.org/10.1167/iovs.18-25156>
- Acimovic, J, Mäki-Marttunen, TM & Linne, M-L 2015, Whole-cell morphological properties of neurons constrain the nonrandom features of network connectivity. in G Cymbalyuk & A Burkitt (eds), *24th Annual Computational Neuroscience Meeting: CNS\*2015*. vol. 16 (Suppl 1), O7, BioMed Central, Prague, pp. P:O7, 24th Annual Computational Neuroscience Meeting: CNS\*2015, Prague, Czech Republic, 18/07/15.
- Zou, J, Hannula, M, Lehto, K, Feng, H, Lähelmä, J, Aula, AS, Hyttinen, J & Pyykkö, I 2015, 'X-ray microtomographic confirmation of the reliability of CBCT in identifying the scalar location of cochlear implant electrode after round window insertion', *Hearing Research*, vol. 326, pp. 59-65. <https://doi.org/10.1016/j.heares.2015.04.005>
- He, Q, Rezaei, A & Pursiainen, S 2019, 'Zeffiro User Interface for Electromagnetic Brain Imaging: a GPU Accelerated FEM Tool for Forward and Inverse Computations in Matlab', *Neuroinformatics*. <https://doi.org/10.1007/s12021-019-09436-9>

