

# Włodzisław Duch

## List of Publications, January 2023

A list of talks and links to some presentations.

Other on-line papers of the Department of Informatics,  
Institute of Technical Sciences, Faculty of Physics, Astronomy and Informatics  
| Nicolaus Copernicus University.

CV | and some DuchLab projects (look here for selected papers on specific topics).

Google list of videos with my lectures.

This list in PDF | papers by topics | Open all topics | conferences, past and planned | in PDF | Google Profile | arxiv page | ORCID ID | publikacje po polsku (papers in Polish).

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**Books** | **Papers** in preparation | submitted | in print | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 | 2004 | 2003 | 2002 | 2001 | 2000 | 1999 | 1998 | 1997 | 1996 | 1995 | 1994 | 1993 | 1992 | 1991 | 1990 | 1989 | 1988 | 1987 | 1986 | 1985 | 1984 | 1983 | 1982 | 1981 | 1980 | 1979 | 1978 | ...

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## 6 Books

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## 21 Edited Books

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**Submitted**   **Submitted**   **Submitted**   **Submitted**   **Submitted**   **and**  
**in preparation**

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1. Bałaj B, Matulewski J, Szmytke M, Pawlaczyk N, Dreszer J, Duch W. (2023) The use of gaze interaction to study speech sound discrimination training in infants.
  2. Duch W. (2022), Artificial intelligence and the limits of the humanities.  
Er(r)go 47 (2/2023) - Humanities.
  3. Komorowski M.K, Rykaczewski K, Piotrowski T, Jurewicz K, Wojciechowski J, Keitel A, Dreszer J, Duch W. (2021)  
ToFFi - Toolbox for Frequency-based Fingerprinting of Brain Signals.  
Neurocomputing (sub. 12/2021, rev. 10/2022). ToFFi at Github repository.

4. Ratajczak E, Dreszer J, Duch W. (2018). Changes of heart. The influence of HRV-biofeedback treatment on various conditions – a detailed review and experimental guide”. In revision, *Applied Psychophysiology and Biofeedback*.
5. Minati L, .... Duch W. (2020). Various approaches to brain dynamics (in submission).
6. Ratajczak E, Duch W. (2015). Global warning: Psychology and psychopathology of modern changing environment. (in submission).

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In print print	In print	In print	In print	In print	In print	In print	In print	In print	In
<b>2023</b>	<b>2023</b>	<b>2023</b>	<b>2023</b>	<b>2023</b>	<b>2023</b>	<b>2023</b>	<b>2023</b>	<b>2023</b>	<b>2023</b>
<b>2022</b>	<b>2022</b>	<b>2022</b>	<b>2022</b>	<b>2022</b>	<b>2022</b>	<b>2022</b>	<b>2022</b>	<b>2022</b>	<b>2022</b>

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372. Duch W. (2022). Imagery agnosia and its phenomenology. [Annals of Psychology](#), pp. 1-17 DOI: [10.18290/rpsych21242-5s](https://doi.org/10.18290/rpsych21242-5s).
373. Duch W. (2022) Concept Representation and the Geometric Model of Mind. [Studies in Logic, Grammar and Rhetoric](#), 67 (60), 151 - 167. doi: [10.2478/slgr-2022-0009](https://doi.org/10.2478/slgr-2022-0009)
374. Furman Ł, Tołpa K, Minati L, Duch W. (2022) Short-Time Fourier Transform and Embedding Method for Recurrence Quantification Analysis of EEG Time Series. [European Physical Journal Special Topics](#), 1-15. DOI: [10.1140/epjs/s11734-022-00683-7](https://doi.org/10.1140/epjs/s11734-022-00683-7).
375. Matulewski J, Bałaj B, Mościchowska I, Ignaczewska A, Linowiecki R, Dreszer J, Duch W. (2022) [Learnability Evaluation of the Gaze Interaction Markup Language](#) for a simple design of new applications. *International Journal of Human-Computer Studies* 165, 1-14, art # 102863 (IF 4.9)
376. Kun Xia, Włodzisław Duch, Yu Sun, Kedi Xu, Weili Fang, Hanbin Luo, Yi Zhang, Dong Sang, Xiaodong Xu Fei-Yue Wang and Dongrui Wu (2022). [Privacy-Preserving Brain-Computer Interfaces: A Systematic Review](#). *IEEE Transactions on Computational Social Systems*, DOI: [10.1109/TCSS.2022.3184818](https://doi.org/10.1109/TCSS.2022.3184818) (Cite Score 8.6)
377. Kun Xia, Lingfei Deng, Włodzisław Duch, , Dongrui Wu. (2022) Privacy-Preserving Domain Adaptation for Motor Imagery-based Brain-Computer Interfaces. *IEEE Transactions on Biomedical Engineering* 69(11), 3365-3376. DOI: [10.1109/TBME.2022.3168570](https://doi.org/10.1109/TBME.2022.3168570) (IF 4.76)
378. Sokolov, O., Mrela, A., Bieniek-Majka, M., Osinska, V., & Duch, W. (2022). Model of Trust Dissemination of Products Based on Fuzzy Aggregation Norms. *2022 17th Conference on Computer Science and Intelligence Systems (FedCSIS)*, 741–744. <https://doi.org/10.15439/2022F182>.
379. Dereziński K, Tołpa K, Furman Ł, Rutkowski T.M, Duch W. (2022) [Time-frequency analysis combined with recurrence quantification](#) for classification of onset of dementia using data from the oddball BCI paradigm.

Abstracts and posters.

291. Włodzisław Duch, Łukasz Furman, Ludovico Minati, and Krzysztof Tołpa. [Non-linear features for EEG based on recurrence analysis](#) and Short-Term Fourier Transform. 3rd Polish Conference on Artificial Intelligence, April 23-25, Gdynia, Poland (abstract + poster).
292. Furman, Ł, Duch W. (2022) Closed-loop neurofeedback based on acoustic stimulation [BCBI – BB (binaural beats)]. Doctoral Consortium/PhD Track at 2nd IEEE International Conference on Human-Machine Systems.

**Popular articles, interviews:**

292. Duch W, Szudy J. (2022), [Jerzy Aleksander Bodurka \(1964–2021\)](#). Głos Uczelni 1-2, 66-68, 2022
293. Duch W. (2022), [Tajemnice kosmosu](#). Głos Uczelni 5-8, 77, 2022
294. Duch W. (2022), [Kosmos i życie – lektura obowiązkowa i uzupełniająca \(1\)](#). Głos Uczelni 9-10, 6-12, 2022
295. Duch W. (2022), [O muzyce, ruchu i innych neuronalnych przyjemnościach](#). Ewie Walusiak-Bednarek opowiada prof. dr hab. Włodzisław Duch. Głos Uczelni 9-10, 20-26, 2022
296. Duch W. (2022), [Kosmos i życie – lektura obowiązkowa i uzupełniająca \(2\)](#). Głos Uczelni 11-12, 11-17, 2022

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2021    2021    2021    2021    2021    2021    2021    2021    2021    2021

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359. Duch W. (2021). Memetics and Neural Models of Conspiracy Theories. Patterns. Cell Press. DOI: <https://doi.org/10.1016/j.patter.2021.100353>
360. Rykaczewski, Krzysztof; Nikadon, Jan; Duch, Włodzisław; Piotrowski, Tomasz. (2021) supFunSim: spatial filtering toolbox for EEG. [Neuroinformatics](#) 19, 107–125 (IF 5.1)
361. Ratajczak E, Hajnowski M, Stawicki M, Duch W. (2021). Novel methodological tools for behavioral interventions: the case of HRV-biofeedback. Sham control and quantitative physiology-based assessment of training quality and fidelity. Sensors 21(11), 3670 <https://doi.org/10.3390/s21113670>.
362. Bonna, Kamil; Finc, Karolina; Zimmermann, Maria; Bola, Łukasz; Szul, Maciej; Mostowski, Piotr; Rutkowski, Paweł; Duch, Włodzisław; Marchewka, Artur; Jednoróg, Katarzyna; Szwed, Marcin. (2021) Early deafness leads to re-shaping of global functional connectivity beyond the auditory cortex. [Brain Imaging and Behavior](#), 15, 1469–1482 (IF 3.6, on line 23/07/2020)

363. I Visser, C Bergmann, K Byers-Heinlein, R Dal Ben, W Duch, S Forbes, L. Franchin, M. Frank, A. Geraci, J.K.Hamlin, Z. Kaldy, L. Kulke, C. Laverty, C. Lew-Williams, V. Mateu, J. Mayor, D. Moreau, I. Nomikou, T. Schuwerk, E. Simpson, L. Singh, M. Soderstrom, J. Sullivan, M. Van den Heuvel, G. Westermann, Y. Yamada, L. Zaadnoordijk, M. Zettersten (2022)  
Improving the generalizability of infant psychological research: The ManyBabies model. Behavioral and Brain Sciences 45, e35. DOI: <https://doi.org/10.1017/S0140525X21000455>  
Also a preprint [in PsyArXiv](#).
364. Gut, M, Finc K, Matulewski J, Goraczewski Ł, Walerzak-Więckowska A, Duch W. (2021)  
Number line estimation strategies used by children with dyscalculia and healthy controls. [The Review of Psychology](#) 64(3). DOI: <https://doi.org/10.31648/pp.7353>
365. M.K. Komorowski, K. Rykaczewski, T. Piotrowski, K. Jurewicz, J. Wojciechowski, A. Keitel, J. Dreszer, W. Duch (2021)  
ToFFi - Toolbox for Frequency-based Fingerprinting of Brain Signals.  
Preprint [arXiv:2110.09919](https://arxiv.org/abs/2110.09919), submitted to Neurocomputing.
366. Duch W, Tołpa K, Duda S, Furman Ł, Lewandowska M, Dreszer J. (2021).  
Neurodynamics of the brain revealed by EEG recurrence analysis.  
[Ninth Recurrence Plot Symposium](#), Lublin, Poland.
367. Duch W. (2021)  
[Zagadnienie interdyscyplinarności w perspektywie polityki naukowej w Polsce](#).  
Podsumowanie wprowadzenia do debaty "Interdyscyplinarność jako wyzwanie dla naukowstwa", przygotowane na spotkanie Komitetu Naukowstwa PAN 22/11/2019.  
[Zagadnienia Naukowstwa](#) 55(2), 39–45.
368. Duch W. (2021).  
Imagery agnosia and its phenomenology.  
[ArXiv CS/Bio](#), [PsyArXiv](#) (12/2021), extended version of the Annals of Psychology paper (2022, in print).
369. Duch W. (2021)  
[Neurocognitive Informatics Manifesto](#).  
ArXiv CS/Bio, 27 pages (updated version of 2009 paper)
370. Duch W. (2021)  
[Memetics and Neural Models of Conspiracy Theories](#).  
ArXiv.org > q-bio > arXiv:1508.04561, 14 pages (updated version of 2015 paper).
371. M. Komorowski, J. Dreszer, K. Jurewicz, J. Wojciechowski, T. Piotrowski, W. Duch. (2021)  
[Spectral Features of Human Brain Activity Are Related to Sensory-Associative Cortical Gradient](#)  
[27th Annual Meeting of the Organization for Human Brain Mapping](#). OHBM 2021, 21-25.06.2021 (virtual conference, poster 1325).

### Popular articles, interviews:

285. Centrum Nauki Kopernik w Warszawie, wystawa: "Przyszłość jest dziś. [Cyfrowy mózg](#)".  
Otwarcie 5.11.2021.  
Krótkie wideo wprowadzające do kilku ekspozycji.
286. Wywiad na temat Stanisława Lema, w programie "Astronarium" 17.10.2021 na różnych kanałach TVP3 i regionalnych; oraz [na YouTube](#).
287. Festiwal Nauki w Warszawie, debata główna, 2021.09.26: "[Czy nauka może przekroczyć samą siebie?](#)" Nagranie spotkania [na YouTube](#), [slajdy](#).

288. [Angela Merkel - najsilniejsza kobieta w polityce. Jaka jest prywatnie?](#) - Dzień Dobry TVN 19.09.21
289. WFAiS UMK, Toruń, 2021.03.04.  
Informatyka neurokognitywna: stan obecny, zastosowania w fizyce i chemii, perspektywy.  
[Nagranie na YouTube](#).
290. [WelInnovators Webinar](#), 2021.01.20, Anna Topol, discussion panel.
291. Duch W. (2021), W poszukiwaniu drogi. [Przestrzeń. Nieregularnik](#) 13, 37-45.
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**2020    2020    2020    2020    2020    2020    2020    2020    2020    2020**

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350. Joanna Dreszer, Marek Grochowski, Monika Lewandowska, Jan Nikadon, Joanna Gorgol, Bibiana Bałaj, Karolina Finc, Włodzisław Duch, Tomasz Piotrowski. (2020)  
[Spatiotemporal Complexity Patterns of the Frontoparietal Network Predict Fluid Intelligence: Sex Matters](#). Human Brain Mapping 41(17), 4846-4865 (IF 4.5)
351. Karolina Finc, Kamil Bonna, Xiaosong He, David Lydon-Staley, Simone Kühn, Włodzisław Duch and Danielle S. Bassett. (2020)  
[Dynamic reconfiguration of functional brain network during working memory training](#). [Nature Communications](#) 11, 2435 (IF=11.8), DOI: <https://doi.org/10.1038/s41467-020-15631-z>. See also [bioRxiv preprint](#) and [citing articles](#).
352. Duch. W. (2020) [IDyOT architecture - is this how minds operate?](#)  
[Physics of Life Reviews](#), Vol. 34–35, pp. 54-56 (IF. 13.8, online, in print 5/2020).
353. Duch W, Mikołajewski D. (2020) [Modelling effects of consciousness disorders in brainstem computational model](#) – Preliminary findings.  
Bio-Algorithms and Med-Systems 16(2), 1-10, 20190059, 2020.
354. Duch W. (2020) [Meta-analizy w badaniach nad nabywaniem języka](#).  
Psychologia Rozwojowa 25(1), 9-27.
355. Czachowski S, Dereziński K, Lewandowska M, Milner R, Ratajczak E, Stawicki M, Duch W. (2020)  
EEG-neurofeedback w procesach kontroli sieci sensomotorycznych – perspektywy badawcze.  
Rozdz. 13 w: [Nowe technologie i metody w psychologii](#). Red. M. Tojan i M. Gut. Wyd. Liberi Libri, Warszawa, pp. 281-298. ISBN 978-83-63487-43-0.
356. Duch W, Międzobrodzka E. (2020)  
[Edukacja wykorzystująca osiągnięcia neuronauki](#).  
W: XVII Konferencja [Informatyka w Edukacji](#), Toruń, 22-25.09.2020; str 1-11.
357. Rykaczewski, Krzysztof; Nikadon, Jan; Duch, Włodzisław; Piotrowski, Tomasz. (2020)  
supFunSim: spatial filtering toolbox for EEG. [bioRxiv preprint](#)
358. Duch. W. (2020) [Experiential Learning Styles and Neurocognitive Phenomics](#).  
PsyArXiv. August 30, 2020.  
[q-bio.NC ArXiv. January 12, 2021](#).

#### Popular articles, interviews:

279. Jak mózg tańczy? [Polski Teatr Tańca, Rozmównica](#) z Kayą Kołodziejczyk i prof. Włodzisławem Duchem, 25.04.2019.

280. Duch W. (2020), [Szczeble naukowej kariery. Pauza Akademicka](#) 530, 5.11.2020, str. 2.
281. Duch W. (2020), [Recenzja tłumaczenia na język polski](#) (tł. K. Cipora, A. Bereś, E. Międzobrodzka i J. Płachetka) raportu "[Neuronauka i Edukacja](#): Przegląd Interwencji i Podejść Edukacyjnych Korzystających z Osiągnięć Neuronauki. Pełen Raport i Podsumowanie" (uzupełniony i nieco rozszerzony w 2019 roku przez tłumaczy i recenzenta). Oryginalna wersja: Paul Howard-Jones, Neuroscience and Education: A Review of Educational Interventions and Approaches Informed by Neuroscience. Full Report and Executive Summary. Education Endowment Foundation 2014 ([patronat Centrum Kopernika UJ](#)).
282. Duch W. (2020), [Critical remarks on the first draft of the Recommendation on the "Ethics of Artificial Intelligence"](#), preliminary report prepared by the UNESCO experts.
283. Duch W. (2020), [Sztuczna inteligencja - szanse Polski](#). Sprawy Nauki 1 (246), 2020
284. Duch W. (2020), [Hamulce Rozwoju](#). Głos Uczelni 3-4, 22-27, 2020

**2019    2019    2019    2019    2019    2019    2019    2019    2019    2019**

340. Duch. W. (2019) Mind as a shadow of neurodynamics. [Physics of Life Reviews](#) 31: 28-31 ([preprint](#)). Special Issue "Physics of mind", Ed. F. Schoeller (IF. 13.8), online 9 July 2019 | [Citing articles](#).
341. Duch W. (2019), Autism Spectrum Disorder and deep attractors in neurodynamics | [Show abstract](#)  
Chapter 13, pp.135-148 in the Springer Handbook of [Multi-Scale Models of Brain Disorders](#): From Microscopic to Macroscopic Assessment of Brain Dynamics (Nov. 2019). DOI 10.1007/978-3-030-18830-6, ISBN 978-3-030-18829-0.
342. Aghabeig M, Bałaj B, Dreszer J, Lewandowska M, Milner R, Pawlaczyk N, Piotrowski T, Szymtke M, and Duch W.  
[Perception of non-native phoneme contrasts in 8-13 months infants](#): tensor-based analysis of EEG signals.  
[27th European Signal Processing Conference, EUSIPCO 2019](#), Corna, Spain, 2-6 Sept. 2019, pp. 2251-2256
343. Bonna, Kamil; Finc, Karolina; Zimmermann, Maria; Bola, Łukasz; Szul, Maciej; Mostowski, Piotr; Rutkowski, Paweł; Duch, Włodzisław; Marchewka, Artur; Jednoróg, Katarzyna; Szwed, Marcin.  
Early deafness leads to re-shaping of global functional connectivity beyond the auditory cortex. [arXiv.org > q-bio > arXiv:1903.11915](#) and in review in Brain Imaging and Behaviour (sub. 12/2018)
344. Duch W, Mikołajewski D. (2019) [Brain Stem – From General View To Computational Model Based On Switchboard Rules Of Operation](#). Bio-Algorithms and Med-Systems 16(1), 1-10, 20190059, 2019.
345. O. Sokolov, V. Osińska, A. Mrela, W. Duch, M. Burak. (2019/2020) [Scientists' Contribution to Science and Methods of Its Visualization](#).  
In: Świątek J., Borzemski L., Wilimowska Z. (eds) Information Systems Architecture and Technology: Proceedings of 40th Anniversary International Conference on Information Systems Architecture and Technology – ISAT 2019. Advances in Intelligent Systems and Computing, vol 1051. Springer, pp. 159-168, 2020



346. Rykaczewski, Krzysztof; Nikadon, Jan; Duch, Włodzisław; Piotrowski, Tomasz. SupFunSim: spatial filtering toolbox for EEG. [bioRxiv preprint](#) doi: <https://doi.org/10.1101/618694>
347. Karolina Finc, Kamil Bonna, Xiaosong He, David Lydon-Staley, Simone Kühn, Włodzisław Duch and Danielle S. Bassett. Dynamic reconfiguration of functional brain network during working memory training. [bioRxiv preprint](#)
348. J. Matulewski, B. Bałaj, I. Mościchowska, A. Ignaczewska, R. Linowiecki, J. Dreszer-Drogorób, W. Duch. The Markup Language for Designing Gaze Controlled Applications, p. 1-32, Human-Computer Studies, in rev. 7/2020), Long version in [arxiv: 1911.06541 Computer Science - Human-Computer Interaction](#)
349. Duch W. (2019) [Tańczące mózgi, tańczące ciała](#). Rozdział w [monografii na 45-lecie Polskiego Teatru Tańca](#), Wielość spojrzeń na taniec. 1973-2018. Wyd. Polski Teatr Tańca, Poznań. Str. 91-107. ISBN 978-83-951669-0-7

### Popular articles, interviews:

266. Duch W. (2019), [Po co nam sztuczna inteligencja](#). Rozmowa z prof. Włodzisławem Duchem. Tygodnik Polityka, str. 52-57
267. Duch W. (2019), Trudny problem świadomości. Psychologia Dziś (Wyd. Charaktery) 2/2019, str. 92-98. Wersja sieciowa: [Czy już rozumiemy świadomość?](#)
268. Duch W. (2019), [Hamulce rozwoju nauki](#). [Wszystko co najważniejsze](#) 15, s.5-6 (nieco krótsza wersja w druku 9.07.2019).
269. Duch W. (2019), [Hamulce rozwoju nauki: ocena czasopism](#). [Pauza Akademicka](#) 471, 16.05.2019, str. 4.
270. Duch W. (2019), [Hamulce rozwoju nauki: tradycja](#). [Pauza Akademicka](#) 469, 2.05.2019, str. 1.
271. Duch W. (2019), [AI: projekty, które mają przyszłość](#). Uwagi do strategicznego programu sztucznej inteligencji w Polsce: "Podstawy uczenia maszynowego, informatyka kognitywna i technologie neurokognitywne", przygotowanej dla OPI PIB.
272. [Lekcja mistrza Zen](#). Z Włodzisławem Duchem rozmawia Anna Mateja. Znak, nr 766, marzec 2019, str. 6-13
273. "[Nadchodzi-era-Homo-Sapiens Digital](#)", Express Bydgoski, 15.03.2019;
274. [Sztuczna inteligencja to droga na skróty](#). Wywiad 12/2019, [SztucznaInteligencja.org](#)
275. Nauka w Polsce, PAP 2019, krótkie wideo: [Wyzwania umysłowe](#) |

### Conference posters and abstracts

276. Komorowski MK, Wojciechowski J, Nikadon J, Piotrowski TJ, Dreszer J, Duch W (2019) Spectral Fingerprints: identification accuracy of regions of the human brain varies with an analyzed dataset - a MEG and EEG data study. Neuroinformatics 2019 Abstract. doi: 10.12751/incf.ni2019.0069
277. Finc K, Bonna K, Chojnowski M, Duch W (2019) FMRIDenoise: tool for automatic denoising and quality control of functional connectivity data. Neuroinformatics 2019 Abstract. doi: 10.12751/incf.ni2019.0077

278. Rykaczewski K, Nikadon J, Duch W, Piotrowski TJ (2019) supFunSim: spatial filtering toolbox for EEG.  
Neuroinformatics 2019 Abstract. doi: 10.12751/incf.ni2019.0082

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**2018    2018    2018    2018    2018    2018    2018    2018    2018    2018**

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330. Duch W. (2018), Multi-level Explanations in Neuroscience I: [From genes to subjective experiences](#).  
[Acta Physica Polonica B](#) 49(12), 1981-2010.  
Presented at the Cracow School of Theoretical Physics. Machine Learning Meets Fundamental Theory. Zakopane, 15-23 June 2018.
331. Komorowski M, Aghabeig M, Nikadon J, Piotrowski T, Dreszer J, Bałaj B, Lewandowska M, Wojciechowski J, Pawlaczyk N, Szmytke M, Cichocki A, and Duch W. (2018)  
Multi-level Explanations in Neuroscience II: [EEG Spectral Fingerprints and Tensor Decompositions for Understanding Brain Activity - initial results](#).  
[Acta Physica Polonica B](#) 49(12), 2011-2028.  
Presented at the Cracow School of Theoretical Physics. Machine Learning Meets Fundamental Theory. Zakopane, 15-23 June 2018.
332. Duch W. (2018), [Kurt Lewin, psychological constructs and sources of brain cognitive activity](#). | [Citing articles](#) | [Show abstract](#)  
Polish Psychological Forum 23(1), 5-19.  
Presented at: XXVI Psychology Colloquium, Polish Academy of Science "Brain-behavior relations in psychology", June 2017.  
[arXiv:1711.01767, Neurons and Cognition](#)
333. Duch W. (2018)  
[Hylomorphism extended: dynamical forms and minds](#).  
Philosophies 2018, 3, 36. Special Issue "Contemporary Natural Philosophy and Philosophies". Eds. G. Dodig-Crnkovic and M. J. Schroeder. Also a chapter in the book "[Contemporary Natural Philosophy and Philosophies - Part 1](#)".
334. O. Sokolov, W. Osińska, A. Mreła, W. Duch. (2018) [Modeling of scientific publications disciplinary collocation based on optimistic fuzzy aggregation norms](#).  
Advances in Intelligent Systems and Computing, Vol. 853, pp. 145-153
335. Duch W. (2018) [Separability is not the best goal for machine learning](#).  
cs arXiv preprint, arXiv:1807.02873
336. Duch W. (2018) [Eliminatywizm i konstrukty psychologiczne](#). | [Show abstract](#)  
Rozdział w monografii "Filozof w Krainie Umysłów", dedykowany Andrzejowi Klawiterowi z okazji 45-lecia pracy naukowej. Wyd. Naukowe Wydziału Nauk Społecznych UAM, Poznań, pp. 201-216, 2018.
337. Boruta, M., Dreszer, J., Pawlaczyk, N., Kmiecik, M., Grzybowska, M., Ignaczewska, A., Duch, W. (2018). [Gestures reflected – tracing gestural development from a child's EEG signal](#).  
In: Cuskley, C., Flaherty, M., Little, H., McCrohon, L., Ravignani, A. & Verhoef, T. (Eds.): The Evolution of Language: Proceedings of the 12th International Conference (EVOLANGXII).  
doi:10.12775/3991-1.010
338. Jacek Matulewski, Bibiana Bałaj, Ewelina Marek, Łukasz Piasecki, Włodzisław Duch.  
[MovEye: Gaze Control of Video Playback](#).  
ACM Symposium on Eye Tracking Research and Applications (ETRA 2018), Symposium on Communication by Gaze Interaction (COGAIN), Warsaw 14-17.06.2018. DOI: 10.1145/3206343.3206352



339. Rodkiewicz, J., Gut., M., Matulewski, J., Goraczewski, Ł., Mańkowska, K., Ciechalska, D., Mielewczyk, A., Witkowska, N., Duch., W. (2018). [Różnice w poziomie zdolności matematycznych w parach bliźniąt jedno- i dwujajowych.](#) [W:] M. Baran i J. Nyckowiak (red.) *Badania i rozwój młodych naukowców w Polsce: nauki przyrodnicze, cz. IV*, str. 133-140. Wyd. Młodzi Naukowcy, Poznań.

### Conference posters and abstracts

246. Miriam Kosik, Karolina Finc, Kamil Bonna, Simone Kühn, Włodzisław Duch. *Brain Functional Network Alterations Due to Increasing Demands of Visuospatial and Auditory Working Memory Task.* [Network Neuroscience](#), Paris 11.06.2018, P. 5
247. Karolina Finc, Miriam Kosik, Kamil Bonna, Włodzisław Duch and Simone Kühn. *Task-related functional network reconfiguration following 6-week working memory training.* [Network Neuroscience](#), Paris 11.06.2018, P15
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5. Duch W, Karwowski J (1981) *Symmetric group graphical approach to the configuration interaction method*. Lecture Notes in Chem **22**:260-271

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15. Duch W (1981) *Symmetric group graphical approach to the configuration interaction method*. Third West Coast Theoretical Chemistry Conference, NASA-Ames Center, California
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3. Duch W (1980) *The direct configuration interaction method for general multireference expansions: symmetric group approach*. Theor Chim Acta(Berl.) **57**:299-313
4. Duch W (1980) *Large-scale N-fermion calculations*. Computer Physics Communications **20**:49-52

#### Conference posters, abstracts, technical reports and book reviews

13. Duch W (1980) *New approach to the CI method*. XI-th Congress of the Polish Chemical Society, Wrocław, Poland
14. Duch W (1980) *Metoda bezpośredniego oddziaływania konfiguracyjnego*. Rozprawa doktorska. Instytut Fizyki UMK, Toruń, Maj 1980

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2. Duch W, Karwowski J (1979) *Coupling constants in the direct configuration interaction method*. Theor Chim Acta(Berl.) **51**:175-188

#### Conference posters, abstracts, technical reports and book reviews

9. Duch W, Karwowski J (1979) *Large-scale N-fermion calculations*. School of computational methods in theoretical physics, Roznov, Czechoslovakia
10. Duch W, Karwowski J (1979) *Direct determination of eigenvectors and eigenvalues*. XXVI-th Congress of the Polish Physical Society, Torun, Poland
11. Duch W (1979) *Generalization of the Roos scheme*. X-th Congress of the Polish Chemical Society, Wrocław, Poland
12. Duch W, Karwowski J (1979) *Calculation of the coupling constants in the direct CI method*. X-th Congress of the Polish Chemical Society, Wrocław, Poland

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#### Popular articles, interviews (written when I was PhD student):

1. Duch W (1978) *Out-of-body and reincarnation phenomena from the point of view of physics*. New Humanity, No.23-27, 34 pp.  
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2. Duch W (1978) [Tradycje Wschodu: Buddyzm](#). Przekrój N.1747, 1/10/1978
3. Duch W (1978) [Medytacja Transcendentalna](#). Przekrój N.1736, 16/7/1978 10.
4. Duch W (1978) [Medytacja](#). Przekrój N.1734, 2/7/1978

5. Duch W (1978) [Dwie półkule i twórczość](#). Przekrój N.1732, 18/6/1978, str. 20
6. Duch W (1978) [Elektronika i stresy](#) , Przekrój N.1730, 4/6/1978, str 21-22. Pierwszy artykuł po polsku na temat biofeedback!
7. Duch W (1978) [Życie po życiu](#). Przekrój N.1725, 30/4/1978. Pierwszy artykuł po polsku na temat doświadczeń bliskich śmierci (NDE).
8. Duch W (1978) [Niewiadome czy nieprawdopodobne](#). Przekrój N.1720, 26/3/1978

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1. Duch W, Karwowski J (1977) *Coupling constants in the direct configuration interaction method*. Preprint UMK No.357

## Patents

1. [Processing clinical text with domain-specific spreading activation methods](#).  
US Patent Application No. 12/006.813 (April 2008), published 2015, granted and published 6.01.2016, Patent 8,930,178 B2.  
co-authors: John Pestian, Paweł Matykiewicz, Włodzisław Duch, Tracy Glauser, Robert Kowatch, Jackie Grupp-Phelan; granted in Oct 25, 2016, U.S. No. 9,477,655 [Processing Text with Domain-Specific Spreading Activation Methods](#).
2. Włodzisław Duch, Bibiana Bałaj, Joanna Dreszer-Drogorób, Oleksandr Sokolov, Tomasz Komendziński, Jacek Matulewski, Dariusz Mikołajewski, Tomasz Piotrowski, Michał Meina System do wspomagania rozwoju percepcyjno-poznawczego niemowląt i małych Dzieci (System supporting perceptual-cognitive development of infants and babies), Zgłoszenie Patentowe PL P411648 (2015).
3. Układ aktywnego stymulatora ośrodków mowy, zwłaszcza niemowląt i dzieci.  
BUP nr: 99/03 str.73 zawierającej skrót wynalazku,  
Polish patent: granted in 2002, patent no. 184102, submitted on 1997.07.29, number 321411.

**In preparation    In preparation    In preparation    In preparation    In preparation**

1. Duch W, *Towards comprehensive approach to attention deficit disorders*.  
Neural Networks (in prep).
2. Duch W, *Consciousness, Top-Down Attention and Imagery Agnosia*.  
(in prep)
3. Duch W, *Autism*.  
New ideas in psychology? BBS? (in prep.)
4. Duch W, *Amusia and Talent*.  
New ideas in psychology? BBS? JCS? (in prep.)
5. Duch W, *Bridging the Mind-Brain Gap*.  
Journal of Consciousness Studies (in prep.)

6. Duch W, Biesiada J,  
*Boosted margin-based feature selection filter for microarray gene expression data.*

7. Duch W, *Mapping pursuit networks.*  
NPL (in prep.)

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Summary (all contributions, without books and papers in preparation):

14 papers in 1977-79; | 62 papers in 1980-89; | 59 papers in 1990-95, | 79 papers in 1996-99, razem 214 | 89 papers in 2000-03, razem 303 | 9 papers in 2004, | 17 papers in 2005, | 13 papers in 2006, | 20 papers in 2007 | 25 papers in 2008 | 16 papers in 2009 | 20 papers in 2010 | 19 papers in 2011 | 16 papers in 2012 | 21 papers in 2013 | 17 papers in 2014 | 12 papers in 2015 | 25 papers in 2016 | 12 papers in 2017 | 10 papers in 2018 | 11 papers in 2019 | 15=9+6 papers in 2020 | 13+7 papers in 2021 |

Total 2021: 371+134+153=658 printed, including posters, abstracts, interviews