

Gabriella Daroczy

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Education

- 2014 - 2020 PhD in Psychology, University of Tuebingen, Germany
"Linguistic and Arithmetic Factors in Word Problems"
23.02.2021, Magna Cum Laude
- From 2015 Associated Member in the LEAD Graduate School & Research Network
(Learning, Educational Achievement, and Life Course Development)
University of Tuebingen, Germany
- 02/2017-02/2018 Maternity leave
- 10/2010 – 05/2013 M.Sc. in Cognitive Science, University of Vienna, Austria
The Middle European Interdisciplinary Master Programme in Cognitive
Science (MEI:CogSci) *"Cognitive Aspects of Designing Dialogues in
Theorem-Prover Based Mathematics Assistants"*
Graduation with Distinction
- 09/2003 – 06/2008 M.Sc. Engineering & Management, Technical University of Miskolc,
Hungary
"Lifetime Management in Information Technology"
Graduation with Distinction

Teaching Experience

- Seminars in Diagnostics Performance/personality diagnostics, diagnostics of
professional aptitude, neuropsychological/developmental
diagnostics, intelligence, WS2013/14, WS2014/15, WS2015/16,
WS2016/17 SS2018, WS2018/19, WS2021/2022
- Practice in Diagnostics SS2014 SS2015, WS2015/16, SS2016, WS2016/17 SS2018,
WS2018/19, WS2021/2022, WS2022/2023, SS2023
- Methods/
Research Seminars/
Research to Practice Giftedness: From research to practice, SS2022
Role of eye movements in cognition, SS2021, SS2023
Human problem-solving skills and their diagnostics, SS2020
Cognitive processes in mathematical problem solving, SS2020
Mathematics Anxiety, SS15, WS2014/15, WS2022/2023
- Propaedeutic Practice WS2020/21, WS2019/20, WS2019/20, WS2022/2023

Working Experience

- from 02/2021 Postdoctoral researcher at the Diagnostics and Cognitive Neuropsychology, Psychology Institute, University of Tuebingen, Germany
- 11/2013 - 02/2021 Research associate at the Diagnostics and Cognitive Neuropsychology Psychology Institute, University of Tuebingen, Germany
- 10/2012 - 10/2013 Research associate at the emediaMonitor GmbH, Vienna, Austria
Research & Management Research in Big Data and Usability,
Fundraising in EU-Projects, FP7, Horizon 2020
- 10/2010 - 10/2012 Private mathematics & statistics instructor, Vienna, Austria
Lerntafel (volunteering) & KEG Nachhilfeinstitute
- 02/2011 - 07/2011 Intern at the Austrian Research Institute for Artificial Intelligence (OFAI), Vienna, Austria
Learning effects in Reckon & Choose (EU FP7 Project)
Evaluation, Usability
- 02/2011 - 07/2011 Semester Projects at the Comenius University of Bratislava, Slovakia
“Measuring the EEG mu rhythm desynchronization associated with motor actions”
“Nature of Human Consciousness and Narrativity”
- 09/2009 - 12/2011 Research associate at the Institute of Artificial Intelligence, Technical University of Miskolc, Hungary
Absolutorium, Knowledge Management, Language processing
- 06/2008 – 09/2009 Research associate at the Department for Research & Business Development, Rosenbauer International AG, Leonding, Austria
EMCC (EMEREC) KIRAS project, financed by the Federal Ministry for Transport, Innovation and Technology (BMVIT), Austria
Testing for usability and usability research

Member of the organization team in the following conferences

- 2016 Domain-General and Domain-Specific Foundation of Numerical and Arithmetic Processing
- 2015 Neuroeducation of Number processing
- 2014 Educational Neuroscience of Mathematics. Founded by GZ: NU 265/2-1.; LEAD: GSC 1028, und WissenschaftsCampus Tübingen

Funding & Stipends & Other

2023	Equal opportunities officer in the appointment committee for the W3 professorship in medical didactics, medical education research and simulation.
2022-2023	Athene Grant, University of Tuebingen, Germany (10.000 Euro)
2022-2023	Lead Intramural Research Grant, University of Tuebingen, Germany <i>Exploring Learner Strategies in Digital Games Using Eye Tracking</i> (9788 Euro)
2015-2016	Lead Intramural Research Grant, University of Tuebingen, Germany Mathematical and linguistic factors in solution of word problems. <i>Children-Large Scale Study & Neurocognitive Foundation</i> (7610 Euro)
2014-2015	Lead Intramural Research Grant, University of Tuebingen, Germany <i>Linguistic and Mathematical Factors in Word Problem Solving</i> (3404 Euro)
09/2011-12/2011	CEEPUS: Comenius University of Bratislava
08/2008 – 09/2008	Sommer University DAAD: Heinrich-Heine-University of Düsseldorf
01/2005 – 06/2005	Erasmus: Technical University of Tampere, Finland
2008	Fellowship granted by the Hungarian Republic (Given to 0.8% of the students)
2005	Fellowship granted by the Hungarian Republic
2003	Fellowship granted by the Hungarian Republic

Skills

Languages	German (near native) English (business fluent) Hungarian (native)
Software	SPSS, R, MPlus Eyelink (Eye-movement, scan path analyses), Microsoft Office, Affinity Designer
Hobbies	Digital & traditional Illustration

Publication List

- Daroczy, G. (2023). Linguistic and Arithmetic Factors in Word Problems (Doctoral dissertation, Universität Tübingen).
- Serena Rossi, S., Xenidou-Dervou, I., Emine Simsek, E., Christina Artemenko, C., Daroczy, G., Nuerk, H.-C., Cipora, K., (2022) Mathematics-gender stereotype endorsement and its influence on mathematics anxiety, mathematics self-concept and arithmetic performance in males and females. *Annals of the New York Academy of Sciences*, doi: 10.17605/OSF.IO/2JMFK
- Daroczy, G., Fauth, B., Meurers, W. D., Cipora, K., & Nuerk, H.-C. (in preparation). The relation of environmental factors to the task difficulty in word problems. doi:10.31234/osf.io/dz9he
- Daroczy, G., Meurers, W. D., Artemenko, C., Wolska, M., & Nuerk, H.-C. (submitted, pre-print Influence of task characteristics on eye-movement patterns related to numerical and textual information in arithmetic word problems.
- Daroczy, G., Fauth, B., Meurers, W. D., Cipora, K., & Nuerk, H.-C. (submitted, pre-print). The relation of environmental factors to the task difficulty in word problems. doi:10.31234/osf.io/dz9he
- Daroczy, G., Meurers, D., Heller, J., Wolska, M., & Nuerk, H. C. (2020). The interaction of linguistic and arithmetic factors affects adult performance on arithmetic word problems. *Cognitive processing*, 21(1), 105-125.
- Daroczy, G., Wolska, M., Meurers, W. D. and Nuerk, H-C (2015) Word problems: a review of linguistic and numerical factors contributing to their difficulty. *Front. Psychol.* 6:348. doi: 10.3389/fpsyg.2015.0034
- Artemenko, C., Daroczy, G., & Nuerk, H.-C. (2015). Neural correlates of math anxiety - an overview and implications. *Frontiers in Psychology*, 6, 1333. dx.doi.org/10.3389/fpsyg.2015.01333
- Daroczy, G., Neuper, W. (2013). Error-Patterns within “Next-Step-Guidance” in TP-based Educational Systems. In: F.Maric and W.Neuper, editors, *eJMT the Electronic Journal of Mathematics & Technology*, 7:2, 175-194.
- Daroczy, G., (2012). Affective Dimensions in Computing Metaphors, XXIV. *Microcad International Scientific Conference, Miskolc, Hungary*, ISBN 978-963-661-773-8
- Daroczy, G., (2010). Artificial Intelligence and the Role of Humanities (Analysis, Applications, Models). *JSC10, Junior Scientists Conference Vienna, Austria*, ISBN 978-3-200-01797-9
- Daroczy, G., (2002). Games. *PI Mathematical Magazine (for High-School Students)* 2002/2003 I-II.

Talks

- Daroczy, G., Roth, L., Nuerk, H.-C. Number Processing in Arithmetic Word Problems. The Mathematical Cognition and Learning Society Conference (MCLS), 01.06.2022-03.06.2022, Antwerp, Belgium
- Daroczy, G., Linguistic and Mathematical Factors in Solving of Word Problems. LEAD Retreat, 16-18.10.2019, Heiligkreuztal, Germany.
- Daroczy, G., On the Influence of Linguistic and Numerical Complexity in Word Problems. 12th biannual conference of the German Cognitive Science Society (KogWis 2014), 29.09.2014-02.10.2014, Tübingen, Germany.
- Daroczy, G., Neuper, W., Dialogue with a Mathematical Assistant Cognitive Aspects of Designing Rule Based Dialogue Guidance AISB 2012 *Symposium on Mathematical Practice and Cognition II*, 2012, Birmingham, UK
- Daroczy, G., Neuper, W., Cognitive Science meets Computer Mathematics. A Case Study, Computer Algebra and Dynamic Geometry Systems in Mathematics Education, 2012 Novi Sad, Serbia
- Daroczy, G., Lifetime Management of Steel Bridges, Scientific Student's Associations Conference, 2007, Miskolc, Hungary [1. Place]
- Daroczy, G., Remarks in the History of Mathematics, 6th Junior Mathematical Congress 23-28.06.2004, Stockholm, Sweden.

Conferences

- Daroczy, G., Roth, L., von der Malsburg, T, Nuerk, H.-C. Scan Path Analysis in Arithmetic Word Problems, European Summer School on Eye-Movement (ESSEM), 05.09.2022-10.09.2022 Bonn, Germany [Poster]
- Daroczy, G., Wolska, M., Meurers, D., & Fauth, B., & Nuerk, H.-C. (2019) The relation of environmental factors and task difficulty in word problems, LEAD Retreat, LEAD Graduate School – Learning, Educational Achievement, and Life Course Development, Bad Urach, Germany, 11-12.04.2019. [Poster]
- Daroczy, G., Wolska, M., Meurers, D., & Fauth, B., & Nuerk, H.-C. (2018) Classroom Management in Word Problem Solving, Workshop: Integrating Educational and Cognitive Perspectives on Mathematics Tuebingen, Germany, 28-29.09.2018. [Poster]
- Daroczy, G., Wolska, M., Meurers, D., & Fauth, B., & Nuerk, H.-C. (2018) The Role of Environment in Word Problem Solving LEAD Retreat, LEAD Graduate School – Learning, Educational Achievement, and Life Course Development, Schwäbisch Gmünd, Germany, 14-16.04.2018. [Poster]
- Daroczy, G., Wolska, M., Meurers, D., & Nuerk, H.-C. (2016) Reading and solving arithmetic word problems in children and adults, Workshop: Domain-General and Domain-Specific Foundations of Numerical and Arithmetic Processing, Tuebingen, Germany, 28-30.09.2016 [Best-Poster Award]
- Daroczy, G., Wolska, M., Meurers, D. and Nuerk, H.-C. (2016). Text problems are (almost) individual: Delineating the linguistic, arithmetic and general cognitive

components underlying their solution: An Eye-tracking study”, TEAP Conference, Heidelberg, Germany, 21-23.03.2016. [Best Poster Award]

- Daroczy, G., Wolska, M., Meurers, D. and Nuerk, H.-C. (2016). The influence of mathematical, linguistics and cognitive factors on children’s solution of addition and subtraction word problems, LEAD Retreat, LEAD Graduate School – Learning, Educational Achievement, and Life Course Development, Bad Urach, Germany, 14-16.04.2016. [Poster]
- Daroczy, G., Wolska, M., Meurers, D. and Nuerk, H.-C. (2016). Reading Strategies in Arithmetic One-step Word Problems Solving, 26th Annual Meeting of the Society for Text & Discourse, Kassel, Germany, 18-20.07.2016. [Poster]
- Daroczy, G., Wolska, M., Meurer, D., Nuerk, H.-C. (2015) Factors contributing to the Difficulty of Arithmetic Word Problems, Workshop "Neuroeducation of Number Processing", Tuebingen, Germany, 21-23.10.2015. Hannover, Germany. [Poster]
- Daroczy, G., Wolska, M., Meurer, D., Nuerk, H.-C. (2015) The Influence of Linguistics and Numerical Factors on Children’s Arithmetic Word Problem Solution, LEAD Retreat, LEAD Graduate School – Learning, Educational Achievement, and Life Course Development, Tuebingen, Germany, 14-16.10.2015. Blaubeuren, Germany. [Poster]
- Daroczy, G., Wolska, M., Meurer, D., Nuerk, H.-C. (2015) Linguistic and mathematical factors in word problem solving - Evidence from Eyetracking, LEAD Retreat, LEAD Graduate School – Learning, Educational Achievement, and Life Course Development, Tuebingen, Germany, 15-17.04.2015. Bad Urach, Germany. [Poster]
- Daroczy, G., Wolska, M., Mikavica, V., Meurer, D., Nuerk, H.-C. (2014) Linguistical and Numerical Influences on Numeracy in Word Problems, Workshop "Educational Neuroscience of Mathematics", Tuebingen, Germany, 03.-04.10.2014. Tübingen, Germany. [Poster]
- Daroczy, G., Wolska, M., Meurer, D., Nuerk, H.-C. (2014) Linguistic and Mathematical Factors in Word Problem Solving, LEAD Retreat, LEAD Graduate School – Learning, Educational Achievement, and Life Course Development, Tuebingen, Germany, 15-17.10.2014. Blaubeuren, Germany. [Poster]
- Daroczy, G., Petta, P. (2011) Learning effects in the simulation based learning experience: Reckon & Choose 17-19.06.2011 Ljubljana, Slovenia MEi:CogSci Conference [Poster]
- Daroczy, G., Farkas I., (2012) Measuring the EEG mu rhythm desynchronization associated with motor actions IK2012 International Conference on Cognitive Science Günne, Germany 16-25.03.2012. [Poster]