

Dr. Mojtaba Soltanlou

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(click on each icon to view the profile)



Professional Experience

- 01/2020-** **Postdoctoral Fellow**
Brain and Mind Institute, University of Western Ontario, London, Canada
- 12/2017-12/2019** **Postdoctoral Fellow**
Psychology Department, University of Tuebingen, Tuebingen, Germany
LEAD Graduate School & Research Network, University of Tuebingen, Tuebingen, Germany
- 03/2015-11/2017** **Research Associate**
Psychology Department, University of Tuebingen, Tuebingen, Germany
- 06/2013-02/2015** **Research Associate**
Leibniz-Institut für Wissensmedien, Tuebingen, Germany
- 08/2012-05/2013** **Research Associate**
Institute of Medical Psychology and Behavioural Neurobiology, Tuebingen, Germany
- 09/2011-07/2012** **Research Associate**
Division of Cognitive Neuroscience, University of Tabriz, Tabriz, Iran
- 10/2008-07/2012** **Senior Occupational Therapist**
Beautiful Mind Paediatric Rehabilitation Clinic, Tehran, Iran
- 09/2006-04/2009** **Occupational Therapist**
Azadi Neuropsychiatry Hospital, Tehran, Iran

Education

- 09/2012-11/2017** **PhD in Neural and Behavioural Sciences**
Graduate Training Centre of Neuroscience, University of Tuebingen, Tuebingen, Germany
Max Planck Research School for Cognitive and Systems Neuroscience, Tuebingen, Germany
Thesis: Neural and Behavioral Correlates of Arithmetic Development and Learning in Children (summa cum laude: Excellent Grade)
Supervisors: Hans-Christoph Nuerk, Andreas J. Fallgatter, Ann-Christine Ehlis
- 09/2005-08/2008** **MSc in Occupational Therapy**
Faculty of Rehabilitation, Tehran University of Medical Sciences, Tehran, Iran
Thesis: Executive Dysfunctions in Children with Cerebral Palsy (Excellent Grade)
Supervisors: Mehdi Tehrani Doost, Gholam Reza Olyaei, Mehdi Abdolvahab
- 09/2001-07/2005** **BSc in Occupational Therapy**
Faculty of Rehabilitation, Iran University of Medical Sciences, Tehran, Iran

Thesis: The Relationship between Cognitive Deficits and Functional Balance in Adults with Right Hemisphere Stroke (Excellent Grade)
Supervisors: Soraya Rahim-Zadeh Rahbar, Ghorban Taghi-Zadeh
09/1996-08/2000 **High School Diploma in Experimental Sciences**
Allameh Helli, Tehran, Iran

Research Interests

- Developmental Cognitive Neuroscience, Child Neuropsychology, Educational Neuroscience
- Knowledge Acquisition, Magnitude Process (Number, Space, Time), Executive Functions
- Neurodevelopmental Disorders, Learning Disorders
- Neuroimaging (fNIRS, EEG, tDCS)

Funding History

Deferred **264,669.12 €**
Applicant: Soltanlou
Fund: Marie Skłodowska-Curie Individual Fellowship, the European Commission
Project: The Role of Prefrontal Cortex in Functional Brain Organization of Number Processing in Infants
Host: Spelke Lab, Harvard University
Diagnostics and Cognitive Neuropsychology Lab, University of Tuebingen
Status: Accepted (*pending approval of US Visa*)

06/2020-05/2023 **225,000.00 C\$**
Applicant: Soltanlou
Fund: Tier 1 BrainsCAN Postdoctoral Fellowship Program, University of Western Ontario, Canada
Project: How Do We Know “2” But Not “3” Means “two”? Neural Correlates of Symbolic Number Knowledge in Kindergarteners
Host: Numerical Cognition Lab, University of Western Ontario
Language, Reading and Cognitive Neuroscience Lab, University of Western Ontario
Status: Accepted

01/2020-12/2021 **116,000.00 C\$**
Applicant: Soltanlou
Fund: Tier 2 BrainsCAN Postdoctoral Fellowship Program, University of Western Ontario, Canada
Project: How Do We Know “2” But Not “3” Means “two”? Neural Correlates of Symbolic Number Knowledge in Kindergarteners
Host: Numerical Cognition Lab, University of Western Ontario
Language, Reading and Cognitive Neuroscience Lab, University of Western Ontario
Status: Completed

03/2019-08/2019 **18,390.66 €**
Applicant: Soltanlou
Fund: Bridging, the Excellence Initiative of the German Research Foundation (ZUK 63), University of Tuebingen, Germany
Project: Postdoctoral fellowship
Status: Completed

07/2018-12/2018 **4,833.60 €**
Applicant: Soltanlou, Masson

Fund: Intramural, the LEAD Graduate School & Research Network, University of Tuebingen, Germany
Project: Order Counts for Counting: Struggles with Multi-digit Numbers in a Second Language” in collaboration with Université Catholique de Louvain in Belgium
Status: Completed

09/2018 12,902.00 €
Applicant: Soltanlou, Dresler, Bahnmueller
Fund: Intramural, the LEAD Graduate School & Research Network, University of Tuebingen, Germany
Project: Integrating Educational and Cognitive Perspectives on Mathematics Conference
Status: Completed

09/2016 9,875.00 €
Applicant: Soltanlou
Fund: The Excellence Initiative of the German Research Foundation (ZUK 63), University of Tuebingen
Project: Domain-General and Domain-Specific Foundation of Numerical and Arithmetic Processing Conference
Status: Completed

Prize, Awards, and Honours

06/2019 1,886.00 €
Travel award from the German Academic Exchange Service (DAAD) to participate at the 2nd Conference of the Mathematical Cognition and Learning Society (MCLS), Balancing the Equation: Connecting Math Cognition and Education, Ottawa, Canada

09/2017 200.00 €
Travel award from the Universitätsbund to participate at the 20th Conference of the European Society for Cognitive Psychology (ESCoP), Potsdam, Germany

10/2016 200.00 €
Travel award from the Universitätsbund to participate at the Biennial Meeting of the Society for functional Near Infrared Spectroscopy, Paris, France

10/2016 200.00 €
Travel award from the Universitätsbund to participate at the Meeting of the EARLI SIG 22 on Neuroscience and Education, Amsterdam, the Netherlands

09/2011 One of the 4 accepted (<1%) in the national PhD entrance exam of Neuroscience, Iran

09/2005 Ranked 3rd (<5%) in the national MSc entrance exam of Occupational Therapy, Iran

07/2005 Ranked 3rd in the four-year bachelor, Iran University of Medical Sciences, Iran

Publications in International Peer-reviewed Scientific Journals

1. **Soltanlou, M.**, Nuerk, H.-C., Artemenko, C. (in-principle acceptance, Stage 1 Registered Report). Cognitive enhancement or emotion regulation: The influence of brain stimulation on math anxiety. *Cortex*. doi:10.17605/OSF.IO/6EN48 [\[link\]](#)
2. **Multi-lab Registered Replication Report** with 48 authors in 17 labs (in press). Perceiving numbers causes spatial shifts of attention by Fischer et al., (2003) in *Nature Neuroscience. Advances in Methods and Practices in Psychological Science*. [\[link\]](#)

3. **Soltanlou, M.**, Artemenko, C. (in press). Using light to understand how the brain works in the classroom. *Frontiers for Young Minds*.
4. Artemenko, C.*, Sitnikova, M.A.*, **Soltanlou, M.**, Dresler, T., Nuerk, H.-C. (2020). Functional lateralization of arithmetic processing in the parietal cortex is associated with handedness. *Scientific Reports*. 10(1):1775. doi:10.1038/s41598-020-58477-7 [\[link\]](#)
5. **Soltanlou, M.***, Nazari, M.A.*, Vahidi, P., Nemati, P. (2020). Explicit and implicit timing of short time intervals: Using the same method. *Perception*. 49(1): 39-51. doi:10.1177/0301006619889554 [\[link\]](#)
6. Schilling T., **Soltanlou, M.**, Seshadri, Y., Nuerk, H.-C., Bahmani, H. (2020). Blue light and melanopsin contribution to the pupil constriction in the blind-spot, parafovea and periphery. *Healthinf*. In *Proceedings of the 13th International Joint Conference on Biomedical Engineering Systems and Technologies*. 5(Healthinf):482-489. doi:10.5220/0008972404820489 [\[link\]](#)
7. Cipora, K., **Soltanlou, M.**, Smaczny, S., Göbel, S.M., Nuerk, H.-C. (2019). Automatic place-value activation in magnitude-irrelevant parity judgement. *Psychological Research*. 1-16. doi:10.1007/s00426-019-01268-1 [\[link\]](#)
8. **Soltanlou, M.**, Coldea, A., Artemenko, C., Ehlis, A.-C., Fallgatter, A.J., Nuerk, H.-C., Dresler, T. (2019). No difference in the neural representation of number and letter symbols in children: An fNIRS study. *Mind, Brain, and Education*. 13(4):313-325. doi:10.1111/mbe.12225 [\[link\]](#)
9. Artemenko, C., **Soltanlou, M.**, Dresler, T., Ehlis, A.-C., Nuerk, H.-C. (2019). Individual differences in math ability determine neurocognitive processing of arithmetic complexity – A combined fNIRS-EEG study. *Frontiers in Human Neuroscience*. 13:227. doi:10.3389/fnhum.2019.00227 [\[link\]](#)
10. **Soltanlou, M.**, Artemenko, C., Dresler, T., Fallgatter, A.J., Nuerk, H.-C.*, Ehlis, A.-C.* (2019). Oscillatory EEG changes during arithmetic learning in children. *Developmental Neuropsychology*. 44(3): 1-17. doi:10.1080/87565641.2019.1586906 [\[link\]](#)
11. Cipora, K., **Soltanlou, M.**, Reips, U.-D., Nuerk, H.-C. (2019). The SNARC and MARC effects can be examined beyond the lab: Large scale Web assessment methods function for small and flexible cognitive effects. *Behavioral Research Methods*, 1-17. doi:10.3758/s13428-019-01213-5 [\[link\]](#)
12. **Soltanlou, M.**, Artemenko, C., Dresler, T., Fallgatter, A.J., Ehlis, A.-C., Nuerk, H.-C. (2019). Math anxiety in combination with low visuospatial memory impairs math learning in children. *Frontiers in Psychology*, 10:89. doi:10.3389/fpsyg.2019.00089 [\[link\]](#)
13. Huber, S., Nuerk, H. C., Reips, U. D., **Soltanlou, M.** (2019). Individual differences influence two-digit number processing, but not their analog magnitude processing: a large-scale online study. *Psychological Research*, 83(7), 1444-1464. doi:10.1007/s00426-017-0964-5 [\[link\]](#)
14. Artemenko, C., **Soltanlou, M.**, Dresler, T., Ehlis, A.-C.*, Nuerk, H.-C.* (2018). The neural correlates of arithmetic difficulty depend on mathematical ability: Evidence from combined fNIRS and ERP. *Brain Structure and Function*, 1-14. doi:10.1007/s00429-018-1618-0 [\[link\]](#)
15. **Soltanlou, M.**, Artemenko, C., Ehlis, A.-C., Huber, S., Fallgatter, A.J., Dresler, T.*, Nuerk, H.-C.* (2018). Reduction but not shift in brain activation in arithmetic learning in children: A simultaneous fNIRS-EEG study. *Scientific Reports*, 8(1):1707. doi:10.1038/s41598-018-20007-x [\[link\]](#)
16. Artemenko, C., **Soltanlou, M.**, Ehlis, A.-C., Nuerk, H.-C.*, Dresler, T.* (2018). The neural correlates of mental arithmetic in adolescents: a longitudinal fNIRS study. *Behavioral and Brain Functions*, 14(1):5. doi:10.1186/s12993-018-0137-8 [\[link\]](#)
17. **Soltanlou, M.***, Sitnikova, M.A.*, Nuerk, H.-C., Dresler, T. (2018). Applications of functional near-infrared spectroscopy (fNIRS) in studying cognitive development: The case of mathematics and language. *Frontiers in Psychology*, 9:277. doi:10.3389/fpsyg.2018.00277 [\[link\]](#)
18. Artemenko, C.*, Coldea, A.*, **Soltanlou, M.**, Dresler, T., Nuerk, H.-C., Ehlis, A.-C. (2018). The neural circuits of number and letter copying: an fNIRS study. *Experimental Brain Research*, 236(4):1129–1138. doi:10.1007/s00221-018-5204-8 [\[link\]](#)
19. Heubner, L., Cipora, K., **Soltanlou, M.**, Schlenker, M.-L., Lipowska, K., Göbel, S.M., Domahs, F., Haman, M., Nuerk, H.-C. (2018). A mental odd-even continuum account: Some numbers may be more odd than others, and some numbers may be more even than others. *Frontiers in Psychology*, 9:1081. doi:10.3389/fpsyg.2018.01081 [\[link\]](#)

20. Nazari, M.A., Mirloo, M. M., Rezaei, M., **Soltanlou, M.** (2018). Emotional stimuli facilitate time perception in children with attention-deficit/hyperactivity disorder. *Journal of Neuropsychology*, 12(2):165-175. doi:10.1111/jnp.12111 [\[link\]](#)
21. **Soltanlou, M.**, Artemenko, C., Dresler, T., Haeussinger, F.B., Fallgatter, A.J., Ehlis, A.-C.* , Nuerk, H.-C.* (2017). Increased arithmetic complexity is associated with domain-general but not domain-specific magnitude processing in children: A simultaneous fNIRS-EEG study. *Cognitive, Affective, & Behavioral Neuroscience*, 17(4):724-736. doi:10.3758/s13415-017-0508-x [\[link\]](#)
22. Nazari, M.A.* , Caria, A., **Soltanlou, M.*** (2017). Time for action versus action in time: time estimation differs between motor preparation and execution. *Journal of Cognitive Psychology*, 29(2):129-136. doi:10.1080/20445911.2016.1232724 [\[link\]](#)
23. Nemati, P., Schmid, J., **Soltanlou, M.**, Krimly, J.-T., Nuerk, H.-C., Gawrilow, C. (2017). Planning and self-control, but not working memory directly predict multiplication performance in adults. *Journal of Numerical Cognition*, 3(2):441-467. doi:10.5964/jnc.v3i2.61 [\[link\]](#)
24. **Soltanlou, M.**, Pixner, S., Nuerk, H.-C. (2015). Contribution of working memory in multiplication fact network in children may shift from verbal to visuo-spatial: A longitudinal investigation. *Frontiers in Psychology*, 6:1062. doi:10.3389/fpsyg.2015.01062 [\[link\]](#)

Submitted/in Revision Publications in International Peer-reviewed Scientific Journals

1. Akbari, S., **Soltanlou, M.**, Sabourimoghddam, H., Nuerk, H.-C., Leuthold, H. (in revision). The complexity of simple counting: ERP findings reveal early perceptual and late numerical processes in different arrangements. *Scientific Reports*.
2. Cipora, K., Loenneker, H.D., **Soltanlou, M.**, Lipowska, K., Domahs, F., Göbel, S.M., Haman, M., & Nuerk, H.-C. (under review). Syntactic influences on numerical processing in adults: Limited but detectable. *Cognitive Processing*.

Publications in National Peer-reviewed Scientific Journals

1. Moazen, M., Nazari, M.A., Yaghooti, F., Mirzakanloo, T., **Soltanlou, M.** (2015). Time Reproduction Deficit in autistic children and its relationship to executive functions. *Advances in Cognitive Science*, 17(2):23-31. [\[link\]](#)
2. Nazari, M.A., **Soltanlou, M.**, Saeedi Dehaghani, S., Damya, S., Rastgar Hashemi, N., Mirloo, M. M. (2014). The effect of gender, valence and arousal of Persian emotional words on time perception. *Journal of Social Cognition*, 2(4):62-73. [\[link\]](#)
3. **Soltanlou, M.**, Anbara, T., Taghi-Zadeh, G., Rahim-Zadeh Rahbar, S., Karimi, H. (2013). Assessing the relationship between cognitive deficits and functional balance in right adult stroke patients. *Urmia Medical Journal*, 24(5):295-301. [\[link\]](#)
4. Nazari, M.A., Mirloo, M. M., **Soltanlou, M.**, Rezaei, M., Roshani, A., Asadzadeh, S. (2013). Design and development of the time discrimination threshold computerized task. *Advances in Cognitive Science*, 15(1):67-76. [\[link\]](#)
5. Salemi Khamene, A., Ghahari, S., **Soltanlou, M.**, Darabi, J. (2013). Effectiveness of pivotal response treatment on communicative and behavioral disorder of 8-12 years-old autistic boys. *J Gorgan Uni Med Sci.*, 15(1):6-11. [\[link\]](#)
6. **Soltanlou, M.**, Olyaei, G., Tehrani Dost, M., Abdolvahab, M., Bagheri, H., Faghihzadeh, S. (2009). Comparison of attentional set shifting in cerebral palsy children with normal in aged 7-12 years. *Modern Rehabilitation Journal*, 2(3&4):60-65. [\[link\]](#)
7. **Soltanlou, M.**, Olyaei, G., Tehrani Dost, M., Abdolvahab, M., Bagheri, H., Faghihzadeh, S. (2008). Comparison of spatial working memory and strategy use in cerebral palsy children with normal subjects with 7-12 years old. *Modern Rehabilitation Journal*, 2(1):9-14. [\[link\]](#)

Book Chapters

1. **Soltanlou, M.**, Jung, S., Roesch, S., Ninaus, M., Brandelik, K., Heller, J., Grust, T., Nuerk, H.-C., & Moeller, K. (2017). Behavioral and neurocognitive evaluation of a web-platform for game-based learning of orthography and numeracy. In Buder J., Hesse F. (Eds.) *Informational Environments* (pp. 149-176). Springer Nature, Cham. doi:10.1007/978-3-319-64274-1_7 [[link](#)]
2. Cipora, K., Schroeder, P., **Soltanlou, M.**, Nuerk, H.-C. (2018). More space, better mathematics: is space a powerful tool or a cornerstone for understanding arithmetic? In K. S. Mix & M. T. Battista (Eds.), *Visualizing Mathematics: The Role of Spatial Reasoning in Mathematical Thought* (pp. 77-116). Springer Nature. doi:10.1007/978-3-319-98767-5_4 [[link](#)]

Invited Talks

1. **Soltanlou, M.** (2020). Open science. *School of Cognitive Sciences, Institute for Research in Fundamental Sciences (IPM)*. December 24, Tehran, Iran [invited, webinar]
2. **Soltanlou, M.** (2019). Neurocognitive foundations of math anxiety. *The 9th Iranian Symposium of Cognitive Neuropsychology*. December 25, Tehran, Iran [invited]
3. **Soltanlou, M.** (2019). Open science. *School of Cognitive Sciences, Institute for Research in Fundamental Sciences (IPM)*. December 24, Tehran, Iran [invited]
4. **Soltanlou, M.** (2019). Neuroscience of Mathematics Learning and Development. *The 8th Basic and Clinical Neuroscience Congress*. December 18, Tehran, Iran [invited]
5. **Soltanlou, M.** (2019). Open science. *Neuroscience Research Center, Iran University of Medical Sciences*. October 21, Tehran, Iran [invited]
6. **Soltanlou, M.** (2019). Neuropsychology of number processing and mathematics. *National Brain Mapping Laboratory*. October 2, Tehran, Iran [invited]
7. **Soltanlou, M.** (2019). Dyscalculic brain. *Division of Cognitive Neuroscience, Tabriz University*. October 13, Tabriz, Iran [invited]
8. **Soltanlou, M.** (2019). Applications and limitations of functional near-Infrared spectroscopy (fNIRS) in Cognitive Neuroscience. *Brain and Mind Institute, University of Western Ontario*. June 19, London, Canada [invited]
9. **Soltanlou, M.** (2019). Neuroscience of arithmetic development and learning. *Interdisciplinary Summer School on Cognitive Neuroscience, Neuroeducation and Applied Neurotechnologies*. Belgorod National Research University, June 3-8, Belgorod, Russia [invited]
10. **Soltanlou, M.** (2019). Hands-on training on conducting functional near-Infrared spectroscopy (fNIRS) measurement. *Interdisciplinary Summer School on Cognitive Neuroscience, Neuroeducation and Applied Neurotechnologies*. Belgorod National Research University, June 3-8, Belgorod, Russia [invited]

Talks

1. **Soltanlou, M.** (2019). Arithmetic training improves neural functionality in children with dyscalculia. *The Second Conference of Mathematical Cognition and Learning Society (MCLS), Balancing the equation: Connecting math cognition and education*, June 16-18, Ottawa, Canada
2. **Soltanlou, M., Cipora, K.** (2019). Linguistic influences on early symbolic knowledge acquisition in preschoolers. *The Second Conference of Mathematical Cognition and Learning Society (MCLS), Balancing the equation: Connecting math cognition and education*, June 16-18, Ottawa, Canada
3. **Soltanlou, M.** (2017). Math anxiety impairs arithmetic learning in children. *European Workshop on Cognitive Neuropsychology*. January 22-27, Bressanone, Italy
4. **Soltanlou, M.** (2015). The neural correlates of arithmetic in children: An fNIRS study. *4th Basic and Clinical Neuroscience Congress*. December 23-25, Tehran, Iran

5. **Soltanlou, M.** (2015). Learning via online learning game; Evidence from arithmetic learning in children. *9th Conference of the Media Psychology Division*. September 9-11, Tuebingen, Germany
6. **Soltanlou, M.** (2014). Language differences in numerical processing: Evidence from an online experiment. *12th Biannual Conference of the German Cognitive Science Society (KogWis 2014)*. September 29- October 2, Tuebingen, Germany
7. **Soltanlou, M.** (2009). Spatial planning in spastic diplegic cerebral palsy. *14th Congress of Iranian Occupational Therapy*. November 10-11, Tehran, Iran
8. **Soltanlou, M.** (2009). Executive dysfunction theory in autism. *14th National Congress of Occupational Therapy*. November 10-11, Tehran, Iran
9. **Soltanlou, M.** (2009). Cognitive deficit is associated with functional balance in right adult stroke patients. *14th National Congress of Occupational Therapy*. November 10-11, Tehran, Iran
10. **Soltanlou, M.** (2006). FM systems. *10th National Congress of Audiology*. November 20, Tehran, Iran
11. **Soltanlou, M.** (2004). Sensory integration theory in pervasive developmental disorders. *5th Scholar Congress of Occupational Therapy*. May 25, Tehran, Iran

Poster Presentations

1. Schilling, T., Seshadri, Y., **Soltanlou, M.**, Bahmani, H. (2019). Blue light enhances pupil-response when stimulated locally to the blind-spot. *33rd International Pupil Colloquium*. October 2-4, Murcia, Spain
2. Schilling, T., Seshadri, Y., **Soltanlou, M.**, Bahmani, H. (2019). Pupillary change depends on stimulus duration and luminance when blind-spot is stimulated with blue light. *The 25th Symposium of the International Colour Vision Society (ICVS)*. July 5-9, Riga, Latvia
3. Haman, M., Cipora, K., Domahs, F., Lipowska, K., Nuerk, H.-C., **Soltanlou, M.** (2019). The impact of grammar on acquisition of the exact number system revealed by magnitude comparison task in Polish and German preschoolers. *European Workshop on Cognitive Neuropsychology*. January 20-25, Bressanone, Italy
4. Lipowska, K., **Soltanlou, M.**, Cipora, K., Domahs, F., Nuerk, H.-C., Haman, M. (2018). Spatial-numerical associations in non-symbolic and symbolic magnitude comparison in preschoolers. *Workshop on Integrating Educational and Cognitive Perspectives on Mathematics*. September 26-28, Tuebingen, Germany
5. Sitnikova, M., Artemenko, C., **Soltanlou, M.**, Dresler, T., Nuerk, H.-C. (2018). An fNIRS study on the functional lateralization of approximate calculation in the parietal cortex based on handedness. *Workshop on Integrating Educational and Cognitive Perspectives on Mathematics*. September 26-28, Tuebingen, Germany
6. Neumann, J., **Soltanlou, M.**, Cipora, K., Lipowska, K., Domahs, F., Haman, M., Nuerk, H.-C. (2018). Linguistic influences on symbolic magnitude comparison in preschoolers. *Workshop on Integrating Educational and Cognitive Perspectives on Mathematics*. September 26-28, Tuebingen, Germany
7. Krieg, A., Laicher, H., Bahnmueller, J., Nuerk, H.-C., **Soltanlou, M.** (2018). Probing attentional control theory in math anxiety. *Workshop on Integrating Educational and Cognitive Perspectives on Mathematics*. September 26-28, Tuebingen, Germany
8. Cipora, K., **Soltanlou, M.**, Lipowska, K., Loenneker, H.D., Domahs, F., Göbel, S.M., Haman, M., & Nuerk, H.-C. (2018). Influences of grammatical number on numerical processing in educated adults. *Third Jean Piaget Conference: The origin of numbers*. June 27-29, Geneva, Switzerland
9. Artemenko, C., **Soltanlou, M.**, Moeller, K., Nuerk, H.-C., Bahnmueller, J. (2018). Re-inverting inversion of German number word through changes in writing direction. *Third Annual Symposium: The Symbol Grounding Problem*. June 7-8, Loughborough, UK
10. **Soltanlou, M.**, Artemenko, C., Dresler, T., Nuerk, H.-C. (2018). Theoretical model of arithmetic development and learning in children – Evidence from empirical studies. *The EARLI SIG 22 on Neuroscience and Education*. June 4-6, London, UK

11. Artemenko, C., **Soltanlou, M.**, Dresler, T., Ehlis, A.-C., Nuerk, H.-C. (2018). Neurocognitive processing of arithmetic complexity depends on math ability – An fNIRS study. *The EARLI SIG 22 on Neuroscience and Education*. June 4-6, London, UK
12. **Soltanlou, M.**, Coldea, A., Artemenko, C., Dresler, T., Fallgatter, A.J., Ehlis, A.-C., Nuerk, H.-C. (2017). Neural representation of lexico-numerical processing in children: An fNIRS study. *Workshop on Linguistic and Cognitive Influences on Numerical Cognition*. September 8-9, Tuebingen, Germany
13. Heubner, L., Schlenker, M.-L., **Soltanlou, M.**, Cipora, K., Göbel, S.M., Domahs, F., Lipowska, K., Haman, M., Nuerk, H.-C. (2017). Which factors affect response speed in a two-digit number parity judgment task: a cross-lingual study. Part III: Auditory presentation. *Workshop on Linguistic and Cognitive Influences on Numerical Cognition*. September 8-9, Tuebingen, Germany
14. Schlenker, M.-L., Heubner, L., **Soltanlou, M.**, Cipora, K., Göbel, S.M., Domahs, F., Lipowska, K., Haman, M., Nuerk, H.-C. (2017). Which factors affect response speed in a two-digit number parity judgment task: a cross-lingual study. Part II: Number words. *Workshop on Linguistic and Cognitive Influences on Numerical Cognition*. September 8-9, Tuebingen, Germany
15. Schlenker, M.-L., Heubner, L., **Soltanlou, M.**, Cipora, K., Göbel, S.M., Domahs, F., Lipowska, K., Haman, M., Nuerk, H.-C. (2017). Which factors affect response speed in a two-digit number parity judgment task: a cross-lingual study. Part I: Arabic notation. *Workshop on Linguistic and Cognitive Influences on Numerical Cognition*. September 8-9, Tuebingen, Germany
16. Smaczny, S., **Soltanlou, M.**, Göbel, S.M., Nuerk, H.-C., Cipora, K. (2017). The parity congruency effect depends on the target: Evidence for automatic place-value processing. *Workshop on Linguistic and Cognitive Influences on Numerical Cognition*. September 8-9, Tuebingen, Germany
17. **Soltanlou, M.**, Coldea, A., Artemenko, C., Dresler, T., Fallgatter, A.J., Ehlis, A.-C., Nuerk, H.-C. (2017). Neural representation of lexico-numerical processing in children: An fNIRS study. *The 20th Conference of the European Society for Cognitive Psychology (ESCoP)*. September 3-6, Potsdam, Germany
18. **Soltanlou, M.**, Artemenko, C., Dresler, T., Ehlis, A.-C., Fallgatter, A.J., Nuerk, H.-C. (2016). The neural correlates of arithmetic complexity in children differ from those in adults: An fNIRS study. *The Biennial Meeting of the Society for functional Near Infrared Spectroscopy*. October 13-16, Paris, France
19. Cipora, K., **Soltanlou, M.**, Reips, U., Nuerk H.-C. (2016). SNARC and MARC over the Web - a large scale online study. *Workshop on Domain-General and Domain-Specific Foundations of Numerical and Arithmetic Processing*. September 28-30, Tuebingen, Germany
20. Akbari, S., Leuthold, H., **Soltanlou, M.**, Sabourimoghddam, H., Babapour, J., Nuerk, H.-C. (2016). The effect of arrangement on enumeration speed and its early and sensory event-related brain potentials. *Workshop on Domain-General and Domain-Specific Foundations of Numerical and Arithmetic Processing*. September 28-30, Tuebingen, Germany
21. **Soltanlou, M.**, Artemenko, C., Dresler, T., Fallgatter, A.J., Nuerk, H.-C., Ehlis, A.-C. (2016). Neurophysiological changes during arithmetic learning in children. *Workshop on Domain-General and Domain-Specific Foundations of Numerical and Arithmetic Processing*. September 28-30, Tuebingen, Germany
22. Sitnikova, M., Artemenko, C., **Soltanlou, M.**, Bahnmueller, J., Dresler, T., Nuerk, H.-C. (2016). Parietal activation during approximate calculation tasks in left- and right-handed students assessed with functional near-infrared spectroscopy (fNIRS). *Workshop on Domain-General and Domain-Specific Foundations of Numerical and Arithmetic Processing*. September 28-30, Tuebingen, Germany
23. Nemati, P., Schmid, J., **Soltanlou, M.**, Krimly, J.-T., Nuerk, H.-C., Gawrilow, C. (2016). Contribution of domain-general factors in complex multiplication in adults: Role of planning and self-control. *Workshop on Domain-General and Domain-Specific Foundations of Numerical and Arithmetic Processing*. September 28-30, Tuebingen, Germany
24. **Soltanlou, M.**, Artemenko, C., Dresler, T., Ehlis, A.-C., Fallgatter, A. J., Huber S., Nuerk, H.-C. (2016). Children learn arithmetic differently than adults: Evidence from simultaneous fNIRS-EEG study. *The EARLI SIG 22 on Neuroscience and Education*. June 23-25, Amsterdam, the Netherlands

25. Artemenko, C., **Soltanlou, M.**, Ehlis, A.-C., & Nuerk, H.-C., & Dresler, T. (2016). The neural correlates of mental arithmetic in children – A longitudinal fNIRS study. *The EARLI SIG 22 on Neuroscience and Education*. June 23-25, Amsterdam, the Netherlands
26. Artemenko, C., **Soltanlou, M.**, Dresler, T., Ehlis, A.-C., Nuerk, H.-C. (2015). Multiplication in a natural setting – An fNIRS study in children. *Symposium on Neuroeducation of Number Processing*. October 21-23, Hanover, Germany
27. Artemenko, C., **Soltanlou, M.**, Dresler, T., Ehlis, A.-C., Nuerk, H.-C. (2015). Neural correlates of the basic arithmetic operations in children – A longitudinal fNIRS study. *Symposium of the LEAD Graduate School on Learning, Educational Achievement, and Life Course Development*. October 14-16, Blaubeuren, Germany
28. Artemenko, C., **Soltanlou, M.**, Dresler, T., Ehlis, A.-C., Nuerk, H.-C. (2015). How high and low performers deal with task difficulty in two-digit mental arithmetic – Evidence from fNIRS. *Symposium of the LEAD Graduate School on Learning, Educational Achievement, and Life Course Development*. April 15-17, Bad Urach, Germany
29. **Soltanlou, M.**, Artemenko, C., Huber, S., Dresler, T., Ehlis, A.-C., Fallgatter, A. J., Nuerk, H.-C. (2015). Neurocognitive foundations of interactive arithmetic learning in children: Evidence from fNIRS. *33rd European Workshop on Cognitive Neuropsychology*. January 25-30, Bressanone, Italy
30. Artemenko, C., Dresler, T., **Soltanlou, M.**, Ehlis, A.-C., Nuerk, H.-C. (2014). The neural correlates of the carry effect in two-digit addition. *Workshop on Educational Neuroscience of Mathematics*. October 3-4, Tuebingen, Germany
31. **Soltanlou, M.**, Pixner, S., Kaufmann, L., Nuerk, H.-C. (2014). On the development of the multiplication fact network in elementary school children. *The EARLI SIG 22 on Neuroscience and Education*. June 12-14, Goettingen, Germany
32. Woitscheck, C., Dresler, T., **Soltanlou, M.**, Kaufmann, L., Pixner, S., Moeller, K., Ehlis, A.-C., Nuerk, H.-C. (2014). The borrowing effect in two-digit subtraction: Developmental aspects and neural correlates. *The EARLI SIG 22 on Neuroscience and Education*. June 12-14, Goettingen, Germany
33. Woitscheck, C., **Soltanlou, M.**, Dresler, T., Ehlis, A.-C., Nuerk, H.-C. (2014). Neurofunctional Foundations of Arithmetic Processes. *Symposium of the LEAD Graduate School on Learning, Educational Achievement, and Life Course Development*. April 10-12, Freudenstadt, Germany
34. **Soltanlou, M.**, Nazari, M. A., Nemati, P. (2012). Temporal decision making, *2nd CIN systems retreat*. September 10, Reutlingen, Germany
35. **Soltanlou, M.**, Anbara, T., Taghizadeh, G., Rahimzadeh Rahbar, S., Karimi, H. (2011). Cognitive deficit is associated with functional balance in right adult stroke patients, *4th International Conference of Cognitive Science*. May 10-12, Tehran, Iran
36. **Soltanlou, M.**, Tehrani Doost, M., Olyaei, G., Abdolvahab, M., Bagheri, H., Faghizadeh, S. (2009). Executive dysfunctions in spastic bilateral cerebral palsy. *3rd International Conference of Cognitive Science*. March 3-5, Tehran, Iran
37. **Soltanlou, M.**, Tehrani Doost, M., Olyaei, G., Abdolvahab, M. (2008). Prefrontal cortex. *13th National Congress of Occupational Therapy*. May 27-28, Tehran, Iran

Editorial Services

- The Editorial Board member of the *Journal of Numerical Cognition (JNC)*, from January 2019 [[link](#)]
- Editor of an special issue on “Direct and Conceptual Replication in Numerical Cognition” in *Journal of Numerical Cognition* [[link](#)]

Ad hoc Reviewer of International Scientific Journals

- Acta Psychologica

- Advances in Cognitive Science
- Asia Pacific Journal of Education
- Brain and Cognition
- British Journal of Educational Psychology
- Child Neuropsychology
- Developmental Cognitive Neuroscience
- Developmental Neuropsychology
- Experimental Brain Research
- Frontiers in Psychology
- Journal of Cognition and Development
- Journal of Experimental Psychology: General
- Journal of Experimental Psychology: Learning, Memory, and Cognition
- Journal of Experimental Child Psychology
- Journal of Neuroscience Research
- Journal of Numerical Cognition
- Perception
- Psychological Research
- Psychophysiology
- Scientific Reports
- Trends in Neuroscience and Education

Administrative and Organizational Experiences

- Organizer of a symposium on *Neuroscience of Dyscalculia*, The Second Conference of Mathematical Cognition and Learning Society (MCLS), University of Carleton, June 16-18, 2019, Ottawa, Canada
- Postdoc representative of *LEAD Graduate School & Research Network*, University of Tuebingen, November 2017-October 2018
- Lab manager of *Diagnostic and Cognitive Neuropsychology*, University of Tuebingen, January 2016-November 2019
- DFG grant manager of the project *Linguistic Influences on Numerical Cognition: A cross-cultural investigation using natural specificities of Polish and German languages*, University of Tuebingen, March 2016-August 2018
- Head of organizing committee of workshop on *Integrating Educational and Cognitive Perspectives on Mathematics*, University of Tuebingen, September 26-28, 2018, Tuebingen, Germany
- Head of organizing committee of workshop on *Linguistic and Cognitive Influences on Numerical Cognition*, University of Tuebingen, September 8-9, 2017, Tuebingen, Germany
- Head of organizing committee of workshop on *Domain-General and Domain-Specific Foundation of Numerical and Arithmetic Processing*, University of Tuebingen, September 28-30, 2016, Tuebingen, Germany
- A member of organizing committee of workshop on *Neuroeducation of Number Processing*, October 21-23, 2015, Hanover, Germany

- A member of organizing committee of workshop on *Educational Neuroscience of Mathematics*, University of Tuebingen, October 3-4, 2014, Tuebingen, Germany
- A member of organizing committee of workshop on *Development of Numerical Processing and Language*, University of Tuebingen, October 7-8, 2013, Tuebingen, Germany
- Head of organizing committee, *5th Scholar Congress of Occupational Therapy*, Iran University of Medical Sciences, May 25, 2004, Tehran, Iran

Teaching Qualification and Experiences

Western Certificate in University Teaching and Learning (ongoing)

Components: Microteaching requirements (completed)
 10 workshops in the future prof series (half way)
 Teaching mentor program (completed)
 Teaching dossier (coming soon)
 Written project (coming soon)

Summer term

2019

Topic: Application and pre-processing of functional Near Infrared Spectroscopy
Level: Bachelor and master (summer school)
University: Belgorod Research State University, Russia

Summer term

2019

Topic: Designing an experiment with OpenSesame
Level: Bachelor and master (summer school)
University: Belgorod Research State University, Russia

Winter term

2018/19

Topic: Math anxiety
Level: Bachelor
Topic: Cultural influences on numerical cognition
Level: Bachelor
University: Tuebingen, Germany

Summer term

2018

Topic: Math anxiety
Level: Bachelor
Topic: Cultural influences on numerical cognition
Level: Bachelor
University: Tuebingen, Germany

Winter term

2017/18

Topic: Learning disorders
Level: Bachelor
Topic: Numerical cognition
Level: Master
University: Tuebingen, Germany

Summer term

2017

Topic: Learning disorders
Level: Bachelor
Topic: Linguistic influences on numerical cognition
Level: Bachelor
University: Tuebingen, Germany

Winter term

2016/17

Topic: Linguistic influences on numerical cognition
Level: Master
University: Tuebingen, Germany

Summer term

2016

Topic: Numerical cognition

Level: Bachelor
University: Tuebingen, Germany

Co-supervisor of Students' Theses

1. Sara-Leanda Mormer Uni. of Tuebingen, BSc in psychology, Apr 2019-Mar 2020
2. Lisa Schmidt Uni. of Tuebingen, BSc in psychology, Apr-Sep 2019
3. Alexander Derksen Uni. of Tuebingen, Internship in psychology, Oct 2018-Mar 2019
4. Olivia Schuele Uni. of Tuebingen, BSc in cognitive science, May-Sep 2018
5. Johanna Neumann Uni. of Tuebingen, BSc in psychology, Apr-Sep 2018
6. Marie-Lene Schlenker Uni. of Tuebingen, MSc in psychology, Apr-Sep 2017
7. Lia Heubner Uni. of Tuebingen, MSc in psychology, Apr-Sep 2017
8. Hannah Loenneker Uni. of Tuebingen, BSc in psychology, Apr-Sep 2017
9. Florine Winkler Uni. of Tuebingen, BSc in cognitive science, Apr-Sep 2017
10. Jacqueline Jaus Uni. of Tuebingen, BSc in psychology, Apr-Sep 2017
11. Jennifer Them Uni. of Tuebingen, BSc in cognitive science, Apr-Nov 2016
12. Annalena Kukofka Uni. of Tuebingen, BSc in psychology, Apr-Sep 2015
13. Franziska Schumacher Uni. of Tuebingen, BSc in psychology, Apr-Sep 2015
14. Anne Kathrin Buesemeyer Uni. of Innsbruck, Internship in psychology, Jun-Sep 2015
15. Andra Coldea Uni. of Glasgow, Internship in psychology, Jun-Sep 2015
16. Stefania Macchione Uni. of Padua, MSc in clinical psychology, Apr-Sep 2014
17. Franziska Hegger Uni. of Tuebingen, BSc in psychology, Apr-Sep 2014
18. Amanda Lillywhite Uni. of Glasgow, Internship in psychology, Apr-Sep 2013

Professional Trainings

- Internet-based Data Collection and Analysis in Decision Making. The 2nd Summer School. University of Konstanz, September 11-15, 2017, Konstanz, Germany
- C++, Academic center of education, culture and research, November, 2011, Tehran, Iran
- Quantitative EEG: measurements and analyses, Institute of Cognitive Science Study, July 12-14, 2011, Tehran, Iran
- Human EEG: measurements and analyses in cognitive tasks, 4th international conference of cognitive science, May 10-12, 2011, Tehran, Iran
- FSL training workshop for fMRI data analysis, Research Centre for Science and Technology in Medicine, February 21-22, 2010, Tehran, Iran
- MATLAB, Hubbell premise wiring, April, 2009, Tehran, Iran
- EEG Neurofeedback in ADHD, July, 2007, Tehran, Iran

Professional Memberships

- 2019-present Member of the Mathematical Cognition and Learning Society (MCLS)
- 2017-2018 Member of the European Society for Cognitive Psychology (ESCoP)

- 2016-2018 Member of Society of functional Near-Infrared Spectroscopy (sfNIRS)
- 2015-2016 Member of Society for Neuroscience (SfN)
- 2006-2011 Member of Iran Medical Council
- 2003-2011 Member of Iranian Society for Occupational Therapy

Language Skills

- Persian: Native
- English: Fluent
- German: Fluent
- Arabic: Basic
- Turkish: Basic

Neuroscientific Techniques

- fNIRS (functional Near-Infrared Spectroscopy)
- EEG (Electroencephalography)
- tDCS (transcranial Direct Current Stimulation)
- Physiological measures (skin conductance, heart rate)

Programming and Analysis Skills

- Neurobehavioral Presentation software, OpenSesame, Psytask, MATLAB
- SPSS, RStudio, JASP, jamovi
- Brainstorm, EEGLab
- Online Survey, Microsoft office

International Collaborators

- Prof. Edward Gibson, Brain and Cognitive Sciences, MIT, USA, egibson@mit.edu
- Dr. Ann-Christine Ehlis, Department of Psychiatry and Psychotherapy, University Hospital of Tuebingen, Germany, ann-christine.ehlis@med.uni-tuebingen.de
- Prof. Marc Joanisse, Department of Psychology and the Brain & Mind Institute, University of Western Ontario, Canada, marcj@uwo.ca
- Prof. Maciej Haman, Department of Psychology, University of Warsaw, Poland, maciej.haman@psych.uw.edu.pl
- Prof. Frank Domahs, Institute of German Linguistics, University of Marburg, Germany, domahs@uni-marburg.de
- Dr. Silke Göbel, Department of Psychology, University of York, UK, silke.goebel@york.ac.uk
- Dr. Thomas Dresler, LEAD Research Network, University of Tuebingen, Germany, Thomas.Dresler@med.uni-tuebingen.de

- Dr. Mohammad Ali Nazari, Cognitive Neuroscience Lab, University of Tabriz, Iran, nazaripsycho@yahoo.com
- Prof. Ulf-Dietrich Reips, Department of Psychology, University of Konstanz, Germany, reips@uni-konstanz.de
- Dr. Attila Krajcsi, Cognitive Psychology Department, Faculty of Education and Psychology, Eötvös Loránd University, krajcsi.attila@ppk.elte.hu
- Dr. Nicolas Masson, Institute for Research in Psychological Sciences, Université Catholique de Louvain, Belgium, nicolas.masson@uclouvain.be
- Dr. Tom Gallagher-Mitchell, Department of Psychology, Liverpool Hope University, UK, mitchet@hope.ac.uk
- Prof. Peter Brugger, Department of Neuropsychology, University Hospital of Zürich, Switzerland, Peter.Brugger@usz.ch
- Dr. Maria A. Sitnikova, Belgorod National Research University, Russia, furmanchuk@bsu.edu.ru

Academic Referees

- Prof. Hans-Christoph Nuerk, Department of Psychology, University of Tuebingen, Germany, hc.nuerk@uni-tuebingen.de
- Prof. Daniel Ansari, Department of Psychology and the Brain & Mind Institute, University of Western Ontario, Canada, daniel.ansari@uwo.ca
- Prof. Andreas J. Fallgatter, Department of Psychiatry and Psychotherapy, University Hospital of Tuebingen, Germany, Andreas.Fallgatter@med.uni-tuebingen.de