

# Curriculum Vitae

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2025

## Personal Details:

Name: Janka Szeibert  
Birth Date: 03.08.1994.  
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## Studies:

2005-2013 Budai Ciszterci Szent Imre Gimnázium  
2013-2019 Eötvös Loránd University  
2019-2023 Ph.D. studies at Mathematics Doctoral School,  
Mathematics Didactics Program of the Eötvös Loránd  
University (ELTE)

## Research Groups

2019- PME working group on ‘International perspectives on proof and proving’  
leader: David Alexander Reid  
2022- MTA-ELTE Theory of Learning Mathematics Research Group  
leader: Szabó Csaba  
2024- ELTE-DOKK Research Group: ELTE, Digital Education Development  
Competence Center

## Scholarships and awards

2023 "Köbűki" scholarship for teachers in talent development  
2023 Reményi díj  
2019 Pro Scientia Gold Medal  
2019-2020 New National Excellence Program of the Ministry of Human Capacities  
2018-2019 New National Excellence Program of the Ministry of Human Capacities  
2018-2019 National Scholarship for Tertiary Education  
2017-2018 New National Excellence Program of the Ministry of Human Capacities  
2017 ELTE Faculty of Science Outstanding Student of the Faculty

## Position held:

2024 – Edutus University, researcher  
2024 – HUN-REN Alfréd Rényi Institute of Mathematics, young researcher  
2022- Assistant lecturer at Eötvös Loránd University (ELTE), Faculty of Primary and  
Pre-School Education

## Degrees:

2024 Ph.D-degree in mathematics didactics (ELTE)  
2019 High-school teacher of mathematics and physics, MSc (ELTE)

### Educational activities:

2018 –2024 Teacher of Mathematics at the Fazekas Mihály Primary and Secondary School in Budapest

### Supervisor works

- 2024 Scientific Student Conference (OTDK) on Subject Pedagogy and Educational Technology co-tutoring  
Virág Buda, Rebecca Prins: *A kifejtős és feleletválasztós tesztelés hatásának vizsgálata egy egyetemi matematika kurzuson*
- 2024 – PhD supervisor of Anna Stirling, in ELTE Doctoral School of Mathematics, Didactics Program
- 2024 Thesis co-tutoring:  
- Eszter Leskovics - *Hogyan érezzük jobban magunkat a matematika órán? A játékosítás módszerének kísérleti alkalmazása egy Montessori iskolában*  
- Petra Farkas Fruzsina - *Mennyit érnek a pontok? Játékosítás a matematikában*
- 2023 Scientific Student Conference (OTDK) on Subject Pedagogy and Educational Technology co-tutoring  
Rebecca Prins, Ágnes Sauerné Feczko: *A játékosítás hatása a matematika tudásra és a matematikai attitűdre középiskolában*

### Invited lectures:

2025. March At the Fazekas+ Festival in the Fazekas Mihály Budapest Primary and Secondary School
2025. January Edutus University
2024. Nov Reformed Pedagogical Institute, professional training for teachers
2024. Nov-Dec ELTE Eötvös József Collegium
2024. May-Jun Edutus University
2023. April Reformed Pedagogical Institute, professional training for teachers
2021. Autumn Eötvös Loránd University, Faculty of Science, Institute of Physics
2021. July Rácz László Vándorgyűlés
2019. November Eötvös Loránd University, Department of Geophysics
2019. November Palacký University Olomouc
2019. September Eötvös Loránd University, Mathematical Institute
2019. April Charles University, Prague
2019. January Budapest Business School, Faculty of Hospitality and Tourism
2018. November Automatization Institute of the Hungarian Academy of Sciences, Budapest
2018. October Szeged University
2018. September PAB III. Board of Mathematics and Informatics, University of Pécs
2018. May ELTE Eötvös Loránd University, Department of Geophysics
2017. November Pavol Jozef Šafárik University, Kosice
2017. May Széchenyi István University, Győr

## Conference presentations:

2025. July *Problem-posing is solved - or how we created a framework for students' complex development*  
48<sup>th</sup> Annual Meeting of the Group for the Psychology of Mathematics Education (PME48), Santiago
2025. May *Problem Posing in the Mathematics Classroom – I know it is effective, but how can I implement it?* The 10th International Scientific Colloquium Mathematics and Children, Eszék, Croatia
2024. Aug *The impact of novelty effects on gamification in non-digital environments*  
13<sup>rd</sup> YERME Summer School (YESS13), Santander, Spain
2024. July *An empirical study of the effect of using long term gamification in high school mathematics lesson*  
and  
*21<sup>st</sup> century competencies: Didactical insights on changes in the mathematics curriculum*  
and  
*Improving mathematical thinking by playing board games in mathematics lessons*  
47<sup>th</sup> Annual Meeting of the Group for the Psychology of Mathematics Education (PME47), Auckland
2024. April *A játékosítás hatása a matematikatudásra és a matematikai attitűdre 9. és 10. osztályban*  
Research in Didactics of Mathematics and Computer Science, Szeged
2023. May *The potential of number theory in the development of mathematical thinking*  
The 9th International Scientific Colloquium Mathematics and Children, Eszék, Croatia
2023. April *A matematikai gondolkodás fejlesztése számelméleti feladatokkal*  
Research in Didactics of Mathematics and Computer Science, Nagyvárad, Romania
2022. April *How to calculate  $\cos 15^\circ$  and Representation of irrational numbers in school*  
Research in Didactics of Mathematics and Computer Science, Baja, Hungary
2021. August *The potential of gamification in high school: why, when and how?*  
11th YERME Summer School (YESS11), Brixen, Italy
2020. January *Teszteljük a tesztet. A geometriai megértés szintjeinek újragondolása magyarországi teszteredmények alapján*  
Research in Didactics of Mathematics and Computer Science, Sárospatak, Hungary
2019. July *Test-enhanced learning in studying mathematics at secondary school and university and Testing the test. Rethinking the levels of understanding geometry based on Math students' van Hiele test result*  
43rd Annual Meeting of the Group for the Psychology of Mathematics Education (PME43), Pretoria, South Africa
2019. Nov *Potentials and barriers of efficacy in math education for unmotivated students*  
Varga 100 – Connecting Tamás Varga's Legacy and Current Research in

- Mathematics Education, Budapest, Hungary, poster presentation (joint work with Csilla Zámbó)
2018. July *Efficiency of test-enhanced learning in teaching elementary geometry*  
42nd Annual Meeting of the Group for the Psychology of Mathematics Education (PME42), Umea, Sweden
2018. January *A teszteléeses tanulás hatékonyságának vizsgálata az elemi geometria tanításában*  
Research in Didactics of Mathematics and Computer Science, Hajdúszoboszló, Hungary

### **National Competitions (OTDK) - Learning and Teaching Methodology - Knowledge Technology Section:**

2017. *Tanítási módszerek és értékelés - egy esettanulmány*  
(supervisor: Csaba Szabó)  
second place
2019. *Teszteljük a tesztet. A geometriai megértés szintjeinek újragondolása a magyarországi diákok teszt-eredményei alapján*  
(supervisor: Csaba Szabó)  
first place
- A teszteléeses tanulás hatékonyságának vizsgálata az elemi geometria tanításában*  
(supervisor: Csaba Szabó)  
first place
- Matematikatanár szakos hallgatók probléma-alkotási képességeinek fejlesztése*  
(supervisor: Csaba Szabó)  
second place and special prize of Charitable Foundation for Natural Sciences Education in Memoriam Szabó Szabolcs
- Az előhívási hatás eredményessége a deduktív következtetést igénylő feladatok esetén*  
(supervisor: Csaba Szabó, László Bernáth)  
second place
- Modellezési problémák – avagy az öltöztetés veszélyei*  
(supervisor: Csaba Szabó, co-supervisor: Éva Vásárhelyi)  
special prize
- I contributed as co-presenter/co-author at the conference lectures, invited lecture sessions and competitions with Csaba Szabó, Anna Muzsnay and Csilla Zámbó.*

### **Publications**

Szeibert, J., Szabó, C. & Stirling, A. K. (2025). *Problem-posing is solved - or how we created a framework for students' complex development*. In C. Cornejo, P. Felmer, D. M. Gómez, P. Dartnell, P. Araya, A. Peri, & V. Randolph (Eds.). *Proceedings of the 48th*

Conference of the International Group for the Psychology of Mathematics Education: General Contributions, p. 330. PME.

Szeibert, J., Szabó, C., Vas, V., & Zámbo, C. (2025). A matematikai gondolkodás fejlesztése számelméleti feladatokkal. *Gyermeknevelés Tudományos Folyóirat*, 13(2), 309-326. <https://doi.org/10.31074/gyntf.2025.2.309.326>

Stirling, A., Szabó, C., Szörényi, S., Vásárhelyi, É. & Szeibert, J. (2024). On elementary representations of  $\cos 75^\circ$  and  $\cos 15^\circ$ . *Annales Mathematicae et Informaticae*. <https://doi.org/10.33039/ami.2024.12.002>

Muzsnay, A., Zámbo, C., Szeibert, J., Bernáth, L., Szilágyi, B., & Szabó, C. (2024). How do testing and test-potentiated learning versus worked example method affect medium- and long-term knowledge in abstract algebra for pre-service mathematics teachers? *European Journal of Psychology of Education*. <https://doi.org/10.1007/s10212-024-00869-8>

Muzsnay, A., Szabó, C., & Szeibert, J. (2024). Retrieval practice – a tool to be able to retain higher mathematics even 3 months after the exam. *Annales Mathematicae et Informaticae*, <https://doi.org/10.33039/ami.2024.05.002>

Szeibert, J., & Szörényi, S. (2024). *An Empirical Study of the Effect of Using Long Term Gamification in High School Mathematics Lessons*. In: Tanya, Evans; Ofer, Marmur; Jodie, Hunter; Generosa, Leach; Jyoti, Jhagroo Proceedings of the 47th Conference of the International Group for the Psychology of Mathematics Education (Vol. 1) p. 223

Geszler, E. A., & Szeibert, J. (2024). *21<sup>st</sup> Century Competencies: Didactical Insights on Changes in the Mathematics Curriculum*. In: Tanya, Evans; Ofer, Marmur; Jodie, Hunter; Generosa, Leach; Jyoti, Jhagroo Proceedings of the 47th Conference of the International Group for the Psychology of Mathematics Education (Vol. 1) p. 144

Zámbo, Cs., Muzsnay, A., & Szeibert, J. (2024). *Improving Mathematical Thinking by Playing Board Games in Mathematics Lessons*. In: Tanya, Evans; Ofer, Marmur; Jodie, Hunter; Generosa, Leach; Jyoti, Jhagroo Proceedings of the 47th Conference of the International Group for the Psychology of Mathematics Education (Vol. 1), p. 247

Szeibert, J., Zámbo, Cs., Muzsnay, A., Szabó, Cs. (2024). *The Potential of Number Theory in the Development of Mathematical Thinking*. In: Zdenka, Kolar-Begović; Ružica, Kolar-Šuper; Ana, Katalenić (szerk.) Effective teaching and learning of mathematics through bridging theory and practice. Zagreb, Horvátország, Osijek, Horvátország : Element d. o. o., Josip Juraj Strossmayer University of Osijek pp. 95-102. , 8 p.

Szabó, C., Bereczky-Zámbo, C., Muzsnay, A., Szeibert, J., & Bernáth, L. (2023). Investigación de la eficacia de práctica de recuperación en matemáticas universitarias. *Revista De Educación*, 401(1). <https://doi.org/10.4438/1988-592X-RE-2023-401-584>

Szeibert, J., Muzsnay, A., Szabó, Cs. & Bereczky-Zámbo, Cs. (2023). A Case Study of Using Test-Enhanced Learning as a Formative Assessment in High School Mathematics.

*International Journal of Science and Mathematics Education*. <https://doi.org/10.1007/s10763-022-10264-8>.

Bereczky-Zámbó, Cs., Szabó, Cs., Muzsnay, A. & Szeibert, J. (2022). Passing the exam and not mastering the material in geometry *Annales Mathematicae et Informaticae*. 55. pp. 189-195. <https://doi.org/10.33039/ami.2022.12.009>.

Szenderák, J., Szeibert, J., Szabó, Cs. & Bereczky-Zámbó, Cs. (2021). On a metamatemEthical question in talent care. *Annalaes Mathematicae et Informaticae*. <https://doi.org/10.33039/ami.2021.04.004>.

Szabó, Cs., Bereczky-Zámbó, Cs., Muzsnay, A. & Szeibert, J. (2020). Students' non-development in high school geometry. *Annales Mathematicae et Informaticae*, 52, 309-319. <https://doi.org/10.33039/ami.2020.12.004>.

Bereczky-Zámbó, Cs., Muzsnay, A., Szeibert, J., Szabó, Cs. (2019). *Test-enhanced learning in studying mathematics at secondary school and university*. In: Mellony Graven; Hamsa Venkat ; Anthony A Essien ; Pamela Vale. Proceedings of the 43rd Conference of the International Group for the Psychology of Mathematics Education (Vol 4). Pretoria, South Africa: PME. Pretoria: Minute Man Press, Paper 4-124.

Bereczky-Zámbó, Cs., Muzsnay, A., Szeibert, J., Szabó, Cs. (2019). *Testing the test: Rethinking the levels of understanding geometry based on maths students' Van Hiele test results*. In: Mellony Graven; Hamsa Venkat ; Anthony A Essien ; Pamela Vale. Proceedings of the 43rd Conference of the International Group for the Psychology of Mathematics Education (Vol 4). Pretoria, South Africa: PME. Pretoria: Minute Man Press, Paper 4-10.

Szabó, Cs., Szeibert, J. (2018). *Efficiency of test-enhanced learning in teaching elementary geometry*. In E. Bergqvist, M. Österholm, C. Granberg, & L. Sumpter (Eds.). Proceedings of the 42nd Conference of the International Group for the Psychology of Mathematics Education (Vol. 5, p. 296). Umeå, Sweden: PME.

Szabó, Cs., Szeibert, J. (2018). *Efficiency of test-enhanced learning in teaching number theory*. In E. Bergqvist, M. Österholm, C. Granberg, & L. Sumpter (Eds.). Proceedings of the 42nd Conference of the International Group for the Psychology of Mathematics Education (Vol. 5, p. 296). Umeå, Sweden: PME.

Szabó, Cs., Muzsnay, A., Szeibert, J., Zámbó, Cs., Bernáth, L. (2018). *Az előhívásos tanulás hatékonyságának vizsgálata matematikatanár szakos hallgatók körében*. In: Lippai, Edit (szerk.) Változás az állandóságban : A Magyar Pszichológiai Társaság XXVII. Országos Tudományos Nagygyűlése : Kivonatkiötet. Budapest, Magyarország : Magyar Pszichológiai Társaság (2018) 328 p. pp. 153-153. , 1 p.

Szabó, Cs., Muzsnay, A., Szeibert, J., Zámbó, Cs., Bernáth, L. (2018). *A tesztelées tanulás hatékonyságának vizsgálata az elemi geometria tanításában*. In: Lippai, Edit (szerk.) Változás az állandóságban : A Magyar Pszichológiai Társaság XXVII. Országos Tudományos

Nagygyűlése : Kivonatkötet. Budapest, Magyarország : Magyar Pszichológiai Társaság (2018)  
328 p. pp. 153-153. , 1 p.

**Languages:**

German B2, complex

English B2, complex

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