

Curriculum Vitae

Silke Szymczak Professor, Dr. rer. nat.
d.o.b. December 16th, 1980, in Bonn, Germany

University Education

2011 Doctorate Natural Sciences, University of Lübeck (UzL)
2002-2005 Studies of Computer Science for Natural Sciences, Bielefeld University
2000-2002 Studies of Computer Science, University of Bonn

Scientific Career

Since 2026 Principal Investigator in the German Center for Lung Research
Since 2025 Member elect of the Board of Directors of the International Genetic Epidemiology Society
Since 2021 DZHK Scientist in the German Center for Cardiovascular Research
Since 2020 University Professor of Genetic Epidemiology (W2) and Deputy Director of the Institute of Medical Biometry and Statistics (IMBS), UzL
2016-2020 Head of the junior research group ComorbSysMed (funded by the German Federal Ministry of Education and Research), Institute of Medical Informatics and Statistics (IMIS), Kiel University
2014-2016 Scientific employee, IMIS, Kiel University
2013-2014 Scientific employee, Institute of Clinical Molecular Biology, University Hospital Schleswig-Holstein, Campus Kiel, Kiel
2011-2013 Postdoctoral fellow, Statistical Genetics Section, Inherited Disease Research Branch, National Human Genome Research Institute, National Institutes of Health, Baltimore, MD, USA
2005-2011 Scientific employee, IMBS, UzL

Awards and Honors

2023 Dorothea-Erxleben Award of the excellence cluster "Precision Medicine in Chronic Inflammation" (100,000 EUR)
2016-2018 Scholarship holder in the Fast-Track program of the Robert-Bosch foundation
2010 Bernd-Streitberg award of the International Biometric Society German Region

Citation Record

Total citations: 11,769; h-index:39; h-index since 2021:29 (Google Scholar January 29th, 2026)

Top-10 selected Publications

CJK Fouodo, M Bleskina, S Szymczak. fuseMLR: an R package for integrative prediction modeling of multi-omics data. BMC Bioinform 2025;26:221

A Balck, M Borsche, P Campbell, X Luo, J Harvey, T Brückmann, C Ludwig, A Harms, K Lohmann, E Brown, HR Morris, AH Schapira, T Hankemeier, R Fleming, S Szymczak*, C Klein*. The role of dopaminergic medication and specific pathway alterations in idiopathic and PRKN/PINK1-mediated Parkinson's disease. Sci Adv 2025; 11:eadp7063

*Shared last authorship

DMM Harris, S Szymczak, S Schuchardt, J Labrenz, F Tran, L Welz, H Graßhoff, H Zirpel, M Sumbül, M Oumari, N Engelbogen, R Junker, C Conrad, D Thaçi, N Frey, A Franke, S Weidinger, B Hoyer, P Rosenstiel, S Waschina, S Schreiber, K Aden. Tryptophan degradation as a systems phenomenon in inflammation - an analysis across 13 chronic inflammatory diseases. EBioMedicine 2024; 102:105056

J Hu, S Szymczak. Evaluation of network-guided random forest for disease gene discovery. BioData Min 2024; 17:10

B Laabs, LL Kronziel, IR König, S Szymczak. Construction of artificial most representative trees by minimizing tree-based distance measures. World Conference on Explainable Artificial Intelligence, 2024, 290-310

J Hu, S Szymczak. A review on longitudinal data analysis with random forest.. Brief Bioinform 2023; 24:bbad002

A Rosenbohm, H Pott, M Thomsen, H Rafehi, S Kaya, S Szymczak, AE Volk, K Mueller, I Silveira, JH Weishaupt, H Tönnies, P Seibler, K Zschiedrich, S Schaake, A Westenberger, C Zühlke, C Depienne, J Trinh, AC Ludolph, C Klein, M Bahlo, K Lohmann. Familial cerebellar ataxia and amyotrophic lateral sclerosis/frontotemporal dementia with DAB1 and C9ORF72 repeat expansions: An 18-year study. Mov Disord 2022; 37:2427-2439

M Gorski, B Jung, Y Li, P Matias-Garcia, ..., S Szymczak, ..., C Böger, A Köttgen, F Kronenberg, C Pattaro, I Heid. Meta-analysis uncovers genome-wide significant variants for rapid kidney function decline. Kidney Int 2021; 99:926-939

F Degenhardt, S Seifert, S Szymczak. Evaluation of variable selection methods for random forests and omics data sets. Briefings Bioinf 2019; 20:492-503

Y Sei, X Zhao, J Forbes, S Szymczak, Q Li, A Trivedi, M Voellinger, G Joy, J Feng, M Whatley, M Jones, U Harper, S Marx, A Venkatesan, S Chandrasekharappa, M Raffeld, M Quezado, A Louie, C Chen, R Lim, R Agarwala, A Schäffer, M Hughes, B JE, S Wank. A hereditary form of small intestinal carcinoid associated with a germline mutation in Inositol polyphosphate multikinase. Gastroenterology 2015; 149:67-78