

Dr. Roman Wendner currently occupies the position of the Director of the Christian Doppler Laboratory LICROFAST at the University of Natural Resources and Life Sciences Vienna, Austria, where he also received his PhD in 2009. Between 2011 and 2013 he worked at Northwestern University under the supervision of Prof. Bažant on topics related to the long-term performance prediction of concrete structures, fracture, size effect and creep. His research interests include the reliability and life time assessment/prognosis of engineering structures with special focus on effective monitoring techniques, inverse system identification and the improvement of prediction models such as model B4 for creep and shrinkage of concrete. Since 2014 Dr. Wendner's research is focused on the experimental and numerical investigation of the life-time performance of fastening systems in concrete with current emphasis on sustained load problems. Dr. Wendner authored more than 25 journal papers, 75 conference papers and 7 book chapters. He received several awards for his early research work, among others, the Appreciation Award of the Austrian Ministry of Education and Research 2006, the Klaus Fischer Award for Innovation and Technology 2007, the IABSE Young Engineer Outstanding Paper Award 2008, the Award of Excellence of the Austrian Ministry of Education and Research 2009, and a prestigious Erwin Schrödinger Fellowship in 2011. Roman Wendner is an active member of several technical committees of *fib* and ACI, and is the chair of the TC ACI 209-D on numerical methods.

Selected publications:

- Hubler, M., Wendner, R., Bažant, Z.P. (2015). Comprehensive Database for Concrete Creep and Shrinkage: Analysis and Recommendations for Testing and Recording. *ACI Mat.* 112(4), 547-558, doi: 10.14359/51687452
- Wendner, R., Hubler, M.H., Bažant, Z.P. (2015). Statistical Justification of Model B4 for Multi-Decade Concrete Creep and Comparisons to Other Models Using Laboratory and Bridge Databases. *RILEM - Materials and Structures*, 48(4), 815-833. doi: 10.1617/s11527-014-0486-1
- Hubler, M.H., Wendner, R., Bažant, Z.P. (2015). Statistical Justification of Model B4 for Drying and Autogenous Shrinkage of Concrete and Comparisons to Other Models. *RILEM - Materials and Structures*, 48(4), 797-814. doi: 10.1617/s11527-014-0516-z
- Wendner, R., Hubler, M.H., Bažant, Z.P. (2015). Optimization Method, Choice of Form and Uncertainty Quantification of Model B4 Using Laboratory and Multi-Decade Bridge Databases. *RILEM - Materials and Structures*, 48(4), 771-796. doi: 10.1617/s11527-014-0515-0
- Bažant, Z.P., Hubler, M.H., Wendner, R. (2015). Model B4 for Concrete Creep and Shrinkage including Multi-Decade Applicability. RILEM draft recommendation, TC242-MDC Multi-Decade Creep and Shrinkage of Concrete: Material model and structural analysis, *RILEM Materials and Structures*, 48(4), 753-770. doi: 10.1617/s11527-014-0485-2
- Wendner, R., Tong, T., Strauss, A., Yu, Q. (2015). A Case Study on Correlations of Axial Shortening and Deflection with Concrete Creep Asymptote in Segmentally-Erected Prestressed Box Girders. *Structure and Infrastructure Engineering*, 11:12, 1672-1687, doi: 10.1080/15732479.2014.992442
- Yu, Q., Bažant, Z.P., Wendner, R. (2012). Improved Algorithm for Efficient and Realistic Creep: Analysis of Large Creep-Sensitive Concrete Structures. *ACI Structural Journal*. 109(5): 665-676. doi: 10.14359/51684044
- Strauss, A., Hoffmann, S., Wendner, R., Bergmeister, K. (2009). Structural assessment and reliability analysis for existing engineering structures, applications for real structures. *Struct Infrastruct Eng.* 5(4): 277-286. doi: 10.1080/15732470601185638