

# Andreas Andersson

[adde@kth.se](mailto:adde@kth.se) born 1980  
<https://www.kth.se/profile/adde/>

## EMPLOYMENT

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2011 – Researcher, Royal Institute of Technology (KTH),  
Division of Structural Engineering and Bridges ([url](#))  
2019 – Senior specialist, the Swedish Transport Administration ([url](#))  
2004 – 2019 Specialist, the Swedish Transport Administration

## EDUCATION

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2011 Ph.D., Structural Engineering and Bridges, KTH  
*Thesis title: Capacity assessment of arch bridges with backfill* ([url](#))  
2009 Lic.Eng, Structural Engineering and Bridges, KTH  
*Thesis title: Fatigue assessment of welded steel bridges* ([url](#))  
2004 M.Sc., Royal Institute of Technology, KTH  
*Thesis title: Measurement Evaluation and FEM Simulation of Bridge Dynamics* ([url](#))

## POST-DOCTORAL VISITS

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2018 Department of Civil and Environmental Engineering ([url](#))  
University of Illinois at Urbana-Champaign, Illinois, USA (2 months)  
2017 State Key Laboratory of Traction Power ([url](#))  
Southwest Jiaotong University, Chengdu, China (1 year)  
2012 Roughan & O'Donovan Innovative Solutions ([url](#)), Dublin, Ireland and  
Trinity College Dublin ([url](#)), Ireland (1 year)

## AWARDS

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2021 Best paper award, ICRT 2021, 2<sup>nd</sup> Int. Conf. on Rail Transportation,  
Chengdu, China. ([url](#))  
2020 International Certificate from CIB/IABSE/RILEM ([url](#))  
2013 The outstanding young engineer contribution award (YEP),  
at IABSE 2013 in Rotterdam ([url](#))  
2005 Lilla Polhemspriset "For the best degree project 2004 in civil engineering education at  
Swedish University." ([url](#))

## PUBLICATIONS

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International journal papers: 20 (+12 manuscripts)  
International conference papers: 45  
Technical reports: 20

## TEACHING

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Co-supervisor of Ph.D students: 9 (4 active)  
Supervisor of MSc. degree projects: 20  
2011 – Finite Element Methods in Analysis and Design (2<sup>nd</sup> cycle)  
2008, 2013 Bridge Design, Advanced course (2<sup>nd</sup> cycle)  
2007 – 2010 Civil Engineering Project course (2<sup>nd</sup> cycle)  
2005 – 2011 Building and Civil Engineering Structures (1<sup>st</sup> cycle)

## COMMISSION OF TRUST

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2023	Co-organiser of mini-symposia on dynamics of railway infrastructure (MS9), Eurodyn 2023, 2-5 July, Delft, the Netherlands. <a href="#">link</a>
2022	Member of the editorial board. Railways 2022, 5th International Conference on Railway Technology, 22-25 August, Montpellier, France. <a href="#">link</a>
2021 -	Invited Expert. CEN/TC 250/SC 1/WG 3/TG DIBRST, Dynamic Interface between Bridges and Rolling Stock.
2021	External Examiner. PhD Midterm research thesis project, Marco Antonio Peixer Miguel de Antonio. University of Porto, 2021-11-22. <a href="#">link</a>
2021	Co-chair of special session (S9: Railway Infrastructures), Int. Conference on Computational & Experimental Engineering and Sciences ICCES 2022. Dubai (online), 8-12 January 2022. <a href="#">link</a>
2021	Co-chair of special session (S25: Railway Infrastructures), Int. Conference on Computational & Experimental Engineering and Sciences ICCES 2021. Online, 6-10 January 2021. <a href="#">link</a>
2020 – 2021	Reference group member. Pre-study of Dynamic Amplification Factor for Existing Road Bridges. <a href="#">link</a>
2019	Member of the scientific committee, 1st Int. Symposium on Risk Analysis and Safety of Complex Structures and Components IRAS 2019. Porto, Portugal, 1-2 July 2019. <a href="#">link</a>
2016	Chair and member of the scientific committee, 19th Congress of IABSE, Challenges in Design and Construction of an Innovative and Sustainable Built Environment IABSE2016, Stockholm, Sweden, 21-23 September 2016. <a href="#">link</a>
2016 – 2017	Reference group member. Analys av skaleffekten hos bergssprickors skjuvhållfasthet och styvhet genom numerisk modellering. BeFo-572. <a href="#">link</a>
2016	Main Examiner. Ph.D. defence, João Miguel dos Santos Pereira da Rocha. University of Porto, 2016-04-28. <a href="#">link</a> , <a href="#">download</a>
2015 – 2021	Reference group member. Utveckling av metodik för inspektion av tunnlar med innertak. BeFo-357 <a href="#">link</a>
2015 -	Delegate. CEN/TC 256/SC 1/WG 46, Railway Applications – Ballastless track systems. <a href="#">EN 16432-1:2017</a> , <a href="#">EN 16432-2:2017</a> , <a href="#">EN 16432-3:2021</a> , EN 16432-4
2015	Keynote lecture. Dynamics of railway bridges: analysis and verification by field tests. EVACES'15, Dübendorf, Switzerland, 19-21 October 2015. <a href="#">link</a>
2014	Faculty examiner. Licentiate seminar, Tarek Edrees Saaed. Luleå University of Technology, 2014-11-20. <a href="#">link</a>
2013 – 2017	Delegate. CEN TC250/SC1/WG3/TG-TBI, Railway Applications – Infrastructure – Track-Bridge Interaction. <a href="#">CEN/TR 17231:2018</a>
2013 – 2016	Special advisor on Railway Bridges. Work group High-Speed Rail, collaboration between Sweden and Japan regarding high-speed railway infrastructure technology.
2013 -	Project Leader – Railway Bridges. Development of technical standards for high-speed railways, Trafikverket.

## SELECTED PUBLICATIONS

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- Colmenares, D., **Andersson, A.**, Karoumi, R., 2021. Closed-form solution for continuous beam systems on elastic supports under moving harmonic loads. *Journal of Sound and Vibration*, 116587. <https://doi.org/10.1016/j.jsv.2021.116587>
- Tell, S., **Andersson, A.**, Najafi, A., Spencer Jr. B.F., Karoumi, R., 2021. Real-time hybrid testing for efficiency assessment of magnetorheological dampers to mitigate train-induced vibrations in bridges. *Int. J. of Rail Transportation*. <https://doi.org/10.1080/23248378.2021.1954560>
- Lind Östlund, J., **Andersson, A.**, Ülker-Kaustell, M, Battini, J-M., 2020. On the influence of the dynamic soil-structure interaction on simply supported high-speed railway bridges founded on shallow soil strata. *Int. J. of Rail Transportation*, pp. 1-19. <https://doi.org/10.1080/23248378.2020.1817804>
- Museros, P., **Andersson, A.**, Martí, V., Karoumi, R., 2020. Dynamic behaviour of bridges under critical articulated trains: Signature and bogie factor applied to the review of some regulations included in EN 1991-2. *Journal of Rail and Rapid Transit*, pp. 1-21. <https://doi.org/10.1177/0954409720956476>
- Martínez-Rodrigo, M.D., **Andersson, A.**, Pacoste, C., Karoumi, R., 2020. Resonance and cancellation phenomena in two-span continuous beams and its application to railway bridges. *Eng. Struct.* 222 (1). <https://doi.org/10.1016/j.engstruct.2020.111103>
- Tell, S., Leander, J., **Andersson, A.**, Ülker-Kaustell, M., 2020. Probability-based evaluation of the effect of fluid viscous dampers on a high-speed railway bridge. *Structure and Infrastructure Engineering*. <https://doi.org/10.1080/15732479.2020.1832537>
- Lind Östlund, J., **Andersson, A.**, Ülker-Kaustell, M, Battini, J-M., 2020. The influence of model assumptions on the dynamic impedance functions of shallow foundations. *Int. Journal of Civil Engineering*, 18(11), 1315-1326. <https://doi.org/10.1007/s40999-020-00526-3>
- Shi, C., Zhao, C., Zhang, X, **Andersson, A.**, 2019. Analysis on dynamic performance of different track transition forms based on the combined discrete element/finite difference method. *Computers & Structures* 230, pp. 1-11. <https://doi.org/10.1016/j.compstruc.2019.106187>
- Arvidsson, T., **Andersson, A.**, Karoumi, R., 2018. Train running safety on non-ballasted bridges. *Int. J. of Rail Transportation* 7(1), pp. 1-22. <https://doi.org/10.1080/23248378.2018.1503975>
- Zangeneh A., Svedholm C., **Andersson, A.**, Pacoste C., Karoumi, R., 2018. Identification of soil-structure interaction effect in a portal frame railway bridge through full-scale dynamic testing. *Eng. Struct.* 159, pp. 299-309. <https://doi.org/10.1016/j.engstruct.2018.01.014>
- Rådeström, S., Ülker-Kaustell, M., **Andersson, A.**, Tell, V., Karoumi, R., 2017. Application of fluid viscous dampers to mitigate vibrations of high-speed railway bridges. *Int. J. of Rail Transportation* 5(1), pp. 47-62. <https://doi.org/10.1080/23248378.2016.1209444>
- Andersson, A.**, 2021. Full-scale forced vibration tests of a railway bridge. *Int. Conf. on Computational & Experimental Engineering and Sciences, ICCES2021, online, January 6-10, 2021*. [https://doi.org/10.1007/978-3-030-64690-5\\_21](https://doi.org/10.1007/978-3-030-64690-5_21)
- Museros, P., **Andersson, A.**, Karoumi R., 2020. Dynamic effect of trains with articulated coaches and Jacobs bogies with integer wheelbase ratios. *Eurodyn 2020, online, 23-25 November 2020*. <https://doi.org/10.47964/1120.9217.20270>
- Andersson, A.**, Karoumi R., 2020. Dynamic response of corrugated steel culverts for railway lines. *Eurodyn 2020, online, 23-25 November 2020*. <https://doi.org/10.47964/1120.9130.18747>
- Lind Östlund, J., **Andersson, A.**, Ülker-Kaustell, M, Battini, J-M., 2020. The effect of model assumptions on the dynamic impedance functions of a shallow foundation. *Eurodyn 2020, online, 23-25 November 2020*. <https://doi.org/10.47964/1120.9235.19373>
- Zangeneh, A., **Andersson, A.**, Pacoste, C., Karoumi, R., 2020. Dynamic soil-structure interaction in resonant railway bridges with integral abutments. *Eurodyn 2020, online, 23-25 November 2020*. <https://doi.org/10.47964/1120.9131.18801>
- Allahvirdizadeh, R., **Andersson, A.**, Karoumi, R, 2020. Reliability Assessment of the Dynamic Behaviour of High-Speed Railway Bridges Using FORM, *Eurodyn 2020, online, 23-25 November 2020*. <https://doi.org/10.47964/1120.9282.18654>
- Colmenares, D., **Andersson, A.**, Karoumi, R., 2020. Closed-formed solution of pedestrian-induced loads for clamped-clamped bridges, *Eurodyn 2020, online, 23-25 November 2020*. <https://doi.org/10.47964/1120.9141.18902>
- Östlund, J., Ülker-Kaustell, M., **Andersson, A.**, Battini, J-M., 2017. Considering dynamic soil-structure interaction in design of high-speed railway bridges. *Eurodyn 2017, Rome, Italy, September 10-13, 2017* <https://doi.org/10.1016/j.proeng.2017.09.264>
- Zangeneh, A., Svedholm, A., Pacoste, C., **Andersson, A.**, Karoumi, R., 2017. Dynamic Stiffness Identification of Portal Frame Bridge-Soil System using Controlled Dynamic Testing. *Eurodyn 2017, Rome, Italy, September 10-13, 2017* <https://doi.org/10.1016/j.proeng.2017.09.293>
- Andersson, A.**, Östlund, J., Ülker-Kaustell, M., Battini, J-M., Karoumi, R., 2017. Full-scale dynamic testing of a railway bridge using a hydraulic exciter. *EVACES 2017, San Diego, United States, July 12-14, 2017* [https://doi.org/10.1007/978-3-319-67443-8\\_30](https://doi.org/10.1007/978-3-319-67443-8_30)