

Curriculum Vitae

Personal information

First name / Surname

Assoc. Prof. Otto / Plášek M.Sc., Ph.D.

Address(es)

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Nationality

Czech

Date of birth

15-09-1962

Work experience

Dates

Since 1991

Occupation or position held

lecturer

Main activities and responsibilities

Teaching, research

Name and address of employer

Brno University of Technology, Faculty of Civil Engineering, 331/95 Veveri, CZ602 00 Brno

Dates

1986 – 1991

Occupation or position held

Railway engineer

Main activities and responsibilities

engineering

Name and address of employer

Czech Railways, CZ 500 01 Hradec Králové

Education and training

Dates

2006

Title of qualification awarded

Assoc. Prof.

Name and type of organisation providing education and training

Brno University of Technology, Faculty of Civil Engineering

Dates

1999

Title of qualification awarded

Ph.D.

Name and type of organisation providing education and training

Brno University of Technology, Faculty of Civil Engineering

Dates

1991

Title of qualification awarded

Postgraduate course

Name and type of organisation providing education and training

Univerzity of Žilina

Dates

1986

Title of qualification awarded

M.Sc.

Name and type of organisation providing education and training

Brno University of Technology, Faculty of Civil Engineering

Background

In last two decades involved in R&D activities in field of:

- static and dynamic analyses of railway superstructure and its components, e.g. rail fatigue, concrete sleepers and bearers, steel trough sleepers, under sleeper pads, hooks of switch locking devices, dynamic effects in switches and crossings, bridge-track interaction, continuous welded track;
- design of station heads, e.g. study of Brno main station;
- laboratory tests, e.g. concrete or steel sleepers, plastic dowels, rail pads, under sleeper pads,
- monitoring and measurement in situ, e.g. switch locking device, deflection and vibration of track superstructure, pressures in substructure, bridge expansion and interaction with track,
- diagnostics of failures and defects.

Scientific and research activity

Dates	since 2016
Name and type of the project	Switches and Crossings Optimal Design and Evaluation (S-CODE), research project Shift2Rail S2R-OC-IP3-01-2016
Main activities and responsibilities	Team leader of Brno University of Technology
Dates	since 2013
Name and type of the project	Centre for Effective and Sustainable Transport Infrastructure, research project Technology Agency of the Czech Republic
Main activities and responsibilities	Team leader of Brno University of Technology
Dates	2011 – 2013
Name and type of the project	Sleepers with under sleeper pads, research project Technology Agency of the Czech Republic
Main activities and responsibilities	Project manager
Dates	2012 – 2014
Name and type of the project	Development of hybrid railway bridge resistant in flood lands , research project Technology Agency of the Czech Republic, Team leader of Brno University of Technology
Main activities and responsibilities	Member of team
Dates	2006 - 2007
Name and type of the project	Centre for Integrated Design of Advanced Structures, research project
Main activities and responsibilities	Member of team
Dates	2002 - 2005
Name and type of the project	Theory, reliability and mechanism of damaging structures under static and dynamic loading
Main activities and responsibilities	Member of team
Dates	2005 - 2007
Name and type of the project	UIC – Project I/05/U/440 Under Sleeper Pads,
Main activities and responsibilities	Member of team
Dates	2009 - 2013
Name and type of the project	UIC – Project P000295: USP in Track,

Main activities and responsibilities

Member of team

**Distinguished
publications in last 5
years**

PLÁŠEK, O.; SALAJKA, V.; ADAMEC, V.; HRUZÍKOVÁ, M.; HRADIL, P.; SCHÜLLEROVÁ, B.; GUZIUR, P. Railway Buffer Stops Planning. In Road and Rail Infrastructure V. Zagreb, Croatia: Department of Transportation Faculty of Civil Engineering, University of Zagreb, 2018. s. 803-809. ISBN: 978-953-8168-25-3.
PLÁŠEK, O.; HRUZÍKOVÁ, M. Under Sleeper Pads in Switches & Crossings. IOP Conference Series: Materials Science and Engineering, 2017, roč. 2017, č. 236, s. 1-8. ISSN: 1757-8981.
PLÁŠEK, O. Current challenges for research activities in the field of railway infrastructure. Acta Polytechnica CTU Proceedings, 2016, roč. 2016, č. 5, s. 47-50. ISSN: 2336-5382.
PLÁŠEK, O.; ŠVÁBENSKÝ, O.; KREJČIŘÍKOVÁ, H.; KLUSÁČEK, L.; VENDEL, J. Interaction between continuous welded rail and bridges with relatively large expansion length. Road and Rail Structure IV, 2016, č. 4, s. 405-411. ISSN: 1848-9842.
PLÁŠEK, O.; HRUZÍKOVÁ, M.; SVOBODA, R.; VENDEL, J., Influence of Under Sleeper Pads on Track Quality, paper in Akustika, ISSN 1801-9064, 2015
AUER, F.; POTVIN, R.; PLÁŠEK, O.; HRUZÍKOVÁ, M., Podpražcové podložky v koleji (Under sleeper pads in track) paper in Nová železniční technika, ISSN 1210-3942, Výzkumný Ústav Železniční, a.s., Brno, 2015
PLÁŠEK, O.; HRUZÍKOVÁ, M.; SVOBODA, R.; BÍLEK, J., Under Sleeper Pads in Railway Track, paper in Communications, ISSN 1335-4205, 2014

**Product Development
Experience:**

Design of concrete sleepers and bearers: static analyses, laboratory tests – design approval test, monitoring of concrete sleepers in track

Under sleeper pads: static and dynamic analyses, laboratory tests of sleepers and bearers with USP, design of the assembly of USP in switches and crossings, in site monitoring and measurements of track quality, deflection, vibrations, pressure in substructure

Switch and movable crossing point locking devices: static and dynamic analyses, laboratory tests, monitoring and measurement in switches and crossing

Plastic sleeper anchors: laboratory test – static, dynamic and fatigue, in situ measurement and monitoring of lateral track resistance, track quality

Intellectual Property Management

Utility models:

Arrangement of under sleeper pads for the turnouts 1:12-500-I with transition area in front of trough sleepers (co-author)
Arrangement of under sleeper pads for the turnouts 1:14-760 with transition area in front of trough sleepers (co-author)
Arrangement of under sleeper pads for the turnouts 1:18,5-1200-I with transition area in the turnout (co-author)
Arrangement of under sleeper pads for the turnouts 1:18,5-1200-I with transition area in the turnout (co-author)
Arrangement of under sleeper pads for the turnouts 1:18,5-1200-I with transition area in front of trough sleepers (co-author)
Test plate for under sleeper pads (co-author)

Industrial design:

Test plate (used for USP – Geometric Ballast Plate, included into prEN 16730)

Realized certified methodology:

Technical requirements for repairs, reconstruction and construction of streets and tram tracks in the city of Brno regarding to noise reduction (co-author)
Development of hybrid railway bridge resistant in flood lands (co-author)

Industry research and cooperation

Since 1994 more than 100 industry research and cooperation projects as a team leader