

Keynote Speakers (in Alphabetic Order of Last Name)

Professor Xuecheng Bian

Professor of Geotechnical Engineering

Key Laboratory of Soft Soil and Geoenvironmental Engineering, MoE

Zhejiang University, China

Email: bianxc@zju.edu.cn

Title of Keynote Presentation: [Geodynamics of High-speed Railway](#)



BIOGRAPHY: Dr. Xuecheng Bian is a professor of Transportation Geotechnical Engineering in Zhejiang University. He received his Ph.D. in Okayama University, Japan, and was a visiting professor in the University of Illinois at Urbana-Champaign, USA, and the University of Edinburgh, UK. Dr. Bian's research interests focus on transportation geotechnical engineering, including traffic induced vibrations, cyclic soil deformation, performance of transportation infrastructures subjected to traffic loadings and environmental impacts, et al. His researches have been supported by the Natural Science foundation of China(NSFC), the Ministry of Railway of China and leading railway industries. He has plenty of experiences in full-scale model testing and field testing on high-speed railways. He was awarded Newton Advanced Fellowship by Royal Society, UK in 2014, and entitled as Changjiang Young Scholar professor by the Ministry of Education of China in 2015. He also received Excellent Young Scientist Award from the National Natural Science Foundation of China(NSFC) in 2012. He is now serving in the editorial board of Transportation Geotechnics journal and also working as committee members of several international societies.

Professor António Gomes Correia

University of Minho, School of Engineering, ISISE

Guimarães, Portugal

Email: agc@civil.uminho.pt

Title of Keynote Presentation: Two-staged kinetics of moduli evolution with time of a lime treated soil under different curing temperatures



BIOGRAPHY: Professor António Gomes Correia is since 2013 Vice-Dean of School of Engineering of the University of Minho. He was from 1998 to 2001 Chairman of the ISSMGE - European Technical Committee - ETC 11 - Geotechnical aspects in design and construction of pavements and rail track and from 2001 chairman of the International Technical Committee - TC 3 – Geotechnics for pavements of the ISSMGE, renamed from 2009 as TC 202 – Transportation Geotechnics.

He was serving TC 202 until 2014 and continue as member. He is since 2013 expert of the Portuguese Agency for Assessment and Accreditation of Higher Education - A3ES for the scientific area of Civil Engineering. He is involved in research, teaching and consulting in the general field of Geotechnics and pavement and railway engineering for 40 years. His work embraced transportation geotechnics, particularly soil and pavement geo-material properties and modelling, compaction, soil improvement, foundations, geotechnical design and management. He has over 400 technical papers and 240 reports published on these subjects. He supervised over 117 graduated students. He is from September 2013 Editor-in-Chief of the International Journal on Transportation Geotechnics published in Elsevier's Engineering Journals, as well as of "Geotecnia" published by the Portuguese Geotechnical Society.

Professor Yu-jun Cui

Laboratoire Navier/CERMES

Ecole des Ponts ParisTech

Marne La Vallée, France

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Title of Keynote Presentation: [Mechanical behavior of coarse grains/fines mixture under monotonic and cyclic loadings](#)



BIOGRAPHY: Yu-Jun Cui is a professor at Ecole des Ponts ParisTech (ENPC), France. He was Panel Member of Géotechnique for three years. He is now Associate Editor of Canadian Geotechnical Journal, Vice Chief Editor of Journal of Rock Mechanics and Geotechnical Engineering, Panel Member of Géotechnique Letters. He is also editorial board members of several other Journals. Has was invited to deliver a number of keynote/invited lectures, including the first European distinguished lecture on unsaturated soils in 2016. His research interests cover unsaturated soil mechanics, laboratory testing, constitutive modelling, environmental geotechnics, nuclear waste disposal, soil-vegetation-atmosphere interaction, ground improvement by lime/cement stabilization, and railway geotechnics. He has published more than 200 SCI papers with more than 4 000 citations.

Professor Carlton L. Ho

Department of Civil and Environmental Engineering

University of Massachusetts

Email: ho@umass.edu

Title of Keynote Presentation: **Evaluating ground vibrations induced by high-speed trains**



BIOGRAPHY: Dr. Ho has a B.S, M.S. and Ph.D. in Civil Engineering from Stanford University. He is currently on the Faculty of the University of Massachusetts. Previously, he was at Washington State University and the Illinois Institute of Technology. Dr. Ho was also a visiting researcher at the United States Geologic Survey, the École Nationale des Ponts et Chaussées, the University of Edinburgh, Scotland, and Tongji University.

Dr. Ho is an expert in the area of railroad geotechnology specializing in dynamic behavior of ballast and subballast. He has also conducted research in geotechnical earthquake engineering, earth retention systems, slope stability and seismic hazard analysis. Ho is a member of the Geo-Institute of the American Society of Civil Engineers having served on numerous committees as member and chair. Currently, he serves on the Railroad Track Structure System Design committee and the Railway Maintenance Committee of the Transportation Research Board of the National Academies (USA).

Dr. Dingqing Li

Transportation Technology Center, Inc.

Association of American Railroads

Pueblo, Colorado, USA

Email: dingqing_li@aar.com

Title of Keynote Presentation: [25 Years of Heavy Axle Load Railway Subgrade Research at the Facility for Accelerated Service Testing \(FAST\)](#)



BIOGRAPHY: Dr. Dingqing Li is Executive Director - Government Programs and Engineering Services, Transportation Technology Center, Inc (TTCI), a subsidiary of the Association of American Railroads (AAR). He is responsible for TTCI's research programs for the Federal Railroad Administration, and manages TTCI's Group of Track and Bridge Engineers, Metallurgists, NDE (non destructive evaluation) Engineers, and Big Data Analysts. Dr. Li joined TTCI/AAR in 1995 after receiving his Ph.D. from the University of Massachusetts at Amherst. He worked as Assistant Professor in Railway Engineering at the Central South University in China prior to his career in the United States. He has close to 30 years of research, testing, modeling, consulting and academic experience in railway engineering and has published more than 200 technical papers and reports, including the book "Railway Geotechnics." Dr. Li is a registered Professional Engineer, and is a member of AREMA and ASCE. Dr. Li also serves as board member or paper reviewer for several professional journals, including Transportation Geotechnics, Journal of Rail and Rapid Transit, Construction and Building Materials, Journal of the Transportation Research Board, Journals for ASCE, as well as major conferences of AREMA, TRB, IHHA and WCRR. Dr. Li has received several professional awards including the Eagle award, the highest level award for extraordinary and exemplary performance from TTCI/AAR, and Best Paper Awards from Railway Engineering conference in UK and IHHA.

Professor Andrei Metrikine

Department Engineering Structures

Faculty of Civil Engineering and Geosciences

Delft University of Technology, The Netherlands

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Title of Keynote Presentation: [The dynamics of support structures for offshore wind turbines](#)



BIOGRAPHY: Professor Andrei Metrikine is Director of Department of Engineering Structures at the Faculty of Civil Engineering and Geosciences at the Delft University of Technology, the Netherlands. He is also Head of Section of Offshore Engineering within the Department of Hydraulic Engineering at the same faculty. His international appointments include the position of Editor-in-Chief of the journal of Sound and Vibration and a part-time International Chair in Offshore Engineering at the Norwegian University of Science and Technology. Andrei graduated from the faculty of radio-physics at the State University of Nizhny Novgorod, Russia in 1989. In 1992 he received a PhD degree in theoretical mechanics from the State Technical University of Saint Petersburg, Russia. In 1994-1998 he held a number of post- doctoral positions, including one in the Institute for Mechanics of the Hannover University, Germany awarded by the Alexander von Humboldt foundation. In 1998 he received a Doctor of Sciences degree in mechanics of solids from the Institute for Problems in Mechanical Engineering RAS, Saint Petersburg, Russia. Since 1999 Prof. Metrikine is a member of staff of the Faculty of Civil Engineering of TU Delft. Andrei's research is focused on vibrations of and waves in structures that are in contact with solids and fluids. The main application areas of Andrei's research currently are: dynamics of offshore wind turbines; dynamics of structures in ice; dynamics and stability of offshore pipelines and dynamics of high-speed railway lines on soft soil.

Professor Peter Woodward

Chair in High Speed Rail Engineering

School of Civil Engineering

University of Leeds, United Kingdom

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Title of Keynote Presentation: Full scale laboratory testing of ballast and concrete slab tracks under phased cyclic loading



BIOGRAPHY: Peter Woodward is Professor of High Speed Railway Engineering and Head of the Institute for High Speed Rail and System Integration at the University of Leeds. He is a Fellow of the Institution of Civil Engineers, the Permanent Way Institution, a Chartered Engineer and a Visiting Professor in High Speed Rail at Central South University China. During 2000-2010 he was seconded part-time to the railway industry as a company Technical Director, designing and solving railway track issues across the UK and overseas, including high-speed lines. He has received many awards including the Highly Commended Award in the Innovation of the Year category at the National Rail Awards 2005, the Institution of Civil Engineers Webb Prize, 2008, the Network Rail Partnering Award 2014 and the Railway Industry Association Product Innovation of the Year 2015. He has given invited Workshops and Keynote addresses at major international conferences across the world on railway track geo-dynamics at high-speed, transitions and track reinforcement. He has published over 140 research papers.

Professor William Powrie

School of Engineering

University of Southampton

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Title of Keynote Presentation: [Train loading effects, measurement and interpretation in railway geotechnical engineering](#)



BIOGRAPHY: William Powrie is Professor of Geotechnical Engineering in the Department of Civil, Maritime and Environmental Engineering at the University of Southampton. His main technical areas of expertise are in geotechnical aspects of transport infrastructure, and sustainable waste and resource management. He was elected Fellow of the Royal Academy of Engineering in recognition of his work in these areas in 2009. William's work on geotechnical aspects of transport infrastructure encompasses groundwater control, in-ground construction to reduce environmental impacts in urban and other sensitive areas, understanding and mitigating vegetation and climate change effects, and fundamental soil behaviour. Major projects on which he has worked include the A55 Conwy Crossing, the Jubilee Line extension stations at Canary Wharf and Canada Water and the Channel Tunnel Rail Link (now HS1). He is co-author of Construction Industry Research and Information (CIRIA) reports C750 Groundwater control: design and practice (2016) and C760 Guidance on embedded retaining wall design (2017). Both of these, together with reports C517 on Temporary propping of deep excavations (1999) and C676 on Drystone retaining walls (2009), incorporate results of his research. William is Convenor of UKCRIC, the UK Collaboratorium for Research in Infrastructure and Cities; and leads the Infrastructure Centre of Excellence within the UK Rail Research and Innovation Network (UKRRIN) and an EPSRC-funded Programme Grant (Track to the Future), aimed at improving the longevity and robustness of railway track, and reducing costs and maintenance needs. He is a former Associate Editor of the Canadian Geotechnical Journal, a former Honorary Editor of the Institution of Civil Engineers journal Geotechnical Engineering, and has been Geotechnical Consultant to water management specialists WJ Group since 1987.

Professor Fumio Tatsuoka

Tokyo University of Science, Japan

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Title of Keynote Presentation: **Soil compaction control based on the degree of saturation for transportation engineering**



BIOGRAPHY: Prof. Tatsuoka obtained PhD degree from University of Tokyo, 1973. He worked for Public Works Research Institute, Ministry of Construction (1973-1977). He was Associate Professor then Professor, University of Tokyo (1977-2004). Currently Professor, Department of Civil Engineering, Tokyo University of Science while Professor Emeritus of University of Tokyo and Tokyo University of Science. His research interests are laboratory tests and deformation and strength characteristics of geomaterials, foundation engineering, ground improvement by cement-mixing, soil compaction and soil reinforcing (particularly geosynthetic-reinforced soil structures). His major society activities are Vice President, ISSMGE (2001-2005); Vice President, Japanese Society for Civil Engineers (2005-2006); Vice President, International Geosynthetics Society (2002-2006); President, Japanese Geotechnical Society (2007-2008); and President, IGS (2006-2010). He received a number of awards including: IGS Award (1994); 1996-1997 Mercer Lectureship, ISSMGE & IGS; Hogentoglar Award, ASTM (1996, 2000 & 2003); Best Paper Award, Ground Improvement Journal, ISSMGE (1997); Best Paper Award, Geosynthetics International (2007, 2008, 2010, 2011); Paper Award, Geotextiles and Geomembranes (2008); and Bishop Lectureship, ISSMGE (2011). He performed a number of keynote lectures at international conferences. He wrote technical papers more than 400.

Professor Yeong-bin Yang

MOE Key Laboratory of New Technology for Construction of Cities in Mountain Area
School of Civil Engineering

Chongqing University, P. R. China

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Title of Keynote Presentation: **Modal Identification of Bridges Using the Contact-Point Response of a Moving Test Vehicle**



BIOGRAPHY: Dr. Yeong-Bin Yang received his Ph.D. degree from Cornell University in 1984. He is member of Chinese Academy of Engineering (2009), foreign member of Austrian Academy of Sciences (2007), and member of EU Academy of Sciences (2018). Currently, he is Honorary Dean of Civil Engineering, Chongqing University, and Professor Emeritus of National Taiwan University (NTU). Also, he is fellow of American Society of Civil Engineers (ASCE) and International Association of Computation Mechanics (IACM), and Editor-in-Chief of International Journal of Structural Stability and Dynamics (IJSSD). In addition, he is President of Asian-Pacific Association of Computational Mechanics (APACM) and Chairman of International Steering Committee of East Asia-Pacific Conference on Structural Engineering and Construction (EASEC). Previously, he was President of National Yunlin University of Science and Technology (YunTech), Dean of College of Engineering, NTU, Chairman of Civil Engineering Department, NTU, and President of four societies in Taiwan: Institute of Engineering Education Taiwan (IEET), Chinese Institute of Civil and Hydraulic Engineering (CICHE), Society of Theoretical and Applied Mechanics (STAM), and Chinese Society of Structural Engineering (CSSE). He has published over 220 referred journal papers, focused on the following areas: structural nonlinear theory and analysis, vehicle-bridge interaction dynamics, and train-induced wave propagation. In each area he has published a monograph.

Professor Jian-Hua Yin

Department of Civil and Environmental Engineering

The Hong Kong Polytechnic University, Hong Kong, China

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Title of Keynote Presentation: Development and Verification of a New Simplified Hypothesis B Method for Calculating Consolidation Settlements of Single and Multi-layered Clayey Soils



BIOGRAPHY: Professor Yin received a BEng degree in 1983 in Chinese Mainland, an MSc degree from Institute of Rock and Soil Mechanics of the Chinese Academy of Sciences in 1984, and a PhD from The University of Manitoba, Canada in 1990. Dr Yin has a mix of industrial and academic experiences. He joined Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University in 1995 as an Assistant Professor. He was promoted to an Associate Professor position in 1999, to a Professor position in 2002, and to the position of Chair Professor of Soil Mechanics in 2014. Professor Yin has a good track record in research and has played a leading role in development of advanced soil testing equipment, innovative fiber optical sensors, establishing a large-scale multi-purpose physical modeling facility for studying geo-hazards, organization of regional and international conferences. His research interests include (i) testing study of properties and behaviour of soils, (ii) elastic visco-plastic modeling, (iii) soft soil improvement, (iv) soil nails and slope analysis, (v) development and applications fiber optical sensors, (vi) soil-structure interface, and (vii) development of advanced/special laboratory testing apparatus. Professor Yin serves as a Vice-President of International Association for Computer Methods and Advances in Geomechanics (IACMAG), a Co-Editor of International Journal of Geomechanics (ASCE), and a Co-Editor of Geomechanics and Geoengineering (UK). He has received the honours of the prestigious “JOHN BOOKER Medal” in 2008, “Chandra S. Desai Excellence Award” in 2011, and “Outstanding Contributions Medal” in 2017 from all IACMAG. He delivered the high-status 2011 “Huang Wenxi Lecture” in Chinese Mainland.

Professor Wanming Zhai

Professor of Railway Engineering

Southwest Jiao Tong University, China

Academician of Chinese Academy of Sciences

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Title of Keynote Presentation: [Wheel-rail dynamic interaction caused by change of wheel and rail profiles](#)



BIOGRAPHY: Since 1994, Wanming Zhai has become a full professor and the Director of Train and Track Research Institute, which is affiliated to State Key Laboratory of Traction Power. Currently, Prof. Zhai is the Chairman of Academic Committee of Southwest Jiaotong University. His research activities are mainly in the field of railway system dynamics, focusing on vehicle-track dynamic interaction and train-track-bridge interactions. Prof. Zhai established a new theoretical framework of vehicle-track coupled dynamics and invented new methodologies for solving large-scale train-track-bridge interaction problems. His models and methods have been successfully applied to more than 20 large-scale field engineering projects for the railway network in China. Prof. Zhai is the Editor-in-Chief of International Journal of Rail Transportation. He also serves as the President of Chengdu Association for Science and Technology, the vice President of the Chinese Society of Theoretical and Applied Mechanics, and the vice President of the Chinese Society for Vibration Engineering.

Professor Jianlong Zheng

Professor of Transportation Engineering

Changsha University of Science & Technology, China

Academician of Chinese Academy of Engineering

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Title of Keynote Presentation: The bi-modulus theory based on the difference of tensile-modulus and compressive-modulus and its application in pavement design



BIOGRAPHY: Jianlong Zheng, the academician of Chinese Academy of Engineering and specialist on road engineering, is the professor and doctoral supervisor of Changsha University of Science and Technology. He is also the laboratory director of National Engineering Laboratory of Road Maintenance Technology, the laboratory director of Ministry Key Laboratory of Road Engineering and the vice president of Chinese Road Council. He engaged in technology research and engineering practice in the field of road engineering and geotechnical engineering in long time. He has already published over 200 academy papers, 5 academy books, won 14 National Invention Patents, edited 4 standards and 8 regional technology guidelines. His directed project “The set of technology for road construction in swelling soil areas” won The First Prize of 2009 National Award for Science and Technology Progress. His directed project “The conditioning design method and structural properties improvement for asphalt pavement and corresponding engineering practice” won The Second Prize of 2012 National Award for Science and Technology Progress. In addition, he also won 1 Outstanding Prize, 6 First Prize and 13 Second Prize of Provincial Award for Science and Technology Progress. He was awarded Second Prize of National Teaching Results once and the First Prize of Provincial Teaching Results twice. Besides, he was awarded “Special Allowance of State Council”, “National Young and Middle-aged Experts with Outstanding Contributions”, “The Outstanding Prize on Transportation Technology” by Ministry of Transportation, “Hunan Province Scientific and Technologic Leaders” and etc.