

ORGANIZATION

Symposium Host

TU Wien, Institute of Geotechnics
KTH Stockholm, Division Soil and Rock Mechanics

Organizing Committee

Prof. Dietmar Adam | TU Wien
Prof. Stefan Larsson | KTH Stockholm
Prof. Rainer Massarsch | Geo Risk & Vibration Scandinavia AB
Dr. Johannes Pistor | TU Wien
Dr. Carl Wersäll | KTH Stockholm

Venue

The symposium will be held in the historic House of Engineers – Eschenbachgasse 9/11, A-1010 Vienna, Austria – under the auspices of the current president of the Austrian Society of Engineers and Architects, Prof. Heinz Brandl.

Gala Dinner

On the occasion of the 40th anniversary of CCC a gala dinner will take place at the venue right after the symposium.

Publication

Extended Abstracts of all presentations will be available at the symposium. The Institution of Civil Engineers (ICE) will publish a Themed Issue with more detailed papers covering the symposium topics.

Symposium Fees

€ 125,- registration until September 30th, 2018 (gala dinner included)
€ 150,- registration from October 1st, 2018 (gala dinner included)
€ 25,- students (gala dinner not included)

Fees include the symposium materials (Proceedings), admission to all scientific sessions and the technical exhibition as well as all coffee breaks and light lunch buffet during the symposium and the gala dinner in the evening.

Registration

Please download the registration form from: www.igb.tuwien.ac.at/en/ccc/ and submit it to: ccc@tuwien.ac.at

Accommodation

About accommodation in Vienna and other travel information please refer to: www.igb.tuwien.ac.at/en/ccc/

Contact

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SYMPOSIUM & EXHIBITION

In 1978 the first CCC system was patented. Since then 40 years have passed, in which not only CCC has been established in geotechnical engineering worldwide, but has also significantly influenced the development of rollers to high tech devices. We will review the past four decades together with renowned international experts and take a look into the future. The anniversary symposium offers a platform for geotechnical engineers from all over the world to exchange experience and developments in dynamic roller compaction and compaction control.

The symposium is connected with a fine exhibition at the venue. The leading roller manufacturers **Bomag**, **Dynapac**, **Hamm**, **Ammann** and **Caterpillar** as well as the CDC compaction company **Cofra** and, moreover, the developers of compaction control devices **Anix** and **ZORN INSTRUMENTS** will present their products and prepare short techno-commercial presentations.

Host



Patronage



Non-financial Co-Sponsors



40 Years of Roller Integrated Continuous Compaction Control (CCC)

Anniversary Symposium & Exhibition

40 Jahre

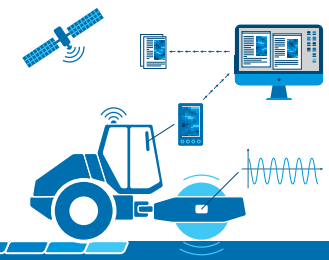
Flächendeckende Dynamische Verdichtungskontrolle (FDVK) Jubiläumssymposium & Ausstellung

November 29th, 2018
Vienna, Austria

Chairmen:

Prof. D. Adam | TU Wien
Prof. S. Larsson | KTH Stockholm

House of Engineers
Eschenbachgasse 9/11
A-1010 Vienna
Austria



Exhibitors and Sponsors of the Anniversary Symposium



PROGRAM

07:15 Registration & Welcome Coffee

08:15 Opening Ceremony & Welcome Address

Chair: D. Adam

H. Brandl, President of ÖIAV

M. Manassero, Vice-President for Europe of ISSMGE

H.F. Schweiger, President of ASSMGE

08:30 “Pioneers’ Session” – Historic Review from Scandinavia and Central Europe

Chair: S. Larsson

The first steps in CCC

Å. Sandström | Geodynamik AB, Stockholm, Sweden

Development and improvement of a roller mounted compaction meter in Sweden in the 70's and 80's

F. Åkesson | Dynapac Compaction Equipment AB, Karlskrona, Sweden

CCC milestones in Central Europe

D. Adam | TU Wien, Vienna, Austria

09:00 Invited Lectures (I)

Chair: R. Massarsch

Schwingungstechnische Grundlagen der FDVK I

Vibration basics of CCC

W. Kröber | Hochschule Koblenz, Germany

Automatic compaction control: an application of the theory of nonlinear vibrations

R. Anderegg | Fachhochschule Nordwestschweiz FHNW, Switzerland

09:40 Coffee Break & Exhibition

10:10 Invited Lectures (II)

Chair: C. Wersäll

Derivation of the permissible spatial variation of CCC data from the requirements for driving comfort

J. Grabe, A. Hagemann | TU Hamburg, Germany

How can the use of CCC influence our understanding of soil behaviour during compaction?

A. Petkovšek, M. Maček | University of Ljubljana, Slovenia

Extended 2nd Proctor Lecture: Compaction improvements from an industry 4.0 perspective

A. Correia | University of Minho, Guimarães, Portugal

11:10 Company Techno-commercial Presentations

Bomag GmbH

Dynapac Compaction Equipment AB

Hamm AG

Ammann Group Holding AG

Caterpillar Inc.

Anix GmbH

ZORN INSTRUMENTS GmbH & Co. KG

12:20 Light Lunch Buffet & Exhibition

13:30 Session (I) – Application I Interpretation I Classification I Evaluation I Implementation of CCC

Chair: J. Pistor

Continuous Compaction Control – CCC applications and interpretation of measurements

H.J. Kloubert | BOMAG GmbH, Boppard, Germany

Intelligent Compaction Measurement Values – A systematic classification

G.K. Chang | Transtec Group and IICTG, Austin, USA

G. Xu | Southwest Jiaotong University and IICTG, Sichuan, China

Evaluation of weak spots in geotechnics in terms of size, distribution and relevance

B. Hansmann, G. Bräu | Technical University of Munich, Germany

Institutional challenges and opportunities in implementation of Continuous Compaction Control

S. Nazarian | The University of Texas at El Paso, USA

M. Mazari | California State University, Los Angeles, USA

C. Tirado | The University of Texas at El Paso, USA

J. Si | Texas Department of Transportation, Austin, USA

Discussion

Intelligent Compaction implementation in US – Issues and solutions

G.K. Chang | Transtec Group and IICTG, Austin, USA

M. Arasteh | US Federal Highway Administration and IICTG, Baltimore, USA

Progress towards implementation of CCC in the UK

M.G. Winter | TRL Limited, Edinburgh, United Kingdom

Construction of the Istanbul new third airport by application of the CCC method in earthworks QA/QC

C. Hotz | Arcadis Germany GmbH, Darmstadt, Germany

H.J. Kloubert | BOMAG GmbH, Boppard, Germany

Influence of vibratory compaction on slope stability ongoing research in Norway

J. Johansson | Norwegian Geotechnical Institute, Oslo, Norway

J.-S. L'Heureux | Norwegian Geotechnical Institute, Trondheim, Norway

Discussion

15:30 Coffee Break & Exhibition



16:00 Session (II) – Research & Development I Novel Compaction Techniques

Chair: J. Grabe

Roller compaction of rock-fill with automatic frequency control

C. Wersäll | KTH Stockholm, Sweden

I. Nordfelt | Dynapac Compaction Equipment AB, Karlskrona, Sweden

S. Larsson | KTH Stockholm, Sweden

Innovative measurements of the roller-soil-interaction system during dynamic compaction

F. Kopf | FCP - Fritsch Chiari & Partner ZT GmbH, Vienna, Austria

M. Fritz | VCE – Vienna Consulting Engineers ZT GmbH, Austria

J. Pistor, D. Adam | TU Wien, Vienna, Austria

Measuring soil compaction on dynamic compaction technologies – Field tests and laboratory investigations using the PIV method

A. Knut, R.E. Ocaña Atencio, H. Pankrath, R. Thiele | Leipzig

University of Applied Sciences, Leipzig, Germany

M. Beitel Schmidt | Technische Universität Dresden, Germany

Numerical simulation of soil compaction with dynamically excited rollers

P. Erdmann | IE, Ingenieurbüro für Berechnung, Entwicklung und Konstruktion, Emmelshausen, Germany

Discussion

CCC with oscillating rollers – Fundamentals and application in experimental field tests

J. Pistor, D. Adam | TU Wien, Vienna, Austria

F. Kopf | FCP - Fritsch, Chiari & Partner ZT GmbH, Vienna, Austria

W. Völkel | HAMM AG, Tirschenreuth, Germany

Analytical modelling of the motion of an oscillating roller during soil compaction assuming pure rolling contact

I. Paulmichl, C. Adam | UIBK, Innsbruck, Austria

D. Adam | TU Wien, Vienna, Austria

W. Völkel | HAMM AG, Tirschenreuth, Germany

Vibratory plate resonance compaction

K.R. Massarsch | Geo Risk & Vibration Scandinavia AB, Stockholm, Sweden

C. Wersäll | KTH Stockholm, Sweden

Spatial Compaction Control: Soil type detection by means of artificial intelligence for boom mounted compactors

U. Nohlen, R. Popelka | Maschinentechnik Schrode AG, Hayingen, Germany

Y. Berquin | Eberhard Karls Universität Tübingen, Germany

Discussion

18:00 Reports (IICTG and ISSMGE TC 202) and ICE Publishing

18:15 Get-Together in the Exhibition Hall

19:30 Gala Dinner on the Occasion of 40 Years of CCC