



Worldwide Engineering *with Passion*



The WBI GmbH

Why is my profession so inspiring for me?

"... maybe it is just the development and completion of a project, or maybe it is the feeling of pride that sometimes overwhelms me when I am using a tunnel knowing that the name of our company is connected to it.

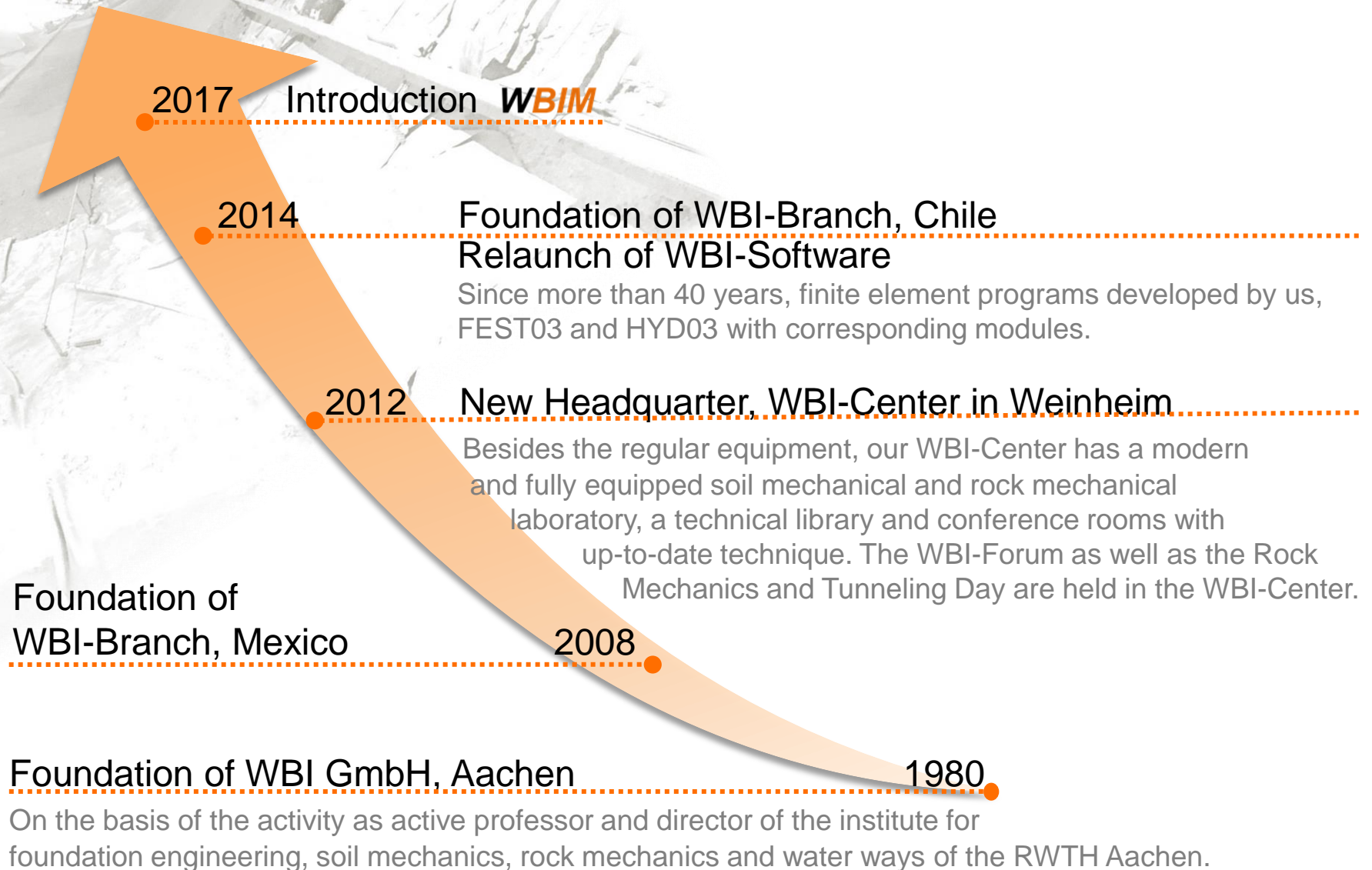


I am living for my profession and for my family."

**Founder and Managing Director of the WBI GmbH
Developer, user and patron of the "AJRM"**

Prof. Dr.-Ing. habil. Dr.-Ing. E. h. Walter Wittke

Company Development



WBI-Management



**Prof. Dr.-Ing. Dr.-Ing. E.h.
Walter Wittke**



**Dr.-Ing.
Claus Erichsen**



**Dr.-Ing.
Bettina Wittke-Schmitt**



**Dr.-Ing.
Martin Wittke**

WBI-Family



Lilian Wittke



**Dr.-Ing.
Patricia Wittke-
Gattermann**



**Dipl.-Ing.
Dieter Schmitt**

- 40 - 50 experienced and highly qualified co-workers
- Mainly engineers and geologists with high sense of responsibility
- Most co-workers are working with us since many years
- Fostering young academics is an important part of our company's philosophy



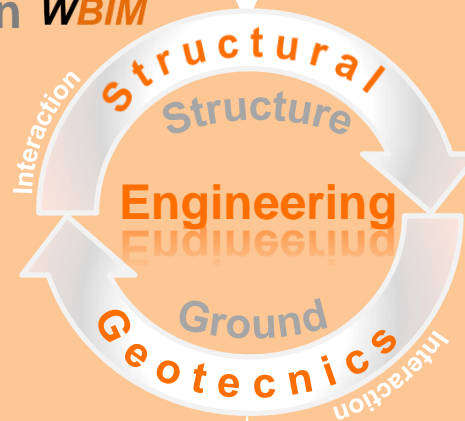
Fields of Work

We are covering all stages of design, consultancy, accompanying construction and site supervision in geotechnical engineering, dam engineering, tunneling and underground works. We are working nationally and internationally for owners and contractors as well as for controlling authorities and all parties participating in construction.



- **Planning and Design** *WBIM*

feasibility
preliminary
for permission
tender
detailed



- **Exploration & Testing**

- **Expertises**
- **Review Engineer**
- **Supervision**
- **Controlling**
- **Monitoring**

Rock Mechanics – Basics and Application

Basis for a safe and economic design and construction of

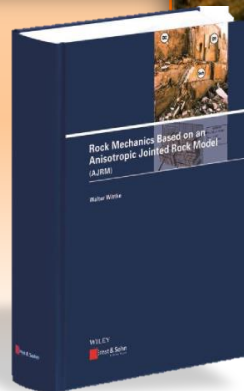
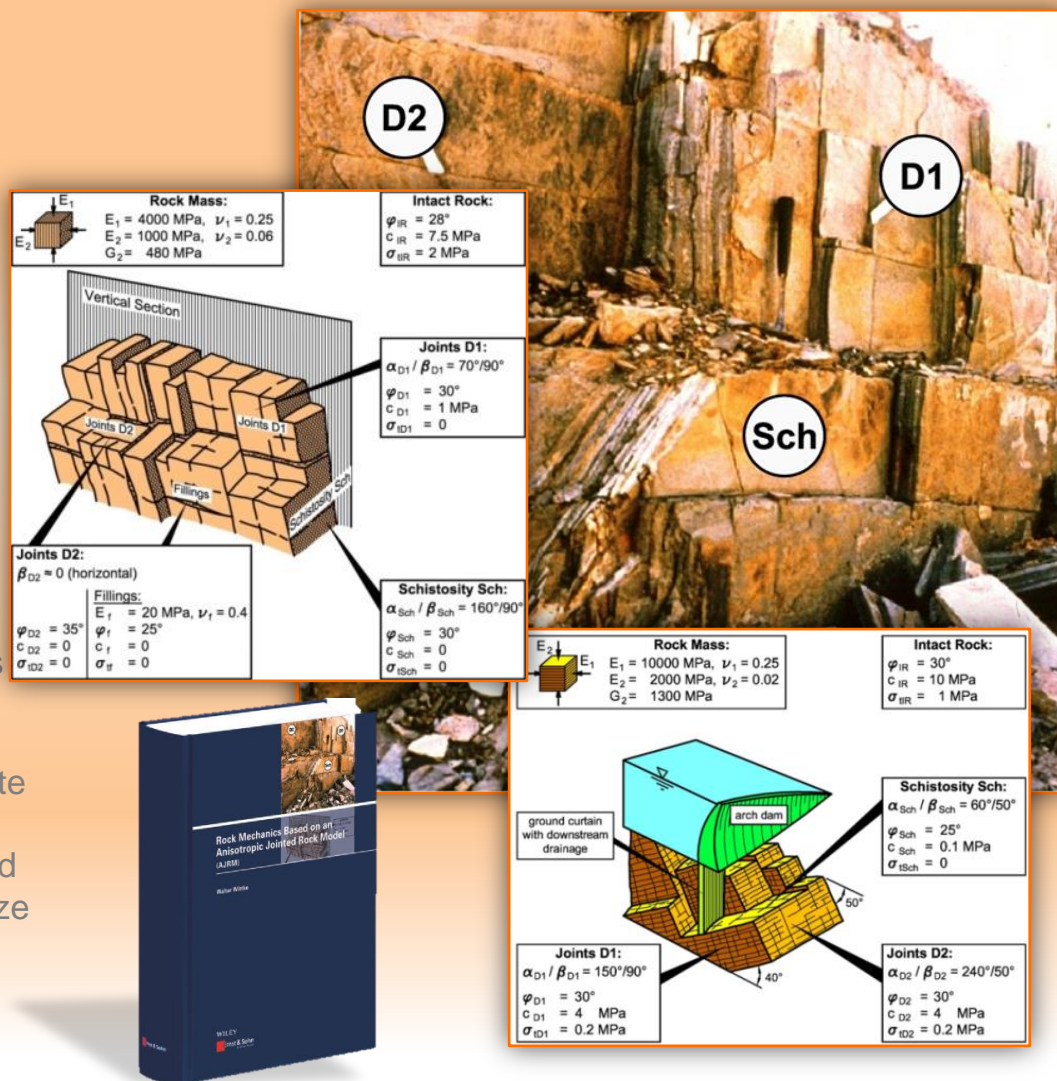
- Tunnels,
- Dams and
- Slopes

in jointed and anisotropic rock mass.

> 50 years of experience

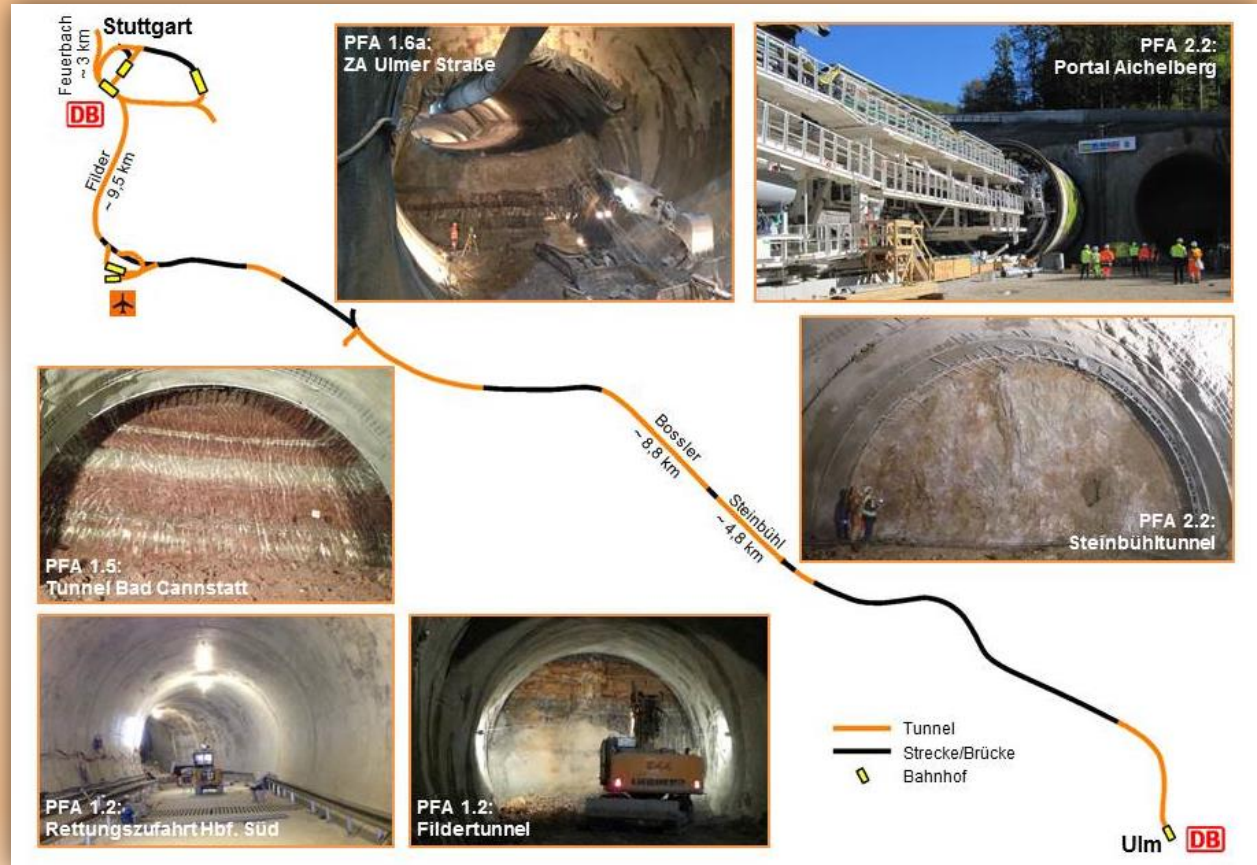
- Development of models
- Application in practice and back-analysis
- Permanent advancement

Therefore, we are able to realistically simulate the load bearing behaviour of soil and rock mass as well as the interaction of ground and structure. On this basis, we can help to realize safe and economic structures.



75 km of tunnels

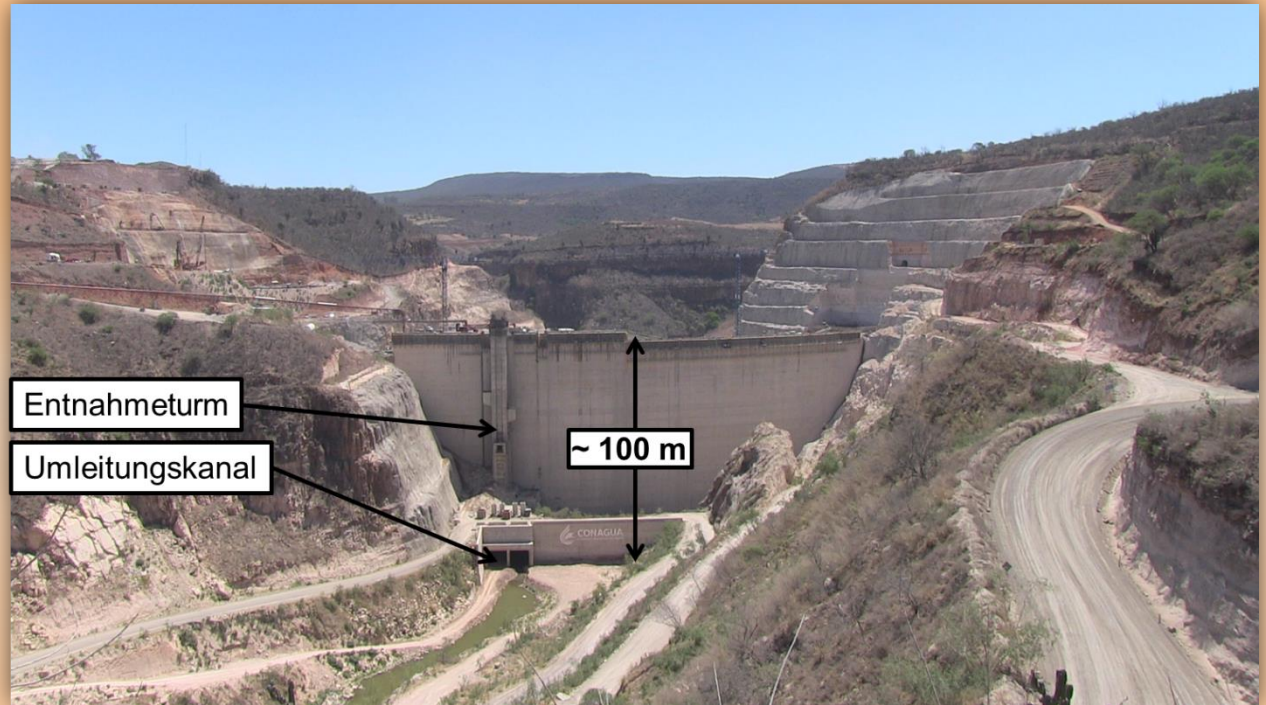
- Tunneling expert
- Geotechnical expert
- Review engineer
- Designer
- Specialist site supervision



Railway Project Stuttgart-Ulm

130 m high RCC gravity dam

- Geotechnical expert
- Review of first design
- Detailed design
- Guidance of construction, monitoring



Presas El Zapotillo, Mexico

Competences

Deep Construction & Foundations

**18 km long, 30 m deep
slurry trench wall at
the Dead Sea**

- Detailed design
- Guidance of construction
- Specialist site supervision



Dike 5/8, Israel

Competences

Slopes & Embankments

Stabilizing a Slope failure

- Concept for rehabilitation
- Detailed design
- Rehabilitation
- Guidance of construction
- Specialist site supervision



Federal Motorway A46, Cut Meschede

Tunneling in swelling rock mass

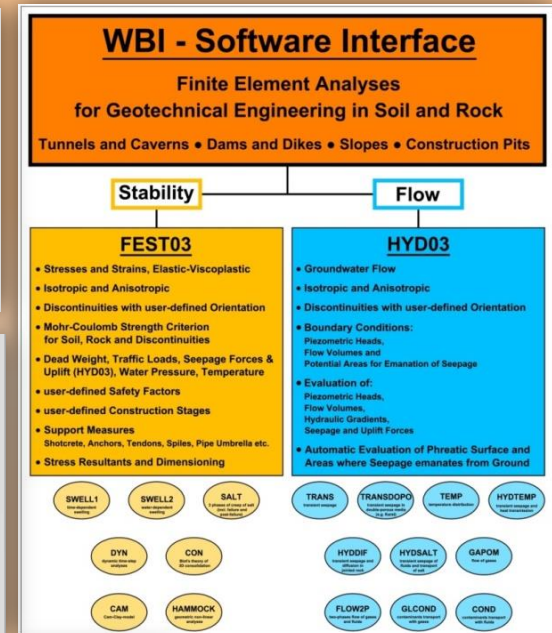
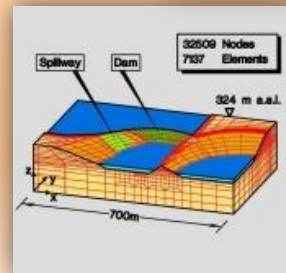
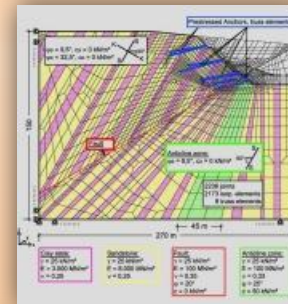
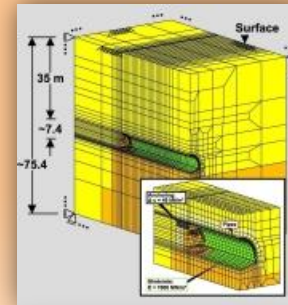
- Large scale test: measuring stresses and deformations due to swelling for more than 20 years, whilst artificially watering the rock
- With the aid of the measurement results: calibration of rock mechanical model and corresponding numerical analysis method
- The results form the basis for dimensioning of the tunnels of the project Stuttgart 21, which are located in anhydritic rock mass



Test gallery Freudensteintunnel

FEST03 and HYD03

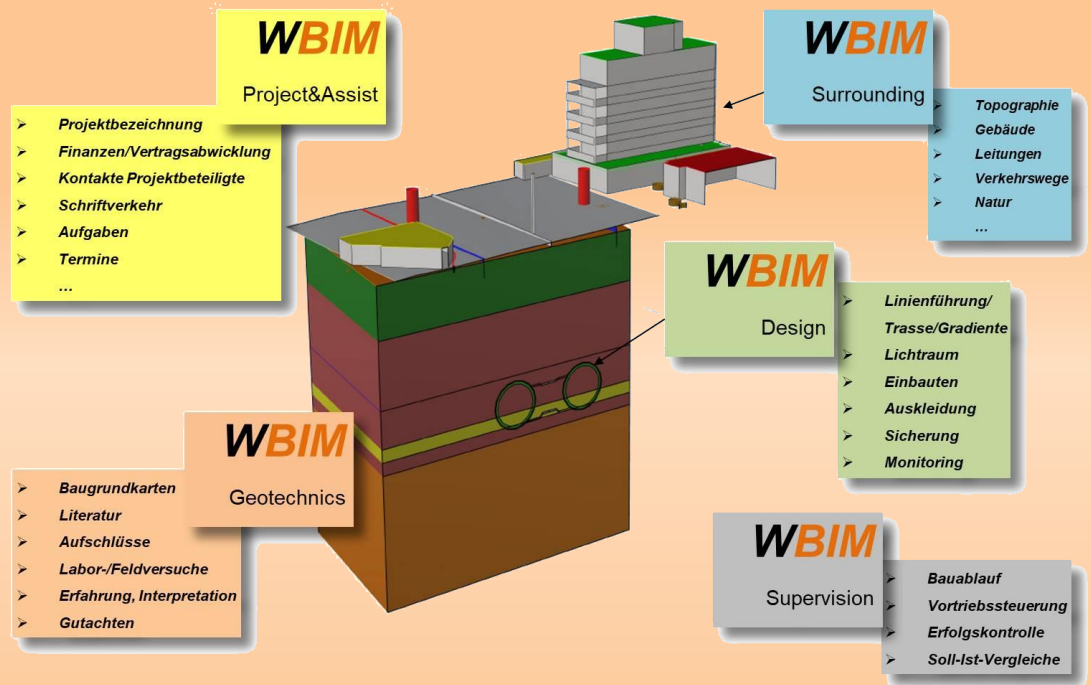
- Realistic modelling of the ground behaviour and of the interaction of ground and structure
- Numerical analyses according to the Finite Element method
- Own computer program systems **FEST03** and **HYD03**
- Numerous additional modules
- Special focus on rock mechanics and rock hydraulics



Competences

WBI-Software

- Central project- and structure related data management
- Integration of all information relevant for tunnel design and construction
- Simplification / Acceleration of design procedures
- Visualization of construction sequences
- Automated evaluation and target oriented representation
- Independency from software suppliers



WBIM

Forum „Research and Practice in the WBI-Center“:

- Series of lectures held various times a year. The participation is free of costs. Acknowledged as advanced training by the Engineering Chamber of the state of Baden-Württemberg.

Further information on www.wbionline.de

Rock mechanics and Tunneling Day:

- Once a year we celebrate a one-day technical symposium in the WBI-Center. Acknowledged as advanced training by the Engineering Chamber of the state of Baden-Württemberg.

Further information on www.felsmechanik.eu

Award of the Walter-Wittke-Prize:

- Is awarded on a yearly basis for publications / projects in the construction or mining sector, which have achieved a progress with regards to the modelling of rock mechanical behaviour of jointed rock in the sense of the AJRM.

Further information on www.ajrm.de

Forum

Forschung und Praxis im WBI-Center

2018

<p>08.03.2018 ab 17:30 Uhr</p>	<p>Dr. Carles Camós-Andreu, Technik- und Anlagenmanagement, FuE und Regelwerk Tunnel- und Erdbau (LNPF 22(F)), DB Netz AG "Neuerungen in der DB-Richtlinie 853 - Eisenbahntunnel planen, bauen und instand halten"</p>
<p>20.09.2018 ab 17:30 Uhr</p>	<p>Dr. Reinhard Domke, Projektleiter NBS Gelnhausen – Fulda, Regionalbereich Mitte (LNG-MI-W(2)), DB Netz AG "ABS/NBS Hanau - Würzburg/Fulda Trassensuche zwischen Spessart und Vogelsberg"</p>
<p>15.11.2018 ab 17:30 Uhr</p>	<p>Dr. Jan Anderssohn, Dr. Oliver Lang, Airbus Defence and Space GmbH "Satellitengestützte Bodenbewegungsmessung von Bauwerken und anderen Infrastrukturen im Tunnelbau"</p>

5th Rock Mechanics & Tunneling Day

WBI-Center, Weinheim (Bergstraße), Germany
23.05.2019



**Subjects of the Railway Project Stuttgart - Ulm
and other national and international major projects**

Herewith we announce the "5th Rock Mechanics & Tunneling Day" that will be organized by WBI Consulting Engineers together with the German Railway Organization for the Project Stuttgart-Ulm and the Civil Engineering Section of the Engineering Association of Württemberg. Lectures on subjects of the Railway Project Stuttgart-Ulm and other major projects will be presented by representatives of owners, contractors, consulting engineers and experts.

The topics are considered to be interesting for professionals, which have a special interest in rock mechanics and tunneling.

The Symposium will be held in German. In case more than 20 English speaking participants are registered, a simultaneous translation from German to English will be provided.

Walter Wittke Stiftung, Weinheim

Auslobung

2019

Walter Wittke Preis



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