

**Dr. -Ing. Christian Missal**

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**Senior Consultant**

**Expertise** Numerical Modeling, Geotechnical Engineering, Disposal for  
Radioactive Waste, Geomechanics, Saltmechanics, Constitutive Models

**Education** Dr.-Ing. (Civil Engineering), 2019  
Technische Universität Braunschweig, Germany  
Dipl.-Ing. (Civil Engineering), 2005  
Technische Universität Braunschweig, Germany

**Professional Affiliations** *Member: German Geotechnical Society*  
*Working Group 1.6 Numerical Systems in Geotechnology*  
*Member: International Society for Rock Mechanics*

**Professional Experience**

2016 – Present *ITASCA Consultants GmbH, Gelsenkirchen, Germany*  
*Senior Consultant*

2008 – 2016 *Technische Universität Braunschweig, Braunschweig, Germany*  
*Institute for Soil Mechanics and Foundation Engineering*  
*Scientific Assistant*

2007 – 2008 *Technische Universität Braunschweig, Braunschweig, Germany*  
*Institute for Construction Maintenance and Structure*  
*Scientific Assistant*

2005 – 2007 *Kurt Fredrich Spezialtiefbau GmbH, Bremerhaven, Germany*  
*Site Manager for Special Foundation Engineering*

**Project Experience**

*Numerical Analysis:* Influence of former near-surface mining on a road construction project in the district Steinfurt, Germany (since 2020)

*Consulting (Joint Venture):* Technical support of BASE in safety analyses within the scope of the site selection process for a radioactive waste disposal (since 2018)

*Numerical Analysis and Geotechnical Consulting (Joint Venture):* Numerical studies of stability and usability for the infrastructure rooms of Konrad mine (since 2016)

*Development of Constitutive Models:* Implementation of a transversal anisotropic elastic and transversal anisotropic plastic constitutive model for layered rock in FLAC3D (2020)

*Numerical Analysis:* Comparative studies of rock mass characteristics and behavior of clay stone in Switzerland (2018)

*Development of Constitutive Models:* Implementation of a visco-plastic constitutive model for granular residue salts in FLAC3D (2016)

*Numerical Analysis:* Comparative studies of rock mass characteristics and behavior of clay stone in Switzerland (2016)