

Curriculum Vitae

Personal Data

Title	
First name	David
Name	Anton
Current position	Research assistant
Current institution(s)/ site(s), country	Technische Universität Braunschweig, Institute of Applied Mechanics (IAM), Division Data-Driven Modeling of Mechanical Systems, Germany
Identifiers/ORCID	https://orcid.org/0000-0002-0888-0220

Qualifications and Career

Stages	Periods and Details
Degree programme	<ul style="list-style-type: none"> ▪ Civil Engineering (M.Sc.), 10.2017 – 06.2020, Technische Universität Braunschweig, Germany ▪ Environmental Engineering (B.Sc.), 10.2013 – 08.2016, Technische Universität Braunschweig, Germany
Doctorate	<ul style="list-style-type: none"> ▪ 06.03.2026, Prof. Henning Wessels (supervisor), Prof. Laura De Lorenzis (examiner), Institute of Applied Mechanics (IAM), Division Data-Driven Modeling of Mechanical Systems, Germany <p>“Uncertainty quantification in constitutive model calibration and discovery in computational solid mechanics”</p>
Stages of academic/ professional career	

Activities in the Research System

Memberships and functions

2025	Treasurer of GAMM Junior Research Group at Technische Universität Braunschweig
2023-2025	Member of faculty committees
2020-2021	Managing Director of DFG funded Research Training Group 2075-2 “Modelling the constitutional evolution of building materials and structures with respect to aging”

Reviewing activities

since 2024	Journal reviewer e.g. for CMAME
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Scientific Results

Category A – Articles in peer-reviewed journals, contributions to peer-reviewed conferences or to anthology volumes, and book publications

1. J.-H. Urrea-Quintero, **D. Anton**, L. De Lorenzis and H. Wessels. “Automated constitutive model discovery by pairing sparse regression algorithms with model selection criteria”. In: *Computer Methods in Applied Mechanics and Engineering* 449 (2026). DOI: <https://doi.org/10.1016/j.cma.2025.118551>. **Open Access**
2. **D. Anton**, J.-A. Tröger, H. Wessels, U. Römer, A. Henkes and S. Hartmann. „Deterministic and statistical calibration of constitutive models from full-field data with parametric physics-informed neural networks”. In: *Advanced Modeling and Simulation in Engineering Sciences* 12.12 (2025). DOI: <https://doi.org/10.1186/s40323-025-00285-7>. **Open Access**
3. U. Römer, S. Hartmann, J.-A. Tröger, **D. Anton**, H. Wessels, M. Flaschel and L. De Lorenzis. “Reduced and All-At-Once Approaches for Model Calibration and Discovery in Computational Solid Mechanics”. In: *Applied Mechanics Reviews* 77.4:040801 (2025). DOI: <https://doi.org/10.1115/1.4066118>. **Open Access**

Category B – Any other form of published results

Published source code:

1. **D. Anton**. “Code for the publication: Deterministic and statistical calibration of constitutive models from full-field data with parametric physics-informed neural networks”. 2024. DOI: <https://doi.org/10.5281/zenodo.11368998>. **Open Access**
2. J.-H. Urrea-Quintero, **D. Anton**, L. De Lorenzis and H. Wessels. „Code for the publication: Automated constitutive model discovery by pairing sparse regression algorithms with model selection criteria”. 2025. DOI: <https://doi.org/10.5281/zenodo.17160081>. **Open Access**
3. **D. Anton**. “Code for the publication: Uncertainty quantification in model discovery by distilling interpretable material constitutive models from Gaussian process posteriors”. 2025. DOI: <https://doi.org/10.5281/zenodo.17442182>. **Open Access**

Published datasets:

4. J.-A. Tröger, S. Hartmann, **D. Anton** and H. Wessels. „Digital image correlation measurement of linear elastic steel specimen”. 2024. DOI: <https://doi.org/10.5281/zenodo.11257192>. **Open Access** (Honored with FAIR Data and Software Award Lower Saxony in the category dataset)

Academic distinctions

03/2026	PhD (Dr.-Ing.) awarded with distinction, Technische Universität Braunschweig, Germany
11/2024	FAIR Data and Software Award Lower Saxony in the category dataset, Germany
06/2021	MATTHÄI award for an excellent Master’s degree in Civil Engineering at Technische Universität Braunschweig, Germany