

Moritz Irion | Asbergplatz 5 | 50937 Cologne
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Person

Name	Moritz Irion
Date of birth	November 25, 1985
Place of birth	Bergisch Gladbach
Marital status	Married



Short profile

- **10 years** of experience in the development of systems and components for the **automotive industry**
- **3 long term projects** in the **e-mobility sector** (EV battery design)
- **7 years** in the development of **dual wet clutch systems** from **concept to series**
- Comprehensive **intercultural and language skills** through international projects and stays abroad
- Experience in the sectors **automotive, medical technology, production technology, consumer goods**

Profession

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| since 2023 01 | irion.engineering , Cologne, Germany
Freelance design and development engineer <ul style="list-style-type: none">- Development of mechanical systems and components from concept to series- CAD 3D design and 2D production drawing creation / CAE analysis- Planning and supervision of system and component tests- Systematic issue resolution processes (6-Sigma, Global 8D, DoE, DFMEA)- Statistical analysis of production process quality data |
| 2022 03 – 2022 12 | FEV , Aachen, Germany / FEV Iberia (2022 03 - 2022 05), Barcelona, Spain
Engineering service provider for the automotive industry
Design / project engineer for automatic transmissions <ul style="list-style-type: none">- Localization of an automatic transmission production in the USA- Design responsibility for transmission components and subassemblies- Technical support for suppliers in the USMCA area- Engineering support for manufacturing and assembly processes in the industrialization phase- Lead of technical review meetings- Project planning support for the purchasing and testing departments |
| 2014 04 – 2021 09 | Magna PT - Transmission Systems (until 2018: Getrag), Cologne, Germany
Manufacturer of car transmissions, part of the Magna International Group
Development / system engineer for dual wet clutch systems <ul style="list-style-type: none">- Lead design responsibility for dual clutch systems- Development and optimization of systems and components regarding functionality, robustness, and cost- Creation of concepts, 3D models, and production-ready 2D drawings- Conduction of CAE analyses (finite element method)- Supervision and performance of system and component tests- Lead of systematic issue resolution processes (6-Sigma, Global 8D, DoE, DFMEA)- Leading technical support for international customers and suppliers- Support for the development of manufacturing and assembly lines- Generation of statistical analyses of production processes |

- 2013 | 03 – 2013 | 10 **Fraunhofer IPA**, Stuttgart, Germany
 Research institute for production and automation technology
Student research assistant, department „biomechatronic systems“
- Research in the fields of biomechanics and biomimetics
 - Development and analysis of biomimetic systems
 - Performance of functional tests
 - Diploma thesis about the development of a sprint prosthetic leg
- 2008 | 10 – 2010 | 12 **Fraunhofer IPT**, Aachen, Germany
 Research institute for production technology
Student research assistant, department „fiber-reinforced composite materials and laser system technologies“
- Concept creation and design of fiber placement systems
 - Design and construction of system test facilities
 - Performance of functional tests

Studies

- 2006 | 10 – 2013 | 10 **RWTH-Aachen**, subject: **Mechanical engineering**
 Focus: Systematic design and development
 Degree: Diploma | Grade „Very good“ (1.5)
- 2013 | 03 – 2013 | 10 **Diploma thesis** at Fraunhofer IPA, Stuttgart | Grade 1.0
 Topic: **Development of a prosthetic leg for sprinters based on the biomechanics of the African ostrich**
 Contents: Biomimetics, concept, design, FEA, prototype manufacturing
- 2011 | 12 – 2012 | 05 **Student research paper** at ITA, RWTH-Aachen | Grade 1.3
 Topic: **Design of a winding-unit for the wet spinning process**
 Contents: Process development, concept, design, patenting
- 2010 | 08 – 2011 | 12 **Student research paper** at Fraunhofer IPT, Aachen | Grade 1.7
 Topic: **Design of a laser-supported fiber-placement-unit**
 Contents: Concept, test facility construction, tests

Internship & Project

- 2012 | 06 – 2012 | 12 **Kärcher**, Winnenden
 Manufacturer of cleaning devices and systems
Advanced internship in the predevelopment department
- Concept and design of the FC5 hard floor cleaning device
 - Test rig design and construction
 - Prototype manufacturing
 - Performance of functional tests
- 2010 | 03 – 2010 | 07 **RWTH-Aachen** | **Hongik University**, Seoul, South Korea |
Hyundai Motor Company, Seoul, South Korea
„Cooperative Product Development“
- Development of a „Hybrid Tricycle“ in an international and interdisciplinary team of mechanical engineering and product design students
 - Preparation and lead of project milestone review meetings
 - Concept creation and 3D CAD model generation
 - Manufacturing of a functional prototype

Abroad

2011 01 – 2011 06	San Sebastián, Spain , exchange semester
2010 05	Seoul, South Korea , project trip „Cooperative Product Development“
2005 08 – 2006 02	Australia , Work & Travel
2002 08 – 2003 01	Montréal, Canada , student exchange program

Language skills

German	Mother tongue
English	Business-fluent (speaking and writing)
Spanish	Business-fluent (speaking and writing)
French	Fluent (speaking and writing)
Korean	Basic (speaking and writing)

Computer skills

CAD	Trained skills in operating CATIA V5 Experience in operating UGS NX, PTC Creo, Solidworks, Pro/Engineer, Autodesk Inventor, CoCreate Modeling
CAE	Trained skills in operating CATIA V5 GPS
Other	MS-Office, Minitab, imc FAMOS

Interests

Music production, film, sports, travelling, motorcycling

Cologne, March 12, 2025

