

Xiaobing Dai

Nationality: Chinese

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Address: Tumblingerstr. 56, 315, 80337 Munich (Germany)

Date of birth: 22/06/1995

Gender: Male



EDUCATION AND TRAINING

Master of Science

Technical University of Munich [01/10/2019 – 06/01/2021]

Field(s) of study: Mechatronics and Robotics

Final grade: 1.4 / 1.0 (95/100, Excellent, passed with distinction)

Ranking: 13.0% (84/642)

System Dynamics, Automation, Modern Control

Master of Science

Technical University of Munich [01/10/2018 – 01/06/2021]

Field(s) of study: Mechanical Engineering

Final grade: 1.5 / 1.0 (93/100, Excellent)

Ranking: 19.4% (125/642)

Management, Logistics, Corporate Finance, Lean Manufacture

Bachelor of Science

Tongji University [01/09/2013 – 30/06/2018]

Class: Rhein Class - Sino-German Machinery and Energy Engineering (Innovation Experimental Zone)

Field(s) of study: Mechanical Design, Manufacture and its Automation

Final grade: 4.4 / 5.0 (89/100)

Ranking: 10.0%

Mechatronics, Product Development, System Kinematics

Minor Degree

Tongji University [01/09/2014 – 30/06/2016]

Field(s) of study: Civil Engineering

Final grade: 90 / 100

Solid Mechanics, Reinforced Concrete, Architecture

WORK EXPERIENCE

Student Research Assistant

Chair of Materials Handling, Material Flow, Logistics, TUM

[01/01/2020 – Current]

City: Munich

Country: Germany

- Modelling and simulation of rigid-flexible hybrid mechanism based on multi-body dynamics
- Co-simulation and control of hydraulic-mechanism systems
- Optimal trajectory search of complex mechanical systems based on deep reinforcement learning

Electrical and Mechanical Engineering Intern

Kohler K&B Asia Pacific NPD Center

[01/02/2018 – 31/07/2018]

City: Shanghai

Country: China

- Design and preliminary test of multimedia and fitness bathtub
- Drainage test of a vertical bathtub for the elderly

Engineering Intern

Shanghai Airport City Terminal

[01/09/2017 – 31/01/2018]

City: Shanghai

Country: China

- Mastery of the working process of water supply, air conditioning and power supply system
- Mastery of the hardware of the microcomputer and its operation and maintenance methods

Intern

Shanghai Cable Works Group Co. Ltd.

[01/02/2017 – 31/08/2017]

City: Shanghai

Country: China

- Management of production process of different types of common and special electric cables
- Maintenance of manufacturing systems
- Inspection of final product quality

Intern in Logistics Technology Department

SAIC Volkswagen

[01/02/2016 – 30/09/2016]

City: Shanghai

Country: China

- Update of the AGV Route Planning Strategy for Assembly Line 2
- Translation and Evaluation of the Documents of ASRS, SuMa2.0
- Survey of SPS in Assembly Line 1

Production Intern

Shanghai Heavy Machinery Factory Co., Ltd

[01/08/2015 – 31/01/2016]

City: Shanghai

Country: China

- Participate in processing methods of large parts using large equipment
- Mastery of the marking of technical drawings in mechanical processing

LANGUAGE SKILLS

Mother tongue(s):

Chinese

Other language(s):

English

LISTENING C1 READING C1 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

German

LISTENING B1 READING C1 WRITING B2

SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1

DIGITAL SKILLS

Document Creation

Microsoft Office / Outlook / VISIO

Programming

C / C++ / SWIFT / Java / HTML5/CSS, Javascript / Python

Engineering Drawing

AutoCAD / ProE(Creo) / Solidworks / Autodesk Inventor

Simulation Software

Matlab/Simulink / Tecnomatix Plant Simulation / NI LabVIEW / GeoGebra / Altium Designer / Proteus

HONORS AND AWARDS

National Artificial Intelligence Challenge - Pedestrian Re-identification (Top 26/1839)

The National Natural Science Foundation of China & Huawei Peng Cheng Laboratory

[08/2020 – 12/2020]

The Third Prize of Tongji Scholarship of Excellence

Tongji University

[09/2016 – 06/2017 , 09/2014 – 06/2015]

The Second Prize of Contemporary Undergraduate Mathematical Contest in Modeling

CSIAM (China Society for Industrial and Applied Mathematics)

[06/2015]

Shanghai Volkswagen Scholarship

Tongji University

[09/2013 – 06/2014]

PROJECTS AND RESEARCH

Dynamics and Control of Lattice Boom Cranes as Spatial Rigid-Flexible Multibody Systems

Chair of Materials Handling, Material Flow, Logistics, TUM

[12/2020 – 06/2021] Master Thesis, Note: 1.0 / 1.0 very good

Development of Routing Strategies for Shuttles in an Automated Warehouse

Chair of Materials Handling, Material Flow, Logistics, TUM

[11/2019 – 05/2020] Semester Thesis, Note: 1.3 / 1.0 very good

Embedded Systems and Robots

Institute of Micro Technology and Medical Device Technology, TUM

[10/2019 – 03/2020]

Numerical Methods for Engineers Lab

Institute for Computational Mechanics, TUM

[10/2019 – 03/2020]

MATLAB/Simulink for Computer Aided Engineering

Institute of Flight System Dynamics, TUM

[10/2019 – 03/2020]

Intelligent Five-bar Mechanism for Trajectory Regeneration based on System Memory

Chinesisch Deutsches Hochschulkolleg, Tongji University

[12/2017 – 06/2018] Bachelor Thesis, Note 5.0 / 5.0 very good

DMG-Lib Mechanism Digital Database

Lehrstuhl für Entwicklungsmethodik und Produktzuverlässigkeit, Tongji University

[09/2016 – 09/2017]

SITP X Research on Electromagnetic Launching Devices

10th Tongji University Undergraduate Innovation Programs, Tongji University

[12/2015 – 06/2016]

SITP X Application of Small Hand-Projecting Robot in Reconnaissance

10th Tongji University Undergraduate Innovation Programs, Tongji University

[12/2015 – 06/2016] Second Prize

PUBLICATIONS

Continuous Medium Hypothesis Based Study on the Screw Flight Wear Model and Wear Regularity in Screw Ship Unloader

[2022] W Yang, W Meng, X Dai, Z Yin, F Yau, Y Yuan

Transactions of the Canadian Society for Mechanical Engineering

Website: <https://cdnsiencepub.com/doi/abs/10.1139/tcsme-2020-0239>

Symplectic Optimal Control of Flexible Long Boom Manipulator

[2021] L Gao, H Ma, H Peng, X Dai, M Kleeberger and J Fottner

8th International Conference on Vibration Engineering (ICVE'2021)

Website: https://icve.sjtu.edu.cn/zy_lwzt.html (Page 7)

Dynamics Modelling and Simulation of Super Truss Element based on Non-linear Beam Element

[2021] L Gao, X Dai, M Kleeberger, J Fottner

11th International Conference on Simulation and Modeling 2021 (SIMULTECH 2021)

Website: https://www.researchgate.net/publication/353396964_Dynamics_Modelling_and_Simulation_of_Super_Truss_Element_based_on_Non-linear_Beam_Element

Microstructure and Dry Friction of 2205 Dual-Phase Steel during Solution Precipitation

[2021] W Yang, W Meng, X Dai

Transactions of the Canadian Society for Mechanical Engineering

Website: <https://www.hindawi.com/journals/sv/2021/8697290/>

Analysis of the Screw Flight Wear Model and Wear Regularity of the Bulk Transport in Screw Ship Unloader

[2021] W Yang, W Meng, L Gao, Y Tan, J Fottner, X Dai, F Yao, Y Yuan, X Sun

Transactions of Mechanical Engineering

Website: <https://link.springer.com/article/10.1007/s40997-021-00422-8>

Analysis of Screw Flight Wear Model of Vertical Screw Conveyor

[2021] W Yang, W Meng, Z Yin, F Yau, Y Yuan

Coal Mine Machinery

Website: <https://kns.cnki.net/kcms/detail/detail.aspx?dbcode=CJFD&dbname=CJFDLAST2018&filename=JXGY201806033&v=t3ZonZooKxq8l7db8ygp52VRJBnji8Gl7JrF0XSPnRd8aNjQ3A7o0scouzsZzjP>

Wear Analysis of Spiral Blade Based on Discrete Element Method

[2021] W Yang, W Meng, X Dai, W Li

Coal Mine Machinery

Website: <https://kns.cnki.net/kcms/detail/detail.aspx?dbcode=CJFD&dbname=CJFDLAST2021&filename=MKJX202104033&v=5kTa3OTTznuX9JntXfgKLsy9kl8KsUcR5sflQ0IhPG90Z1sNcKuAiBvW2dpKXkPO>

Manual for Industry 4.0 (Handbuch Industrie 4.0, Chinese Translation)

[2020] Gunther Reinhart, J Min, W Zhang, N Xu

China Machine Press. ISBN: 9787111662570

Transmission Design and Trajectory Control of 3D Printer Extruder based on Five-bar mechanism

[2018] N Qin, X Dai, S Lin

Manufacturing Automation. 2018,40(06):136-140.

Website: <https://kns.cnki.net/kcms/detail/detail.aspx?dbcode=CJFD&dbname=CJFDAUTO&filename=MKJX202107022&v=5kTa3OTTznshvp1pySm5GhxcXaHQPERR9vuF6BDH9dmR921ZvLQjSYDHs548uRC>