

Bingrui Chen

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EDUCATION

Nanjing Forestry University

Nanjing, China

M.Sc. in Forestry Engineering (Furniture Design and Engineering) Sep 2020-Present

- Supervisor: Prof. Huiyuan Guan Assistant Prof. Wengang Hu
- Average Score: 89/100 GPA: 3.57/4.0
- Primary Awards: National English Competition for College Students (Second Prize for Graduate Students Group); Excellent Student Assistant Award.
- Scholarship: 1st Class Scholarship; Outstanding Student Scholarship (top 1%).

Nanjing Forestry University

Nanjing, China

B.Sc. in Industrial Design (Furniture Design and Manufacture) Sep 2016-Jun 2020

- Average Score: 86.88/100 GPA: 3.57/4.5 Rank: 4/116
- Primary Awards: Outstanding Student Cadre Award of Jiangsu Province; Excellent Student Assistant Award*3.
- Scholarship: Metasequoia Student Scholarship*2 (top 1%); Outstanding Student Assistant Scholarship*1.

Research Experience

a. Research Project

1. Study on the Forming Mechanism of Mortise-and-tenon Joint Strength of Wood Furniture (M.Sc. degree thesis) **2020-present**
2. Design and test of detachable connector for modern wood furniture **2020-2022**
3. Acoustic emission (AE) of wood (Research assistant) **2021**
4. Design of a portable seat (B.Sc. degree thesis) **2020**

b. Peer-Reviewed Journal Articles

1. W.G. Hu, **B.R. Chen**, and T.X. Zhang. 2021. Experimental and Numerical Studies on Mechanical Behaviors of Beech Wood under Compressive and Tensile States, *Wood Research*, 66, 27-37. (IF 1.139). Contribution: Software; validation; experiment; and data curation.
2. W.G. Hu, **B.R. Chen**. 2021. A Methodology for Optimizing Tenon Geometry Dimensions of Mortise-and-Tenon Joint Wood Products, *Forests*, 12 (4), 478. (IF 2.634). Contribution: Software; validation; investigation; data curation; and original draft.
3. W.G., **B.R. Chen**, X.W. Lin, and H.Y. Guan. 2021. Experimental and Numerical Study on a Novel Bamboo Joint for Furniture Considering Effect of Loading Type on Mechanical Parameters Used in Finite Element Method, *Maderas. Ciencia y tecnología*, 23. (IF 1.576). Contribution: Experiment, validation, and data curation.

- W.L. Fu, H.Y. Guan, and **B.R. Chen**. 2021. Investigation on the Influence of Moisture Content and Wood Section on the Frictional Properties of Beech Wood Surface, Tribology Transactions 64 (5), 830-840. (IF 1.96). Contribution: Experiment, and data curation.
4. **B.R. Chen**, S.F. Lu, and W.G Hu. 2021. Investigation on Functional Requirements of Public Coffee Tables (Chinese with English summary), Forestry and Grassland Machinery 2(4), 59-61. (IF 0.456).
 5. **B.R. Chen**, H.Y. Xia, and W.G Hu. 2022. The Design and Evaluation of Three-dimensional Corner Joints Used in Wooden Furniture Frames: Experimental and Numerical, BioResources, Vol. 17 (2), 2143-2156. (IF 1.614).
 6. **B.R. Chen**, X.J. Yu, and W.G Hu. 2022. Experimental and Numerical Studies on the Cantilevered Leg Joint and its Reinforced Version Commonly Used in Modern Wood Furniture, BioResources, Vol. 17 (3), 3952-3964. (IF 1.614).
 7. **B.R. Chen**, W.G Hu. 2022. Design and Performance Analysis of a Wood Detachable Oval Mortise-and-Tenon Joint (Chinese with English summary), Chinese Journal of Wood Science and Technology, 36 (2), 65-70+86. (IF 0.852).
 8. **B.R. Chen**, X.J. Yu, and W.G Hu. 2022. Study on Improved Structural Design of Cantilever Leg Joints for Wood Chair (Chinese with English summary), Furniture, 43(4) Pre-print, (IF 3.29).
- c. Grant Patents** (total of 12; selection)
1. **B.R. Chen**, H.Y. Guan. 2022. Measuring Device for Measuring the Withdrawal Load Capacity of Wood Mortise, CN216621990U.
 2. **B.R. Chen**, H.Y. Xia, Y. Liu, and W.G. Hu. 2022. A Novel Furniture Connector and a Furniture Structure with the Connector, CN215980293U.
 3. **B.R. Chen**, Y.He, W.G. Hu, Y. Liu, and S. Li. 2022. A Novel Furniture Corner Connector and Furniture Corner Joints. CN215444652U.

Grant Support

Postgraduate Research Innovation Program of Jiangsu Province	2020-2022
PI; Study on the Forming Mechanism of Mortise-and-tenon Joint Strength of Wood Furniture; Grant number: KYCX_0905	

Teaching Assistant Experience

Furniture Structure (For overseas students in English)	2022
Curriculum Design of Furniture Design and Manufacture	2021
Graduation Design (B.Sc. thesis) for five students	2021
Wood Product Design and Manufacturing Training	2020

Language and Skills

- a. Language:** Chinese (native); English (IELTS: 6.5 - Listening: 7.5; Reading: 7; Writing: 6; Speaking: 6).
- b. Skills:** Modelling (CAD, SolidWorks, JD Paint); Numerical simulation (Abaqus); Experiment (Universal testing machine, Fatigue testing machine, FFT, SEM, etc.); Basic wood processing (CNC, Saw, etc.); Data analyzing (SPSS, Origin, Design expert).