# Curriculum Vitae - Meihan Liu

## Personal Information

Name: Meihan Liu
Gender: Female | Ethnicity: Han
Date of Birth: June 1993 | Place of Birth: Inner Mongolia
Political Affiliation: Communist Party Member | Degree: Ph.D. in Engineering
Phone: 18813171983 | E-mail: liumh93@163.com
Mailing Address: Hydraulics Laboratory, Tsinghua University, Haidian District, Beijing (Zip Code: 100084)

## Academic Discipline & Research Interests

Primary Discipline: Agricultural Engineering / Hydraulic Engineering
Research Interests: Water-saving irrigation, saline-alkali land remediation, remote sensing evapotranspiration, crop water consumption mechanisms, water-salt transport

## Education & Research Experience

Tsinghua University (10/2022 - Present)
Postdoctoral Researcher in Hydrology and Water Resources
Advisor: Associate Professor Huimin Lei

Inner Mongolia Agricultural University (09/2015 - 12/2021)
Ph.D. in Agricultural Water and Soil Engineering
Advisor: Professor Haibin Shi

University of Lisbon, Portugal (12/2018 - 07/2020)
CSC Joint Ph.D. Training in Agricultural Water and Soil Engineering
Advisor: Luis Santos Pereira

Inner Mongolia Agricultural University (09/2011 - 07/2015)
B.Eng. in Agricultural Hydraulic Engineering

## Research Projects

National Natural Science Foundation Key Project (01/2016 - 12/2020):
"Water and Fertilizer Cycle Mechanism and Regulation in Saline Irrigation Areas under Changing Environments"
Role: Crop water consumption estimation and evapotranspiration analysis.

National Key R&D Program of China (09/2016 - 12/2020):
"Efficient Water-saving Irrigation Technology Research and Integration for Grain and Economic Crops in the Hetao Irrigation District, Inner Mongolia"
Role: Optimizing crop irrigation systems.

National Natural Science Foundation Project (09/2018 - 12/2021):
"Effects of Water-saving Reconstruction on Soil-Water Environment in Saline Irrigation Areas and Its Regulation Mechanism"
Role: Investigated groundwater table influences on crop and soil water-salt processes.

National Key R&D Program (07/2021 - 12/2025):
"Integration and Model Assembly of Water-saving, Salt Control, and Productivity Enhancement Technologies and Optimization Simulation System for Efficiency Testing"
Role: Remote sensing-based farmland evapotranspiration inversion.

## Professional Experience & Leadership

• Class League Secretary & Cultural Committee Member (09/2011 - 06/2015)
• Office Director & Head of Quality Development Department, Student Union (09/2013 - 06/2015)
• Lead Coordinator for International Student Reception during President Xi Jinping's State Visit to Portugal (11/2018 - 01/2019)

## Skills & Certifications

• Teaching Certification: Junior High School Mathematics Teacher Qualification
• Software Proficiency: AutoCAD, Microsoft Office, Sigmaplot, Origin, DPS, Photoshop

Programming Skills:

- Proficient in R and Python for crop evapotranspiration simulation and statistical analysis
- Familiar with Google Earth Engine platform programming

## Awards & Honors

• "Outstanding Student Leader," Inner Mongolia Autonomous Region (07/2013)
• National Encouragement Scholarship (11/2014)
• "Outstanding University Graduate," Inner Mongolia Autonomous Region (05/2015)

## Patents & Software Copyrights

• Utility Model Patent: *Alfalfa Root Sampler*, China, ZL201920979965.8 (2020-04-07)
• Invention Patent: *Coordinated Irrigation, Drainage, and Fertilization in Saline-alkali Land*, China, CN117521411A (2024-02-06)

• Software Copyright: *Soil Moisture Content Simulation Software for Different Irrigation Systems V1.0*, China, 2021SR0150859 (2020-08-07)

## Postdoctoral Research

**Research Topic:**

High-Resolution Remote Sensing Evapotranspiration Inversion in Highly Heterogeneous Saline-Alkaline Farmland in Arid Regions

**Main Objectives:**

1. Develop a remote sensing evapotranspiration model incorporating salinity stress factors to investigate evapotranspiration under salinity stress.
2. Utilize multi-source remote sensing data fusion algorithms to obtain high spatiotemporal resolution datasets for analyzing the spatiotemporal evolution of crop evapotranspiration at the farmland scale.

## Personal Statement

Dedicated researcher with a rigorous academic attitude, strong teamwork abilities, an outgoing personality, excellent communication skills, and a passion for sports.