# (Mark) Shui Hu

Applied Physics Graduate
Python developer
Tinkerer

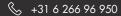


Languages

Bash SQL HTML5 & CSS







**15-02-1995** 

Hi, my name is Mark. I am always eager to learn, use, and produce innovative tools to tackle complex problems. I am attentive to detail and well organized. In my work, presentation and visual aesthetics are also essential. By combining these traits, my passion has become to create software that can convey detailed information using visualization.

### **EXPERIENCE**

Student assistant 2018 - 2020

QuTech Academy, Delft

Preparation and testing of online courses on quantum mechanics

### Flow engineer intern

2018 - 2019

Spirocco Kft., Budapest

Design, simulation and testing of volume-flow meters within an asthma inhaler using Autodesk CAD, Autodesk CFD programs, and 3D printing

### Marketing and communications intern

2018

Technoorg Linda Kft., Budapest

Production of a series of educational videos regarding electron microscopy

### Online content manager 2018

Bever BV, Pijnacker

Development of Python software for easier online product management

### Highschool student tutor 2014 - 2017

iLoveHomework, the Hague

Homework guidance and tutoring on the subjects of physics, mathematics, chemistry, and biology

### Software engineer intern

2016

PinkRF, Nijmegen

3D volume reconstruction from stereometric images via MATLAB

### T PROJECTS

### OpenSurfaceSim (Open Surface Code Simulations)

https://github.com/watermarkhu/opensurfacesim

Open-source simulator for benchmarking and visualizing surface code decoders, written in Python, grant recreived from the Unitary Fund

## PUBLICATIONS

# Quasilinear-Time Decoding Algorithm for Topological Codes with High Decoding Perfomance

S. Hu, D. Elkouss

ResearchGate pre-print, (2020)

# Skills Python3 Matlab LaTeX Fluent Fluent Adobe Creative Suite Autodesk Fusion 360 Autodesk Fusion 360 Autodesk CFD



### **Master Applied Physics**

2017 - 2020

Delft University of Technology

8.6/10

Electives on fluid dynamics, imaging physics, and quantum mechanics

Master thesis on quantum computation at QuTech; new solutions to quantum
error correction on a self-produced quantum simulator in Python

### **Bachelor Applied Physics**

2013 - 2017

Delft University of Technology

7.7/10

Bachelor thesis on imaging and biophysics; description and further development of a software package for DNA analysis in MATLAB

#### Minor Medical Delta

2015 - 2016

Erasmus University Rotterdam, Leiden University

7.0/10

Courses on anatomy, biophysical processes, and imaging techniques

### Gymnasium

2007 - 2013

Lorentz Casimir Lyceum

7.8/10

Curriculum: science & engineering and science & health + German & French Runner-up at the Singapore International Mathematics Challege 2012



### Freshman's weekend committee

2017

Vereniging voor Technische Physica

Presidential role in organizing the freshman weekend activity for 300+ students

### Study tour committee

2015 - 2016

Vereniging voor Technische Physica

Graphic design and communication role in organizing a 30-day study tour to South-East Asia and China

### Various committees

2007 - 2015

Vereniging voor Technische Physica, AEGEE Delft, Lorentz Casimir Lyceum
Various roles including organizer of symposia, editor and graphic designer
for the faculty magazine and yearbook, and IT related committees

### Participant and volunteer First Lego League 2006 - present

First Lego League Benelux, Germany, Denmark, Norway, Japan
Participant and organizational volunteer for the regional, national, and international finals of the First Lego League competition







