

# SAMEH OTHMAN

## Physicists & Programmer

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ssothman  
Esslingen Am Neckar, Germany



## EXPERIENCE

### Researcher

#### IAS-2, Forschungszentrum Juelich

July 2021 – June 2025 Juelich, Germany

- Scaled molecular-dynamics simulations of active-matter systems from 500 to 600,000 particles, optimizing performance and streamlining statistical-analysis pipelines
- Earned a 2.0 grade in graduate-level Statistical Physics at the University of Cologne, demonstrating rigorous theoretical and analytical proficiency
- Co-supervised two Bachelor and three high-school students on independent research projects, guiding system design, simulations, and data interpretation

### Machine Learning Internship

#### Max Planck Institute for Intelligent Systems

Oct 2020 – May 2021 Tuebingen, Germany

- Modeled node non-exposure in a Bayesian community-detection framework to mitigate sampling bias and elevate graph reconstruction and community-recovery performance
- Developed probabilistic node-exposure estimation techniques and published the work in Complex Networks and Their Applications XI (HERE)

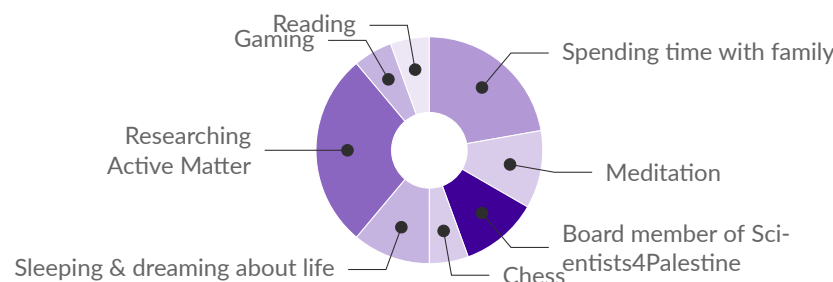
### Observatory Operator & Manager

#### Birzeit University

Feb 2016 – May 2020 Palestine

- Spearheaded and coordinated public and private educational events, engaging audiences from 10 up to 1,500 participants
- Engineered and integrated custom hardware, software, and observational workflows to elevate the observatory into Palestine's foremost astronomy facility

## A DAY OF MY LIFE



## REFEREES

### Dr. Thorsten Auth

t.auth@fz-juelich.de  
Institute for Advanced Simulation, Forschungszentrum Juelich

## LIFE PHILOSOPHY

*"There is always a solution, if someone is willing."*

## MOST PROUD OF

**Courage I had**  
to stand up and lead change in society

**Persistence**  
Built and nurtured a thriving community of astronomers, empowering members to give back through outreach and educational initiatives

**Good Listener**  
to a variety of people and background to support or help solve problems

## STRENGTHS

Hard-working Eye for detail  
Motivator & Supporter Patience  
Python Bash Github Cloud  
OS Fluency SQL C HPC Systems

## LANGUAGES

English Arabic German

## EDUCATION

### PhD in Statistical Physics

#### Köln University, Germany

April 2022 – Sept 2025

### M.S. in Physics

#### Birzeit University, Palestine

Feb 2016 – May 2020

### B.S. in Physics, Computer Science

#### Birzeit University, Palestine

Oct 2010 – Feb 2016