Kwame **Sellick-Cole**



Profile

Mechanical Engineering master's student at Eindhoven University of Technology with industrial experience at Allseas Nuclear. Seeking a thesis project in thermal-fluids engineering or energy systems, with experience in fluid dynamics, heat-transfer modelling and numerical verification.

Contact details

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Personal information

Citizenship: **United Kingdom**
Languages: **English** (native), **Dutch** (currently learning)

Skills

- CFD: OpenFOAM and ParaView
- Heat transfer and porous-media modelling
- Numerical verification and mesh-convergence analysis
- Scientific computing: Python and MATLAB
- Dynamic systems modelling: Simulink
- Engineering optimisation: Gurobi
- CAD: Autodesk Inventor
- Software development and testing

Availability

Available for a master's thesis from February 2027

Education

MSc Mechanical Engineering *Eindhoven University of Technology*
2025–present
◇ Research Section: Energy Technology
◇ Coursework in scientific computing, numerical methods, and engineering optimisation, with current studies in computational continuum mechanics and interfacial transport phenomena. Projects include CFD, energy-system modelling, and Monte Carlo simulation.

- **Thermodynamic Design of a CHP Plant:** Designed a combined heat and power system using energy balances, heat exchanger analysis, and pinch methods to optimise heat recovery and system efficiency.
- **Energy Storage Modelling and Control:** Developed a Python home battery simulation combining physical modelling, control logic, and energy forecasting to optimise performance under dynamic electricity pricing.
- **Monte Carlo Modelling of Gas Adsorption:** Modelled adsorption in nanoporous materials using statistical mechanics, thermodynamics, and force fields to predict adsorption isotherms and molecular interactions.

MSc Finance and Investment Management *University of Liverpool*
2023–2026 ◇ Thesis: *Electricity Price Volatility and Renewable Energy Stock Returns: Evidence from European Liberalised Electricity Markets*

BEng Mechanical Engineering, Sport Scholarship *Newcastle University*
2018–2021

Experience

R&D Intern at *Allseas Nuclear (Delft, Netherlands).*
2026.07–2026.09 ◇ Evaluated OpenFOAM for helium flow and heat transfer modelling in high-temperature gas-cooled reactor geometries.

- Developed an OpenFOAM model of helium flow and solid–gas heat transfer in a porous reactor core.
- Verified model implementations against analytical solutions and assessed mesh convergence.
- Compared results with reference codes and assessed model limitations.
- Reviewed open-source simulation tools and presented recommendations to the engineering team.

Software Developer at *Scott Logic Ltd. (United Kingdom).*
2022.02–2025.07 ◇ Consultant software engineer developing and testing Java Spring Boot applications across banking, public-sector and internal R&D projects.

- Developed and tested software in multidisciplinary teams, translating client requirements into working implementations.
- Presented technical progress to clients, hosted knowledge-sharing seminars and mentored new graduates.

Hobbies

Basketball : Former semi-professional basketball player and Newcastle University sports scholar; currently competing in the Netherlands.