Curriculum Vitae

Personal Details:

Name:	Jonas Sohn
Phone:	+45 71792293
E-Mail:	jsohn@btech.au.dk
Country:	Denmark
LinkedIn:	https://www.linkedin.com/in/jonas-sohn-350213177/
Qualification:	BSc. Mechanical and Industrial Engineering
	MSc. in Engineering - Technology Based Business Development

Academic Profile:

Publications:

- Sohn, J.; Riskutia, B., Isik, U. & Xydis, G. – *Impact of Hydrogen Energy Storage on a 100% Renewable Energy based System in Denmark.* (Under Review)
- Sohn, J., Liulys, M., Avgoustaki, D.D., Xydis, G. (2023). "*CFD analysis of airflow uniformity in a Shipping-Container vertical farm.*" Computers and Electronics in Agriculture 215. https://doi.org/10.1016/j.compag.2023.108363
- Avgoustaki, D.D., Avgoustaki, G., Miralles, C.C., Sohn, J. & Xydis, G. (2022). *"Autonomous Mobile Robot with Attached Multispectral Camera to Monitor the Development of Crops and Detect Nutrient and Water Deficiencies in Vertical Farms."* Agronomy 12(11). https://doi.org/10.3390/agronomy12112691

06/2023 – present   **Aarhus University, Denmark**

PhD Fellow investigating HVAC system design and operation in vertical farming

- **PhD course specialization:**

  o "Basic Usage of OpenFOAM" and "CFD simulation with Open-Source Software" at Chalmers University of Technology, Sweden
  o Advanced Optimization Techniques for Energy Systems Planning and Operation at Aalborg University, DK
  o Application-Oriented Modelling of Renewable Energy Sources, Conversion and Energy Storage Systems at Aalborg University, DK
  o Energy Economics: Energy Consumption at DTU, DK

11/2022 – 05/2023   **Otto-von-Guericke-University Magdeburg, Germany**

Position: Research Assistant

- Development and implementation of a position tracking for person localization in an outside environment
- Writing C++ software in the ROS framework
- MATLAB/Simulink
- Usage of Debian-based OS and version control systems (git)
- Deploying, testing, and debugging software on prototype vehicle

09/2020 – 07/2022   **Aarhus University, Denmark**

MSc. in Engineering - Technology Based Business Development || Modules: Management of Technology, Energy Engineering and Innovation, Advanced Operation Management, Optimisation of Engineering Processes Using Numerical Approaches, Business Model Innovation

- Master Thesis: *A CFD analysis of airflow uniformity in a container vertical farm system considering crop resistance.* Supervised by: Associate Prof. George Xydis

- Project Articles:

- o *Analysis and evaluation of a fogponics system for indoor plant production at "Ponics".* Supervised by Post-Doc. Dafni D. Avgoustaki
- o *Implementation of fans and an intermitted misting cycle to optimize water and nutrient supply in a fogponics-system.* Supervised by Post-Doc. Dafni D. Avgoustaki
- o *Solving a high-voltage utility pole positioning problem using a greedy algorithm*

09/21 – 01/22   **Exchange Semester at TU Delft, Netherlands**
- o *Electricity and Gas: Market Design and Policy Issues*:
  - ▪ *Modelling Assignment:* Analysis of the effect of additional hydrogen storage and renewable generation capacity through the energy island to meet hourly demand in the Danish energy market under consideration of the least-cost solution using a multi-period optimization algorithm in MATLAB.
- o *Financing Technology Ventures*
  - ▪ Assessment of risk, financial viability, and profitability of new technology ventures; Analysis of the start-up financing ecosystem to understand valuation techniques and key financial contracts relevant in entrepreneurial finance.

10/2015 - 07/2020   **Otto-von-Guericke-University Magdeburg, Germany**
BSc. - Mechanical and Industrial Engineering || Specialisation: Production Engineering || Modules: Manufacturing; Materials, Properties and Applications; Integrated Product Development; Quality Management; Project Management and Project Work in Teams

- Bachelor Thesis: *Generation of velocity profiles for energy consumption estimation of e-buses using a stochastic simulation method.* Supervised by: Prof. Dr. Hartmut Zadek, Dip. -Ing. Olaf Czogalla.
- Project: *Development of a prototypical HoloLens-application for a new realistic communication scenario.* Supervised by: Dr. Stefan Waßmann, Dipl.-Psych.& Dipl.-Sporting. David Becke

Other Skills:

- MS Office
- SimScale (CFD simulation)
- Python 3
- Autodesk Fusion360
- Octave/MATLAB
- Windows / Linux; basic shell skills
- ROS (OpenCV & PCL)
- C++
- Git/Gitlab version control

Languages:

- German: mother tongue
- English: IELTS-Test 2020: B2/C1 Equivalent