

# Adithyan Kannaiyan

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## Education

- 2018 – ...    ■ **Master in Mechanical Engineering**, École polytechnique fédérale de Lausanne, Switzerland. *'Energy' orientation.*
- 2014 – 2018    ■ **B. Tech. Mechanical Engineering**, Indian Institute of Technology, Indore, India. *Institute Silver Medal for academic performance.*  
GPA: 9.24/10.0

## Project Experience

- May – July, 2017    ■ **Shape Memory Alloy and Polymer composites for enhanced stiffness**  
*Nanyang Technological University, Singapore | Supervisor: Dr. Huang Wei Min*  
Fabricated composites of shape memory alloy (Ni-Ti) and shape memory polymers (EVA, PMMA) in order to improve stiffness characteristics over a range of temperatures. Designed and performed experiments for testing composite strengths.
- July – Dec, 2017    ■ **Performance analysis of a thermochemical energy storage device for solar thermal applications**  
*Bachelor's Thesis, Indian Institute of Technology, Indore, India | Supervisor: Dr. Anil Kumar, IIT Tirupati*  
Designed an energy storage device utilising manganese chloride and ammonia as the working pair and characterised its performance under laboratory controlled conditions.
- Feb – June, 2019    ■ **Integration of a ground source heat pump model in a building energy system design tool**  
*Semester Project, IPESE | Supervisors: Dr. Francois Marechal, Dr. Paul Stadler*  
Developed an AMPL model for a ground source heat pump (GSHP) and integrated the model in an existing Mixed Integer Linear Programming (MILP) based design tool that optimizes a building energy system given target parameters.

## Skills

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|---------------------------|--|
| Programming               | ■ C, MATLAB, Python, R   |
| Misc.                     | ■ AUTOCAD, L <sup>A</sup> T <sub>E</sub> X, RMarkdown, Ansys Fluent  |
| Relevant master's courses | ■ Advanced heat transfer, Renewable energy, Advanced energetics, Two-phase flows and heat transfer, Modelling and Optimization of Energy systems |

## Awards

- 2018    ■ **Institute Silver Medal**, Indian Institute of Technology, Indore, awarded for graduating at the top of the Class of 2018, Department of Mechanical Engineering.
- 2017    ■ Selected for the **NTU-India Connect Research Internship Scholarship Programme**.