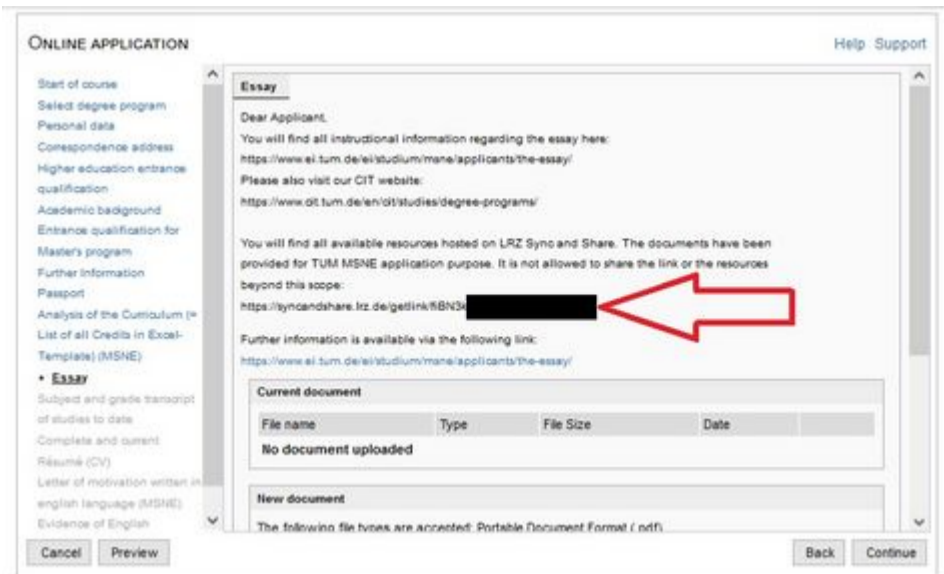


Essay for MSNE Application (Mandatory Application Document)



Screenshot of TUM Online Application System (Essay Resources and Essay Upload)

According to FPSO (MSNE), applicants must provide a written essay as part of their application documents. **Topics, resources and instructions** are announced here on this website. Kindly read this page carefully:

Each of the three essay topics is based on a recent scientific publication. Your task is to write a summary on **ONE** of the following three publications:

Topic 1: “Remote nongenetic optical modulation of neuronal activity using fuzzy graphene” (written by Sahil K. Rastogi et al.)

Topic 2: “Emergence of robust self-organized undulatory swimming based on local hydrodynamic force sensing” (written by Robin Thandiackal et al.)

Topic 3: “Targeted neurotechnology restores walking in humans with spinal cord injury” (written by Fabien B. Wagner et al.)

We provide a TUM-bound access to all applicants using LRZ Sync-and-Share file hosting service: You may download all three publications (pdf format, ~90MB), following the instructions in TUM Online application system.

The screenshot on this website helps you finding the essay section in TUM Online Application System. Kindly register in TUM Online Application System, fill all your applicant data first. In **TUM Online Application System** (i.e. not here on this website!), scroll down to the essay section, download the publications, read them carefully, decide for one of the publications and write your summary.

MSNE Admission Essay Format:

Applicants **choose one out of the three topics** listed above. Applicants provide an essay, performing an journal article summary and analysis. Applicants are encouraged to consider:

- *Introduction* – provide context for what the paper is about
- *Methods* – what were the key methods used, and how do they work?
- *Results* – what are the key results of the paper?
- *Contribution to the field* – What key step forward did the technology presented provide, or what key problem did it solve? What are the pros/cons of this technology?
- *Conclusions* – summarize important points of the above sections
- *References* - Applicants are also welcome to seek out and source other relevant literature that assists in writing the summaries/ the essay.

Constraints for this written essay:

- Written in **English**
- Length **between 550 and 650 words** (word count including essay title and essay plain text, excluding reference list, excluding picture captions, excluding footnotes, excluding text in tables, excluding students' declaration text, excluding auxiliary file/meta information such as date and name of author information). Kindly provide your wordcount final statistics in the document.
- No signature required.

Recommendations:

- Kindly provide the essay in a document form allowing to process text information, e.g. a pdf file generated by LaTeX, Word, or a different editor tool of your choice. Please do not provide a scanned image of your essay.
- We do not provide a template. I.e. you may choose your own favourite font, font size, line spacing, format, word processing software, etc...

Assessment criteria, according to FPSO regulation:

- A scientific and logical argumentation style; Covering the topic completely and correctly
- A structured scientific essay, referencing to resources completely and correctly, showing competence while applying domain-specific terminology in English, maintaining the length constraint (word count).