**INTERNSHIP POSITION**

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| **Topic** | **Transcendental topological optimization of machine components** |
| **Specification/**  **Programme**  (min. 100 words) | The topic deals with transcendental topological optimization, including modeling of variable boundary conditions. The goal of the topic is to include time-varying mechanical values in the design of machine components. To combine property modeling technology with artificial intelligence to enable the design of single-purpose machine components. The topic requires knowledges of CAD softwares, especially CREO from PTC, Inventor from AutoDESK, or Fusion from the same company. It is also possible to use the CATIA program from Dassault. Furthermore, in order to successfully master it, it is necessary to master the basic procedures and calculations of the finite element method. |
| **Time period** | Start from Jun to September |
| **Length of the traineeship - number of months** | 2 - 4 month |
| **Supervisor´s name and contact** | Prof. Ing. Ladislav Ševčík, CSc.  Technical University of Liberec  Faculty of Mechanical Engineering  Department of Machine Parts and Mechanism  Studentská 1402/2  46117 Liberec  ladislav.sevcik@tul.cz |
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| **Documents required** | CV, Letter of motivation, Transcript of Records |