**INTERNSHIP POSITION**

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| **Topic** | **Light structures for autonomous electric utility vehicles** |
| **Specification/**  **Programme**  (min. 100 words) | “Lightweight structures for autonomous electric utility vehicles” focuses on material development, design and production of one-piece composite elements that create a chassis frame for autonomous utility vehicles with very high strength and resistance to dynamic loads and adverse climatic and operational conditions. The development of new materials for the resulting lightweight construction will focus on new types of polymer composites with organic and inorganic reinforcements, modified by hybrid nanoparticle systems from waste inorganic materials, suitable for the construction of one-piece composite elements. The verification of this new knowledge requires the measurement of new materials, model simulations and design proposals supported by long-term testing of individual parts, functional samples and the resulting prototype under laboratory conditions as well as in real operation. Applicant will be cooperating with members of department to numerical modelling and optimizing in labs. |
| **Time period** | Start from Jun to September |
| **Length of the traineeship - number of months** | 2 - 12 month |
| **Supervisor´s name and contact** | Doc. Ing. Michal Petrů, Ph.D.  Technical University of Liberec  Faculty of Mechanical Engineering  Department of Machine Parts and Mechanism  Studentská 1402/2  46117 Liberec  [michal.petru@tul.cz](mailto:michal.petru@tul.cz) |
| **Administrative Contact** | Marcela Valkova, [marcela.valkova@tul.cz](mailto:marcela.valkova@tul.cz) |
| **Documents required** | CV, Letter of motivation, Transcript of Records |