Initial situation:
The variety of products in the automotive industry is constantly increasing. Planned as well as unplanned introductions of new product variants (for example of electric vehicles) influence the processes in a production system. Increasing product and process complexity, in turn, tends to negatively affect the key performance targets of cost, quality, and time. Due to the high level of vertical integration and specific investment costs, mastering this variant-induced complexity is of particular importance in automotive body shops.

One approach is to replace the solitary geometry-setting fixtures with component-integrated geometrical features to achieve a higher degree of flexibility.

Your tasks:
You will work on the simulation and testing of component-integrated features. The aim of the work is primarily to analyze the features towards their suitability to replace fixtures in the context of an automotive body shop.

For this purpose, a broad literature review on existing approaches on feature based design and the utilization of features to replace fixture functions is to be done. Afterwards the findings are to applied in the simulation of features developed at PEM. Finally, the simulation results are to verified by hardware test of the features.

Requirements:
– motivation and high commitment
– independent work
– interested in topics of production of electric mobility
– ideally experience in automotive assembly or toolkit development

Offering:
– Extensive supervision
– Defined task
– Fast realization
– Autonomous realization of an exciting project
– Cooperation in a research topic with promising future

Have we awoken your interest?
Please send your current transcript of records and curriculum vitae to the e-mail address listed below.

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