DEPARTMENT OF AUTOMOTIVE AND AERONAUTICAL ENGINEERING

The 50 Most Important Parameters of the 60 Most Used Passenger Aircraft

Task for a *Project*

Background

When dealing with passenger aircraft, it is convenient to have a database with parameters at hand. As such, we never lose control of reality. A database exists since 2001 from Jenkinson et al. It is a good example, but has not been maintained or extended for two decades. It is time to start from scratch. The new database should have a source for each parameter in the database and at best a comparison of sources for each number. It should be possible to easily calculate new parameters from known parameters. We can e.g. calculate aspect ratio from span and wing area with $A = b^2/S$ (to give just one simple example) for all 60 aircraft in the database. Much data has been collected for special investigations (see e.g. on http://library.PofScholz.de) and could be included in this general database. Such a database could grow over the years by continuously adding parameters and aircraft. This could be done by other students.

Task

Task of this project is to build a database with passenger aircraft data in Excel and HTML. The subtasks are:

- Review a source (https://www.flightglobal.com/download?ac=73559) with a statistic about almost all passenger aircraft types and their number in use globally. Determine the aircraft types for which initially data should be considered.
- Review sources from which the most reliable data of passenger aircraft can be retrieved.
- Define the most important parameters for the database.
- Collect and curate numbers for the required data and build the database.
- Write a report in which all steps and thoughts are explained.

The report has to be written in English based on German or international standards on report writing.