

Exercises for Computational Physics (physik760)

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Linear regression

1: Download the global temperature anomaly data set

http://data.giss.nasa.gov/gistemp/tabledata_v3/GLB.Ts+dSST.csv
or

https://ecampus.uni-bonn.de/goto_ecampus_file_1141356_download.html

and understand its content.

- a) Plot the average annual temperature anomaly versus the years, making the assumption that for each year, the anomaly in each month is an independent sample. (use this to compute estimates of errors on the year-by-year means)
- b) Assume further that the data for the anomaly is not correlated between the years.
- c) Determine which polynomial degree $n = 0, 1, 2, 3$ best fits this data.