# Estimating the conditional variance by local linear regression

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## Aircraft data

```r
library(sm)
```

```
## Package 'sm', version 2.2-5.6: type help(sm) for summary information
```

```r
data(aircraft)
help(aircraft)
attach(aircraft)
lgPower <- log(Power)
lgSpan <- log(Span)
lgLength <- log(Length)
lgWeight <- log(Weight)
lgSpeed <- log(Speed)
lgRange <- log(Range)
```

## Estimating the conditional variance

**First, use the function loc.pol.reg that you can find in ATENEA and choose all the bandwidth values you need by leave-one-out cross-validation (you have not to program it again! Just look for the right function in the \*.Rmd files you can find in ATENEA)**

**Second, use the function sm.regression from library sm and choose all the bandwidth values you need by direct plug-in (use the function dpill from the same library KernSmooth).**