**MA4605 Lecture 4A : Linear Models**

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| Int=c(2.1,5.0,9.0,12.6,17.3,21.0,24.7)  Conc=c(0,2,4,6,8,10,12)  cor.test(Int,Conc) |

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| > cor.test(Int,Conc)  Pearson's product-moment correlation  data: Int and Conc  t = 47.1967, df = 5, p-value = 8.066e-08  alternative hypothesis: true correlation is not equal to 0  95 percent confidence interval:  0.9920730 0.9998421  sample estimates:  cor  0.9988796 |

Remark upon the following outputs:

* The correlation coefficient: **0.9988796**
* The confidence interval for the correlation coefficient estimate: **(0.9920730,0.9998421)**
* p-value: **8.066e-08**

**Distribution of the normalized errors**

The errors of estimation of the slope and intercept, when normalized by the corresponding standard deviations are distributed as Student t-distribution with *n-2* degrees of freedom.