# ST552, Homework 2

## Due Wednesday, Sep 25, 2013

1. JM 2.11 (p32)
2. JM 2.19 (p33). Read the paragraph preceding Exercise 2.17.
3. JM 2.20 (p33)
4. JM 2.21 (p34)
5. JM 3.6 (p65)
6. JM 3.7 (p65)
7. JM 3.11 (p67)
8. The Hadamard product between two matrices is defined as the elementwise multiplication. That is $\boldsymbol{C} = \boldsymbol{A} \circ \boldsymbol{B}$ has elements $c_{ij} = a_{ij}b_{ij}$. Show that if $\boldsymbol{A}, \boldsymbol{B} \in \mathbb{R}^{n \times n}$ are positive semi-definite, then their Hadamard product is positive semi-definite.