Errata Corrige

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"Progress is the exploration of our own error. Evolution is a consolidation of what have always begun as errors. And errors are of two kinds: errors that turn out to be true and errors that turn out to be false (which are most of them). But they both have the same character of being an imaginative speculation. . . . it seems to me terribly important to say this in an age in which most nonscientists are feeling a kind of loss of nerve. . . . by the time science becomes a closed –that is, computerizable– project, it is not science anymore. It is not in the area of the exploration of errors."

Jacob Bronowski, *The Origins of Knowledge and Imagination* (1978)

Chapter 2

Page 32 In the Definition of the A–norm a scalar product is denoted with $(\cdot,\cdot)$ instead of $<\cdot,\cdot>$:

$$f(\mathbf{x}^{(k)}) = \|\mathbf{x}^{(k)} - \mathbf{x}^*\|_A = <A(\mathbf{x}^{(k)} - \mathbf{x}^*),\mathbf{x}^{(k)} - \mathbf{x}^*>.$$

Page 40 In the equation at the bottom of the page a "=" is missing, it should be:

$$\frac{\|\mathbf{r}^{(m)}\|_2}{\|\mathbf{r}^{(0)}\|_2} = \frac{\|\mathbf{b} - A\mathbf{x}^{(m)}\|_2}{\|\mathbf{b} - A\mathbf{x}^{(0)}\|_2} = \frac{\|A(\mathbf{x}^* - \mathbf{x}^{(m)})\|_2}{\|A(\mathbf{x}^* - \mathbf{x}^{(0)})\|_2}.$$

Page 42 The chain of inequalities in the hypotheses of Theorem 2.8 should be:

$$0 < \lambda_1 \leq \lambda_2 \ldots \leq c < \leq \lambda_{n-m+1} \leq \ldots \leq \lambda_n.$$

Page 45-46 Equations (2.35), (2.36) and (2.37), the matrix M should be the matrix A.

Page 46 At Line 1 of Algorithm 2.4 the instruction $\rho_1 \leftarrow \rho_0$ is missing.

Page 46 Algorithm 2.5: $\mathbf{v}_0 = \mathbf{0}$, $\beta_1 = 0$.

Page 47 Algorithm 2.6: Line 7 $\mathbf{v}_j$ is $\mathbf{v}_{j+1}$.