**Errata of the book *Signals and Systems*,**

**by A. V. Oppenheim and A. S. Willsky, 2nd edition**

Elaborated by teachers of Signals and Systems (Sinais e Sistemas), IST

**Note:** There are several different versions of the 2nd edition of this book, printed in different years. It is possible that in newer versions some or all of the errors indicated below don't appear.

- Page 663, top – Property 2,

  > For rational Laplace transforms, the ROC does not contain any poles.

  should simply read

  > The ROC does not contain any poles.

  In a pole the function has no finite value (it tends to infinity at that point), and therefore a pole can never be in the ROC, irrespective of whether the transform is rational or not.

- Page 693, bottom – The property

  > The ROC associated with the system function for a causal system is a right-half plane.

  should read

  > The ROC associated with the system function for a causal system is a wide-sense right-half plane.

  "Wide sense", here, means that the edge of the half plane can be in a finite position, in which case the ROC will be a proper half plane, but it can also be at $-\infty$, in which case the ROC will be the whole plane, and it can be at $+\infty$, in which case the ROC will be the empty set.

- Page 695, before Example 9.20 – The property

  > An LTI system is stable if and only if the ROC of its system function H(s) includes the entire $j\omega$-axis [i.e., $\mathscr{R}e\{s\} = 0$].

  should read

  > An LTI system with a rational system function is stable if and only if the ROC of its system function H(s) includes the entire $j\omega$-axis [i.e., $\mathscr{R}e\{s\} = 0$] and the system function doesn't have more zeros than poles.

  There is no simple property of this kind for non-rational system functions.