# Herramientas Computacionales

## Miguel Angel Rojas Aparicio 18 de febrero de 2015

Taller 2 - LATEX

#### 1. Ecuaciones

(a) 
$$\left(-\frac{\hbar^2}{2m}\nabla^2 + V\right)|\psi\rangle = i\hbar \frac{d|\psi\rangle}{dt}$$
(b) 
$$\Sigma_{n=1}^{\infty} \frac{1}{n^2} = \frac{\pi^2}{6}$$
(c) 
$$(\beta mc^2 + c(\alpha_1 p_1 + \alpha_2 p_2 + \alpha_3 p_3))\psi(x, t) = i\hbar \frac{\partial \psi(x, t)}{\partial t}$$
(d) 
$$\int_{-\infty}^{\infty} e^{-\frac{x^2}{2\sigma^2}} dx = \sqrt{2\pi}\sigma$$
(e) 
$$\frac{P}{A} = \frac{2\pi(kT)^4}{h^3c^2} \int_0^{\infty} \frac{x^3}{e^x - 1} dx = \frac{2\pi^5 k^4}{15h^3c^2} T^4$$
(f) 
$$\Sigma_i \vec{F}_i = m\vec{a}$$
(g) 
$$\left(\begin{array}{c} a & b \\ c & d \end{array}\right)^{-1} = \frac{1}{ad - bc} \left(\begin{array}{c} d & -b \\ -c & a \end{array}\right)$$

### 2. Fragmento

**6.1 Definition** Let [a,b] be a given interval. By a partition P of [a,b] we mean a finite set of points  $x_0, x_1, ..., x_n$ , where

$$a = x_0 \le x_1 \le \dots \le x_{n-1} \le x_n = b.$$

We write

$$\Delta x_i = x_i - x_{i-1}$$
  $(i = 1, ..., n).$ 

### 3. Alineación y Formatos

With fame I become more and more stupid, which of course is a very common phenomenon.

To Heinrich Zangger, December 24, 1919.

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