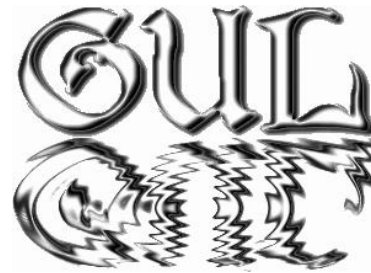

Trasparencias del Curso de L^AT_EX II

IV CURSO DE LATEX del GUL

*Grupo de usuarios de
Linux*

Univ. Carlos III de Madrid



3 de abril de 2003

Entornos matemáticos

- Dos posibilidades principales:
 - Entornos equation, eqnarray y displaymath:

$$i = 1$$

```
\begin{equation*}
\label{eq:pru1}
i=1
\end{equation*}
```

- Inclusión en el texto con \$ \$

Y de aquí se extrae $\frac{1}{2}$

| Y de aquí se extrae `$\frac {1}{2}$`

Numeración y referencia

$$\frac{10}{20} = \sqrt{0,25} \quad (1)$$

$$\vec{x} = \vec{y} + \vec{j} \quad (2)$$

Ec (1) y ec (2).

```
\begin{eqnarray}
  \label{eq:eqn1}
  \frac{10}{20} & = & \sqrt{0.25} \\
  \label{eq:eqn2}
  \vec{x} & = & \vec{y} + \vec{j}
\end{eqnarray}

Ec (\ref{eq:eqn1}) y ec (\ref{eq:eqn2}).
```

Variado

- Letras griegas:

 $\alpha, \beta, \delta, \Delta$
 $\$ \backslash \alpha, \backslash \beta, \backslash \delta, \backslash \Delta \$$

- Fracciones:

$$\frac{1}{\sqrt{2} + \frac{1}{\sqrt{3} + \frac{1}{\sqrt{4} + \frac{1}{\sqrt{5} + \dots}}}}$$

```
\begin{equation*}
\label{eq:pru12}
\cfrac{1}{\sqrt{2}+}
\cfrac{1}{\sqrt{3}+}
\cfrac{1}{\sqrt{4}+}
\cfrac{1}{\sqrt{5}+\dotsb}
\end{equation*}
```

Variado

- Subíndices y superíndices:

$$X_1, X_{Y_2}, X_{\frac{1}{2}}^{\alpha}$$

```
$X_1, X_{Y_2}, X_{\frac{1}{2}}^{\alpha}$
```

$$\sum_{i \geq 1}^{i < \infty} x_i$$

```
\[ \sum_{i \geq 1}^{i < \infty} x_i \]
```

$$\iint_{B_1}^{B_2}$$

```
\[ \iint_{B_1}^{B_2} \]
```

- Límites

$$\lim_{n \rightarrow 0} \frac{\sin x}{x}$$

```
\lim_{n \rightarrow 0} \frac{\sin x}{x}
```

Variado

■ Matrices:

$$\mathbf{x} = \begin{pmatrix} x_{11} & x_{12} & \dots & x_{1n} \\ x_{21} & x_{22} & \dots & x_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ x_{n1} & x_{n2} & \dots & x_{nn} \end{pmatrix}$$

```
\begin{displaymath}
\mathbf{x} =
\left(
\begin{array}{cccc}
x_{11} & x_{12} & \ldots & x_{1n} \\
x_{21} & x_{22} & \ldots & x_{2n} \\
\vdots & \vdots & \ddots & \vdots \\
x_{n1} & x_{n2} & \ldots & x_{nn}
\end{array}
\right)^{-1}
\end{displaymath}
```

Variado

■ Matrices:

$$\begin{pmatrix} 0 & 11 & 2 \\ 431 & 4 & 5 \end{pmatrix}$$

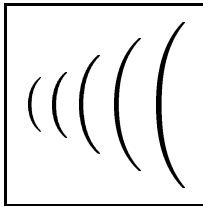
```
\[ \begin{pmatrix} 0 & 11 & 2 \\ 431 & 4 & 5 \end{pmatrix} \]
```

$$\begin{matrix} 0 & 1 & \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} & \begin{vmatrix} 1 & 2 \\ 3 & 4 \end{vmatrix} & \begin{Vmatrix} 1 & 2 \\ 3 & 4 \end{Vmatrix} \\ -1 & 1 & & & \\ \text{matrix} & \text{bmatrix} & \text{vmatrix} & \text{Vmatrix} \end{matrix}$$

Variado

Separadores:

- Tamaño fijo:



```
\boxed{(\big(\Big(\bigg(\Bigg(}
```

- De tamaño ajustable

$$\left(\frac{\frac{1+6}{2}}{\pi}\right)$$

```

 $\left( \frac{\frac{1+6}{2}}{\pi}\right)$ 

```

Alineación

$$x^2 + y^2 = 1 \quad (3)$$

$$x = \sqrt{1 - y^2} \quad (4)$$

$$\begin{aligned} (a + b)^4 &= (a + b)^2 = \\ &= (a^2 + 2ab + b^2)^2 = \\ &= a^4 + 4a^3 + \dots \end{aligned}$$

```
\begin{align}
  x^{\{2\}} + y^{\{2\}} &= 1 \\
  x &= \sqrt{1-y^{\{2\}}}
\end{align}

\[
\begin{split}
  (a+b)^{\{4\}} &= (a+b)^{\{2\}} = \\
  &= (a^{\{2\}}+2ab+b^{\{2\}})^{\{2\}} = \\
  &= a^{\{4\}}+4a^{\{3\}}+\ldots
\end{split}
\]
```

Variado

$$\underbrace{a + b + \cdots + z}_{26}$$

$$P_{r-j} = \begin{cases} 0 & \text{r-j impar} \\ r! (-1)^{(r-j)/2} & \text{r-j par} \end{cases}$$

```

 $\underbrace{a+b+\cdots+z}_{26}$ 

\begin{equation*}
P_{r-j} =
\begin{cases}
0 & \text{r-j impar}, \\
r! (-1)^{(r-j)/2} & \text{r-j par}
\end{cases}
\end{equation*}

```

Cosas más complicadas

$$\sum_{\substack{i=\frac{x}{y} \\ j=\infty \\ 0 \leq i \leq m \\ j \in \mathbb{R}_C}} 2^i \binom{i}{j} \left\{ \frac{\int \cdots \int_V dv \cdot \int_{D_1}^{D^2} \sqrt[\beta]{\frac{\theta}{\oint_S}}}{\left| \begin{array}{cc} \frac{1}{2} & \varepsilon^{1,0} \\ \cdots & \cdots \\ c & d \end{array} \right|} \right\}$$