

Unicodelt

LaTeX → Unicode

Sven Kreiss and Kyle Cranmer
New York University

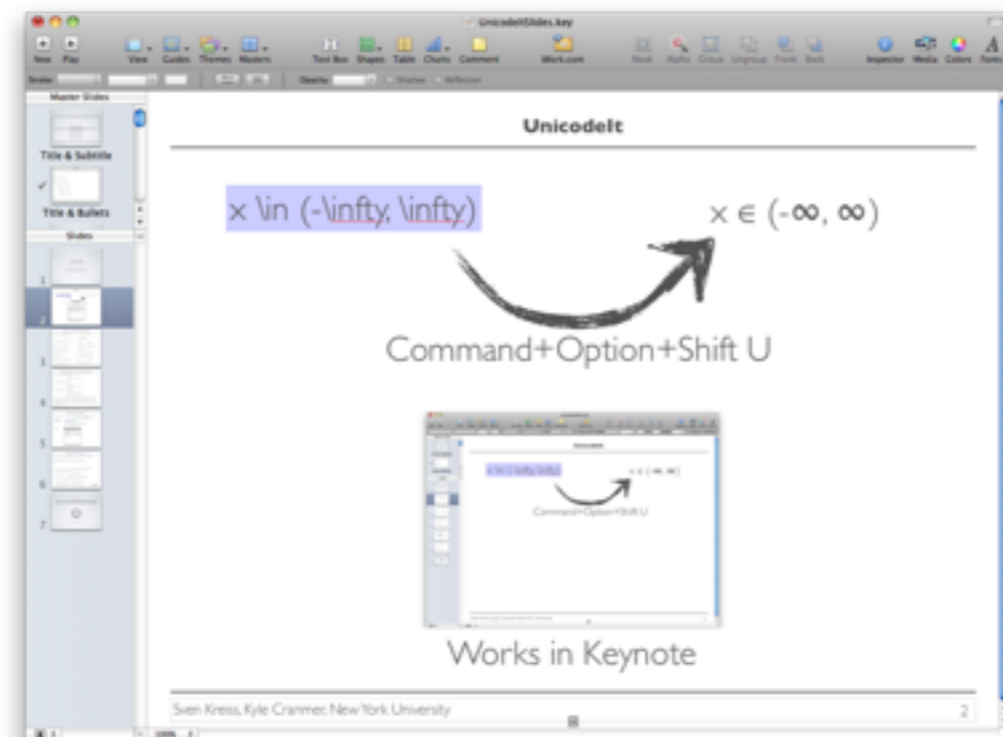
UnicodeIt

$x \in (-\infty, \infty)$

$x \in (-\infty, \infty)$




Command+Option+Shift U



Works great in Keynote

UnicodeIt - Examples (Out Of 708 Symbols)

- `\alpha` α , `\beta` β , `\infty` ∞
- `e^+` e^+ , `\mu^-` μ^-
- `\int` \int , `\sum` Σ , `\partial` ∂
- `\to` \rightarrow , `p\bar{p}` $p\bar{p}$
- `\slash{\partial}` ∂
- `\underline{x}` \underline{x} , `\hat{x}` \hat{x}
- `\dot{x}` \dot{x} , `\ddot{x}` \ddot{x}
- `A^6` A^6 , `m_0` m_0
- `\gamma` γ , `\Gamma` Γ
- `\~{O}` becomes \tilde{O}
- `\sfrac{3}{5}` $\frac{3}{5}$
- `\therefore` \therefore , `\because` \because
- `\perp` \perp , `\parallel` \parallel
- `\subset` \subset , `\supset` \supset
- `\phone` , `\checkmark` \checkmark
- `\Im` \Im , `\Re` \Re , `\hbar` \hbar
- `\exists` \exists , `\nexists` \nexists

Unicode Application - Mixing LaTeX and Unicode

- To solve integrals of the form:

$$\int_{-\infty}^{\infty} x^2 e^{-\alpha x^2} dx$$

- Use $-\partial/\partial\alpha$ to replace x^2 :

$$-\frac{\partial}{\partial\alpha} \int_{-\infty}^{\infty} e^{-\alpha x^2} dx$$

- The integral is now Gaussian:

$$-\frac{\partial}{\partial\alpha} \sqrt{\frac{\pi}{\alpha}} = \frac{1}{2} \frac{\sqrt{\pi}}{\alpha^{3/2}}$$

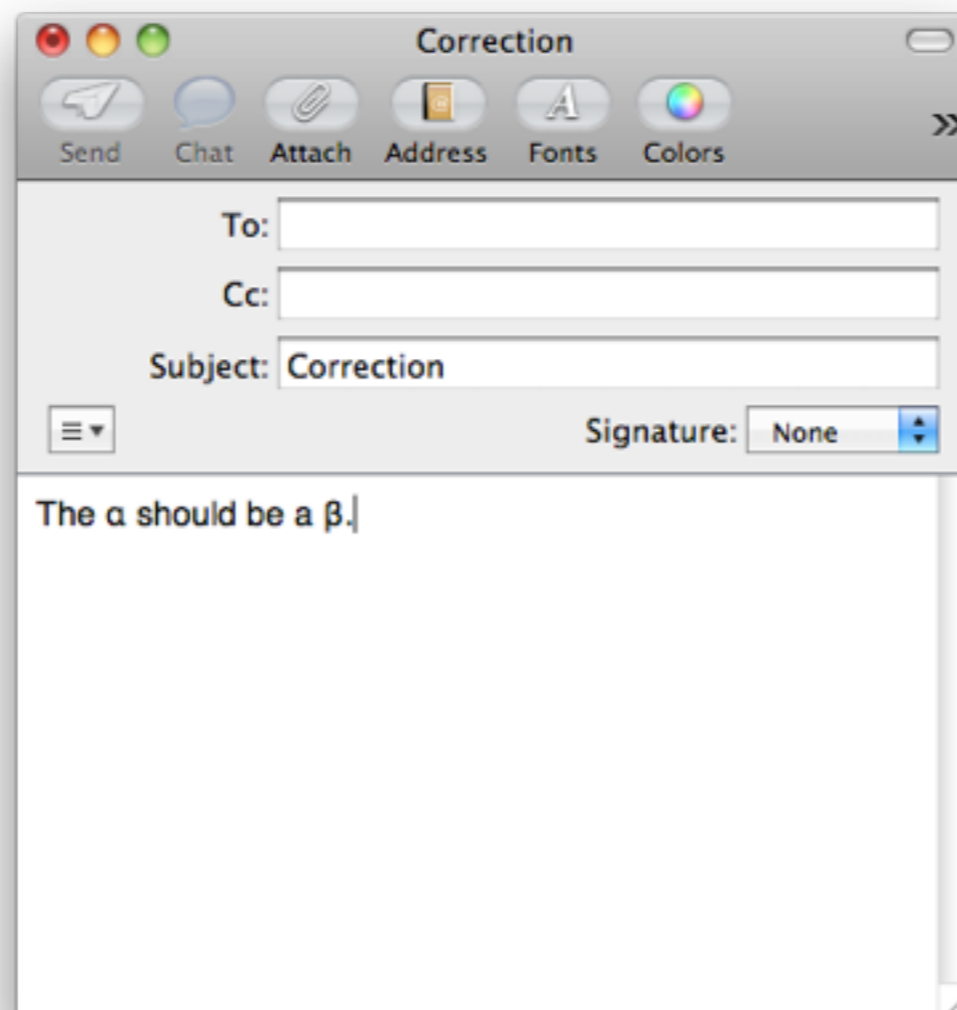
- It also works for higher powers x^{2n} . The only difference is that $-\partial/\partial\alpha$ is replaced with $(-1)^n \partial^n/\partial\alpha^n$. This integral can also be solved using integration by parts or using the definition of the Γ -function.

Unicode1t - Use in Applications

• Adium chat: 4:28:55 PM **Sven Kreiss:** $\int dx$, \sum_0^n , $\frac{7}{8}$

• Facebook: **Sven Kreiss** → μ^-
21 hours ago  · [Comment](#) · [Like](#)

• Mail:



Unicode - Sub- and Superscripts

• Expansion: `\epsilon_{0123}` ϵ_{0123} , `\alpha^{5678}` α^{5678}

• Supported: `0123456789=+-()ni`
`0123456789=+-()`

• Problem with some fonts: superscript \neq superscript

• Arial: `0123456789=+-()ni`
`0123456789=+-()`

• Arial Unicode MS: `0123456789=+-()ni`
`0123456789=+-()`

• Tahoma: `0123456789=+-()ni`
`0123456789=+-()`

• Al Bayan: `0123456789=+-()ni`
`0123456789=+-()`

← **winner**

Download at

<http://www.svenkreiss.com/UnicodeIt>



\smile or \:)