

A WUR template for beamer.

An exercise in advanced L^AT_EX hacking.

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The *raison d'être* for using L^AT_EX

- ▶ The **hillslope-storage Boussinesq** equation: itemsep= 3.0pt plus 2.0pt minus 1.0pt; parsep=3.0pt plus 2.0pt minus 1.0pt; abovedisplayskip=10.0pt plus 2.0pt minus 5.0pt

$$f \frac{\partial S}{\partial t} = \frac{k \cos \alpha}{f} \frac{\partial}{\partial x'} \left[\frac{S}{w} \left(\frac{\partial S}{\partial x'} - \frac{S}{w} \frac{\partial w}{\partial x'} \right) \right] + k \sin \alpha \frac{\partial S}{\partial x'} + f N w$$

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- ▶ **Linearization:** The storage per unit width, S/w , can be replaced by a fraction of the total storage per unit width, $p f D$:

$$f \frac{\partial S}{\partial t} = k p D \cos \alpha \left[\frac{\partial^2 S}{\partial x^2} - \left(\frac{1}{w} \frac{\partial w}{\partial x} \right) \frac{\partial S}{\partial x} - \frac{\partial}{\partial x} \left(\frac{1}{w} \frac{\partial w}{\partial x} \right) S \right] + k \sin \alpha \frac{\partial S}{\partial x} + f N w$$

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$$f \frac{\partial S}{\partial t} = k p D \cos \alpha \left[\frac{\partial^2 S}{\partial x^2} - \underbrace{\left(\frac{1}{w} \frac{\partial w}{\partial x} \right)}_a \frac{\partial S}{\partial x} - \frac{\partial}{\partial x} \left(\frac{1}{w} \frac{\partial w}{\partial x} \right) S \right] + k \sin \alpha \frac{\partial S}{\partial x} + f N w$$

- ▶ **Simplification:** applying exponential width functions $w(x) = ce^{ax}$:

$$f \frac{\partial S}{\partial t} = k p D \cos \alpha \left[\frac{\partial^2 S}{\partial x^2} - a \frac{\partial S}{\partial x} \right] + k \sin \alpha \frac{\partial S}{\partial x} + N w f$$

Itemize example I

- ▶ A first item.

Itemize example I

- ▶ A first item.
- ▶ Another very important item.

Itemize example I

- ▶ A first item.
- ▶ Another very important item.
 - ▶ A first sub-item.
 - ▶ A second sub-item.
 - ▶ A sub-sub-item.
 - ▶ A last sub-item.

Itemize example I

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 - ▶ A sub-sub-item.
 - ▶ A last sub-item.
- ▶ The concluding item.

Itemize example II

- ▶ A first item.
- ▶ the concluding item.

Itemize example II

- ▶ A first item.
- ▶ Another very important item.
 - ▶ A first sub-item.

- ▶ the concluding item.

Itemize example II

- ▶ A first item.
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Itemize example II

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- ▶ the concluding item.

Vertically centered text

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Top-aligned text

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`\alert` vs `\emph`

Highlighting text in the traditional \LaTeX way, by using the `\emph` command, does *not work well* on slides. Instead, use the `\alert` command, which **performs much better** as you may notice.

Default: white-on-blue

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Alternative: blue-on-white

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A frame without logos as well, using the [plain] frame option. Useful for inserting full-screen graphics, mainly. Examples will follow.

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The Lorenz attractor

System:

$$\frac{\partial x}{\partial t} = a(y - x)$$

$$\frac{\partial y}{\partial t} = x(b - z) - y$$

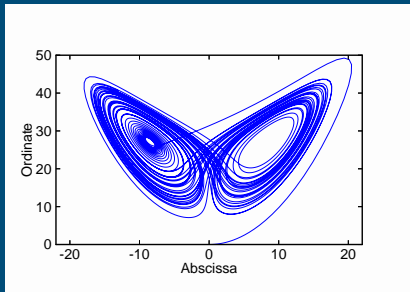
$$\frac{\partial z}{\partial t} = xy - cz$$

Parameters:

$$a = 10$$

$$b = 28$$

$$c = 8/3$$

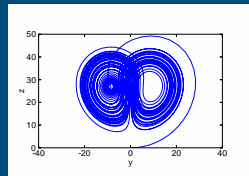
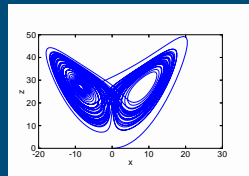
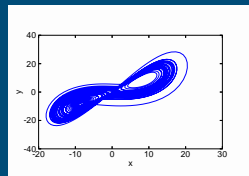


The Lorenz attractor

System:

$$\begin{aligned}\frac{\partial x}{\partial t} &= a(y - x) \\ \frac{\partial y}{\partial t} &= x(b - z) - y \\ \frac{\partial z}{\partial t} &= xy - cz\end{aligned}$$

Parameters: $a = 10$, $b = 28$, $c = 8/3$.

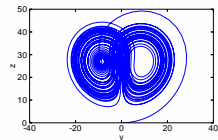
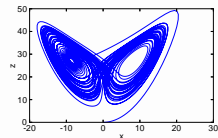
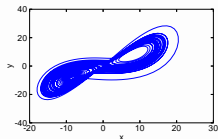


The Lorenz attractor

System:

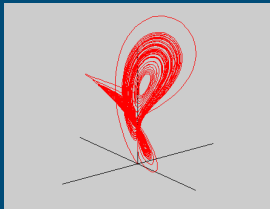
$$\begin{aligned}\frac{\partial x}{\partial t} &= a(y - x) \\ \frac{\partial y}{\partial t} &= x(b - z) - y \\ \frac{\partial z}{\partial t} &= xy - cz\end{aligned}$$

Parameters: $a = 10$, $b = 28$, $c = 8/3$.



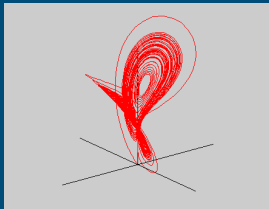
Animated Lorenz attractor

Using Acrobat's internal AVI viewer. Click the picture to start the animation. Might not work with all OS/Acrobat combinations. Please report.



(works with WinNT/Acrobat 5)

Using an external viewer. Might be useful in cases (linux?) when the PDF viewer can't handle embedded AVI files. Please report success/failure.



(works under WinNT)

