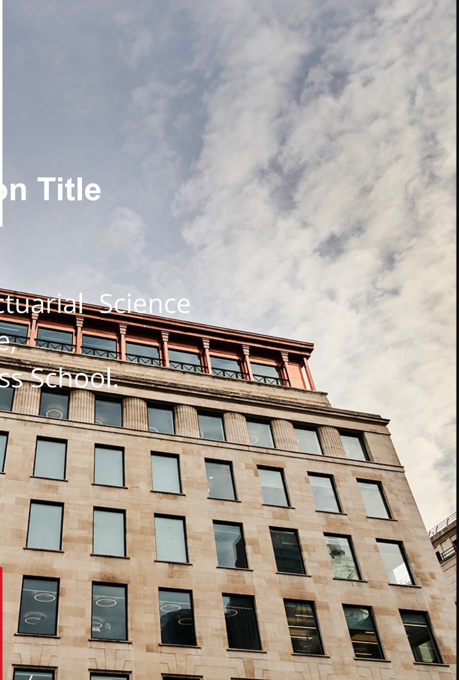
Presentation Title

Author Name

Faculty of Actuarial Science and Insurance,
Bayes Business School.
DD/MM/YYY

BAYES
BUSINESS SCHOOL
CITY ST GEORGE'S
UNIVERSITY OF LONDON



on Title

Author Name

Faculty of Actuarial Science
and Insurance,
Bayes Business School.

DD/MM/YYY

on Title

Author Name

Faculty of Actuarial Science and Insurance,
Bayes Business School.
DD/MM/YYY

Administrative Details

About myself:

- Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
- Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.
- Email: dummy.email@domain.com.
  Personal website: https://loremipsum.example.com.

Administrative Details

About myself:

- Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
- Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.
- Email: dummy.email@domain.com.
  Personal website: https://loremipsum.example.com.

Tutorials' details:

- Cover around 2-3 lorem ipsum questions every week.
- Requirement: be *minimally* familiar with the lorem ipsum dolor sit amet, and, if possible, also with the respective lorem exercises.
- References: Doe, 2024 & Smith, 2025

Sample Title

- Lorem ipsum dolor sit amet, consectetur adipiscing elit.

$$f(x) = \frac{p(x)}{q(x)}$$

  for $p(x)$ and $q(x)$ being polynomial functions.
- Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. That is:

$$\frac{p(x)}{q(x)} = \underbrace{s(x)}_{\text{quotient}} + \frac{\overbrace{r(x)}^{\text{remainder}}}{q(x)}$$

  where $\frac{r(x)}{q(x)}$ is now a proper rational function.

Block Title

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Header 1	Header 2
$\frac{px+q}{(x-a)(x-b)}, a \neq b$	$\frac{A}{x-a} + \frac{B}{x-b}$
$\frac{px+q}{(x-a)^2}$	$\frac{A}{x-a} + \frac{B}{(x-a)^2}$
$\frac{px^2+qx+r}{(x-a)(x-b)(x-c)}$	$\frac{A}{x-a} + \frac{B}{x-b} + \frac{C}{x-c}$
$\frac{px^2+qx+r}{(x-a)^2(x-b)}$	$\frac{A}{x-a} + \frac{B}{(x-a)^2} + \frac{C}{x-b}$
$\frac{px^2+qx+r}{(x-a)(x^2+bx+c)}$	$\frac{A}{x-a} + \frac{Bx+C}{x^2+bx+c}$
*where $x^2 + bx + c$ cannot be factorised further	

Table 1: Sample Table Caption

2.2. Set Theory Expressions

- **Symmetric difference**:

$$A\Delta B = (A\backslash B) \cup (B\backslash A) = (A \cap B^c) \cup (B \cap A^c)$$

- **De Morgan's laws**:

$$(A \cup B)^c \underset{\substack{\uparrow \\ \text{up arrow}}}{=} A^c \cap B^c \quad \text{and} \quad (A \cap B)^c \overset{\substack{\text{down arrow} \\ \downarrow}}{=} A^c \cup B^c$$

2.3. Permutations and Combinations

Combinations

$$ {}^{n}C_{r} = \binom{n}{r} = \frac{{}^{n}P_{r}}{{}^{r}P_{r}} = \frac{n!}{r!(n-r)!} $$

❊ Number of possible arrangements in a collection of items where the order does not matter.

Pascal's triangle.

$$
\begin{matrix}
 & & & & & & & {}^{0}C_{0} & & & & & & & \\
 & & & & & & {}^{1}C_{0} & & {}^{1}C_{1} & & & & & & \\
 & & & & & {}^{2}C_{0} & & {}^{2}C_{1} & & {}^{2}C_{2} & & & & & \\
 & & & & {}^{3}C_{0} & & {}^{3}C_{1} & & {}^{3}C_{2} & & {}^{3}C_{3} & & & & \\
 & & & {}^{4}C_{0} & & {}^{4}C_{1} & & {}^{4}C_{2} & & {}^{4}C_{3} & & {}^{4}C_{4} & & & \\
 & & {}^{5}C_{0} & & {}^{5}C_{1} & & {}^{5}C_{2} & & {}^{5}C_{3} & & {}^{5}C_{4} & & {}^{5}C_{5} & & \\
 & {}^{6}C_{0} & & {}^{6}C_{1} & & {}^{6}C_{2} & & {}^{6}C_{3} & & {}^{6}C_{4} & & {}^{6}C_{5} & & {}^{6}C_{6} & \\
{}^{7}C_{0} & & {}^{7}C_{1} & & {}^{7}C_{2} & & {}^{7}C_{3} & & {}^{7}C_{4} & & {}^{7}C_{5} & & {}^{7}C_{6} & & {}^{7}C_{7} \\
 & & & & & & & \vdots & & & & & & &
\end{matrix}
=
\begin{matrix}
 & & & & & & & 1 & & & & & & & \\
 & & & & & & 1 & & 1 & & & & & & \\
 & & & & & 1 & & 2 & & 1 & & & & & \\
 & & & & 1 & & 3 & & 3 & & 1 & & & & \\
 & & & 1 & & 4 & & 6 & & 4 & & 1 & & & \\
 & & 1 & & 5 & & 10 & & 10 & & 5 & & 1 & & \\
 & 1 & & 6 & & 15 & & 20 & & 15 & & 6 & & 1 & \\
1 & & 7 & & 21 & & 35 & & 35 & & 21 & & 7 & & 1 \\
 & & & & & & & \vdots & & & & & & &
\end{matrix}
$$

2.4. Matrices. Diebold-Li model: state-space representation

- Measurement equation:

$$\begin{pmatrix} y_t(\tau_1) \\ y_t(\tau_2) \\ \vdots \\ y_t(\tau_{43}) \end{pmatrix} = \begin{pmatrix} 1 & \frac{1-e^{-\lambda_t \tau_1}}{\lambda_t \tau_1} & \frac{1-e^{-\lambda_t \tau_1}}{\lambda_t \tau} - e^{-\lambda_t \tau_1} \\ 1 & \frac{1-e^{-\lambda_t \tau_2}}{\lambda_t \tau_2} & \frac{1-e^{-\lambda_t \tau_2}}{\lambda_t \tau} - e^{-\lambda_t \tau_2} \\ \vdots & \vdots & \vdots \\ 1 & \frac{1-e^{-\lambda_t \tau_{43}}}{\lambda_t \tau_1} & \frac{1-e^{-\lambda_t \tau_{43}}}{\lambda_t \tau} - e^{-\lambda_t \tau_{43}} \end{pmatrix} \times \begin{pmatrix} L_t \\ S_t \\ C_t \end{pmatrix} + \begin{pmatrix} \varepsilon_t(\tau_1) \\ \varepsilon_t(\tau_2) \\ \vdots \\ \varepsilon_t(\tau_{43}) \end{pmatrix} \tag{1}$$

- Transition equation:

$$\begin{pmatrix} L_t - \mu_L \\ S_t - \mu_S \\ C_t - \mu_C \end{pmatrix} = \begin{pmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{pmatrix} \times \begin{pmatrix} L_{t-1} - \mu_L \\ S_{t-1} - \mu_S \\ C_{t-1} - \mu_C \end{pmatrix} + \begin{pmatrix} \eta_t(L) \\ \eta_t(S) \\ \eta_t(C) \end{pmatrix} \tag{2}$$

where ε and η denote the disturbances in each equation respectively.

Slide Title

Section Title

- Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo.
- Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt.

BAYES BUSINESS SCHOOL
CITY ST GEORGE'S UNIVERSITY OF LONDON

Figure 1: Write picture caption here.

Slide Title

Section Title

- Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo.
- Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt.

Figure 2: Write picture caption here.

Slide Title

Section Title
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Section Title
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

1. Introduction

2. Math examples

2.1 Sample Subsection

2.2 Set Theory

2.3 Permutations and Combinations

2.4 Matrices

3. Other display examples

4. Conclusion

Conclusion

- Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.
- Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Conclusion

- Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.
- Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

➥ Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Doe, J. (2024). *An example of dummy book* (2nd) [This is a dummy book for illustrative purposes]. Fictional Press.

Smith, J. (2025). *Understanding placeholder references* (3rd) [This is a dummy reference for illustrative purposes]. Imaginary Press.

Bayes Business School
106 Bunhill Row
London EC1Y 8TZ
Tel +44 (0)20 7040 8600
bayes.city.ac.uk