

# Peter Naur's contribution to formal notations and beyond

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## Peter Naur's contribution

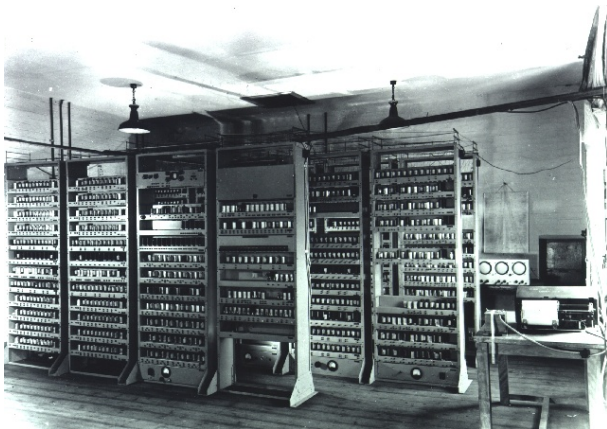
“For fundamental contributions to programming language design and the definition of Algol 60, to compiler design, and to the art and practice of computer programming.”

# Formal notations in history



**Figure:** File: Birch bark MS from Kashmir of the Rupavatra Wellcome L0032691.jpg. (2020, September 26). Wikimedia Commons, the free media repository. Retrieved 09:38, November 8, 2020 from [https://commons.wikimedia.org/w/index.php?title=File: Birch\\_bark\\_MS\\_from\\_Ka](https://commons.wikimedia.org/w/index.php?title=File: Birch_bark_MS_from_Ka)

## New need for formal notations



**Figure:** File:EDSAC (19).jpg. (2020, October 28). Wikimedia Commons, the free media repository. Retrieved 09:49, November 8, 2020 from [https://commons.wikimedia.org/w/index.php?title=File:EDSAC\\_\(19\).jpg&oldid=41818181](https://commons.wikimedia.org/w/index.php?title=File:EDSAC_(19).jpg&oldid=41818181)

# Overview

- 1 Formal notations
  - Phrase structure grammars
  - Backus Naur form
  - Programming languages, natural languages and mathematical languages
- 2 Peter Naur's contribution
  - Definition of Algol 60
  - Compiler Design
  - Art and practice of computer programming
- 3 Computing vs. Human Thinking
  - Difference to previous presentations
- 4 Conclusion

## Paragraphs of Text

Sed iaculis dapibus gravida. Morbi sed tortor erat, nec interdum arcu. Sed id lorem lectus. Quisque viverra augue id sem ornare non aliquam nibh tristique. Aenean in ligula nisl. Nulla sed tellus ipsum. Donec vestibulum ligula non lorem vulputate fermentum accumsan neque mollis.

Sed diam enim, sagittis nec condimentum sit amet, ullamcorper sit amet libero. Aliquam vel dui orci, a porta odio. Nullam id suscipit ipsum. Aenean lobortis commodo sem, ut commodo leo gravida vitae. Pellentesque vehicula ante iaculis arcu pretium rutrum eget sit amet purus. Integer ornare nulla quis neque ultrices lobortis. Vestibulum ultrices tincidunt libero, quis commodo erat ullamcorper id.

# Bullet Points

- Lorem ipsum dolor sit amet, consectetur adipiscing elit
- Aliquam blandit faucibus nisi, sit amet dapibus enim tempus eu
- Nulla commodo, erat quis gravida posuere, elit lacus lobortis est, quis porttitor odio mauris at libero
- Nam cursus est eget velit posuere pellentesque
- Vestibulum faucibus velit a augue condimentum quis convallis nulla gravida

## Blocks of Highlighted Text

### Block 1

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer lectus nisl, ultricies in feugiat rutrum, porttitor sit amet augue. Aliquam ut tortor mauris. Sed volutpat ante purus, quis accumsan dolor.

### Block 2

Pellentesque sed tellus purus. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Vestibulum quis magna at risus dictum tempor eu vitae velit.

### Block 3

Suspendisse tincidunt sagittis gravida. Curabitur condimentum, enim sed venenatis rutrum, ipsum neque consectetur orci, sed blandit justo nisi ac lacus.



# Multiple Columns

## Heading

- 1 Statement
- 2 Explanation
- 3 Example

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer lectus nisl, ultricies in feugiat rutrum, porttitor sit amet augue. Aliquam ut tortor mauris. Sed volutpat ante purus, quis accumsan dolor.

# Table

Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Table: Table caption

# Theorem

Theorem (Mass–energy equivalence)

$$E = mc^2$$

# Verbatim

## Example (Theorem Slide Code)

```
\begin{frame}  
\frametitle{Theorem}  
\begin{theorem}[Mass--energy equivalence]  
$E = mc^2$  
\end{theorem}  
\end{frame}
```

# Figure

Uncomment the code on this slide to include your own image from the same directory as the template .TeX file.

# Citation

An example of the `\cite` command to cite within the presentation:

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# References



John Smith (2012)

Title of the publication

*Journal Name* 12(3), 45 – 678.

# The End