Cassiopeia 2.3.0 Release Notes

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1   Extension of derivation rules

Cassiopeia has a built-in symbolic alegebra system for automatically simplifying equations. An error in the derivation rules for expressions containing fractions was discovered and fixed. A Command-Shift-Doubleclick on the following expression

$$p\left(v\right) = p_0 \sqrt{1 - \frac{v^2}{c^2}}$$

and then a click on *Differentiate* automatically generates the correct expression for the first derivative now.

$$p'\left(v\right) = -p_0 \frac{1}{c^2} v \left(1 - \frac{v^2}{c^2}\right)^{-\frac{1}{2}}$$

2   Support for polish characters

The document classes Article-polish and Book-polish were added to support the generation of PDFs (LaTeX) for documents in the polish (and other) language(s).

3   Case Structure was added

In earlier versions of Cassiopeia expressions like

$$\chi\left(r\right) = \begin{cases} \varphi & : & r>0 \\ 2\pi & : & r = 0 \end{cases}$$

had to be inserted with a pure LaTeX region. The new case structure part (see *Vectors, Matrices and Accents* pane of the Palette) can now natively be inserted with the key sequence Ctrl-c <rows> <Return>. For a case structure with two rows this would be pressing Ctrl-c, releasing all keys, pressing 2 and then the Return-key.