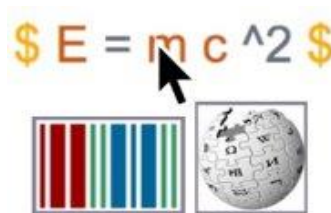


MR01 Wikipedia Formula Annotation

Background

Mathematical Question Answering systems, such as <https://mathqa.wmflabs.org> require labeled formulae. However, very little data is available so far.



Mass-energy relation
$E = mc^2$
Math Formula Information
Formula: $E = mc^2$
Name: mass-energy equivalence
Description: Physical law relating mass to energy
Elements of the Formula
energy E quantitative physical property transferred to objects to perform heating or work on them
mass m property of matter to resist changes of the state of motion and to attract other bodies
speed of light c speed at which all massless particles and associated fields travel in a vacuum
Data Source
https://www.wikidata.org/wiki/Q35875

**FORMULA
DETAIL
PAGE**

Goal

- Develop a formula annotation recommender system for Wikipedia.

Tasks

- Build an API for the AnnoMathTeX (<https://annomathex.wmflabs.org>) annotation recommendations.
- Build a seeding service to transfer the annotated formula concept knowledge to Wikidata.
- Build an integrated system and deploy it to Wikipedia. If successful, you can proudly claim to be a Wikipedia developer.

Philipp Scharpf
scharpf@gipplab.org



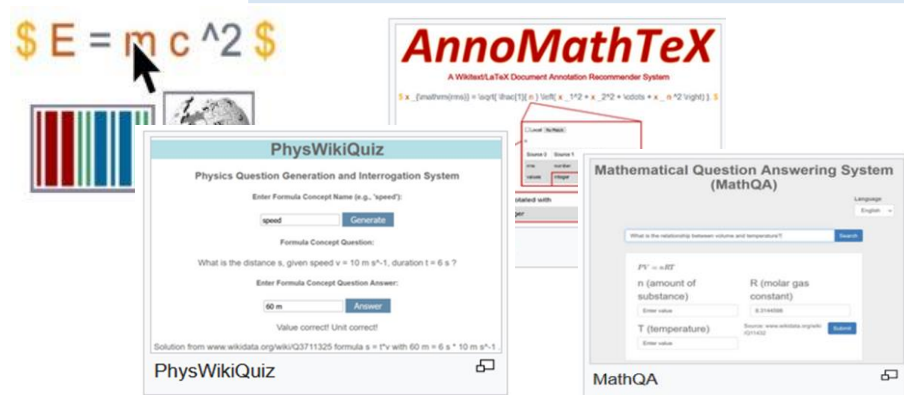
Moritz Schubotz
Moritz.Schubotz@
fiz-karlsruhe.de



MR02 A Large Dataset for Mathematical Entity Linking

Background

Mathematical Information Retrieval systems (MathIR) and Machine Learning applications require labeled formulae. However, very little data is available so far.



Goal

- Develop a large annotated dataset of annotated (linked) mathematical formulae.

Tasks

- Research design principles for large annotated datasets (annotation guidelines).
- Annotate formulae in a corpus (e.g., Wikipedia articles or arXiv documents) using the AnnoMathTeX formula and identifier annotation recommender system.
- Test selected MathIR systems (e.g., MathQA or PhysWikiQuiz) on your dataset.
- Document insights from the annotation and test process to improve the systems.

Philipp Scharpf
scharpf@gipplab.org



Moritz Schubotz
Moritz.Schubotz@
fiz-karlsruhe.de

