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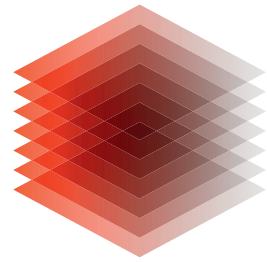

TIB

Audiovisual Research Data in Mathematics

Mila Runnwerth

1st Leibniz MMS Days, Berlin, January 28, 2016

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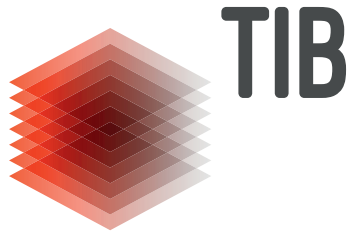

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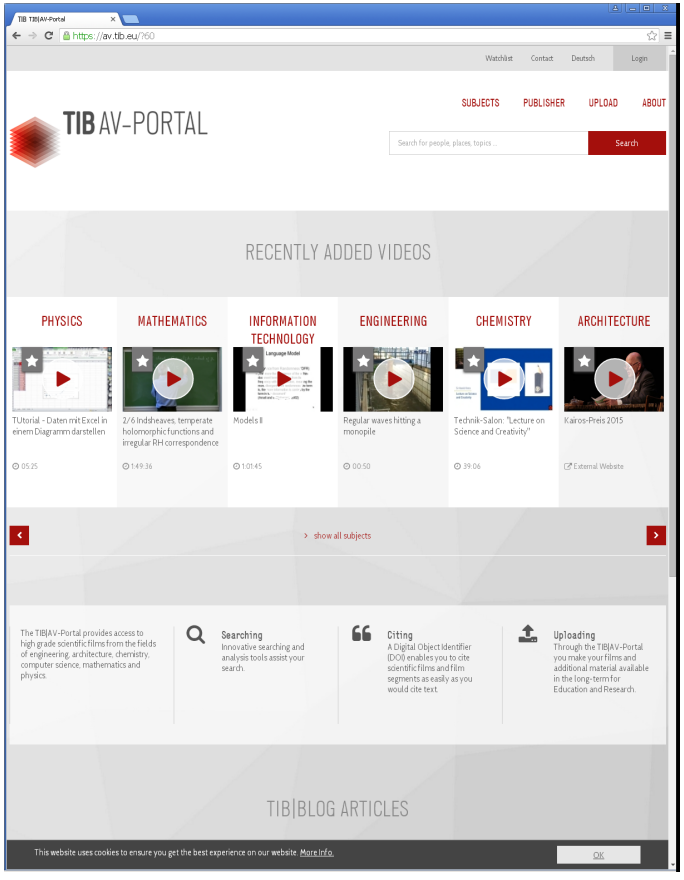

https://av.tib.eu

What does the TIB AV-Portal offer? - Content

- Conference talks: Gauß Prize Lecture

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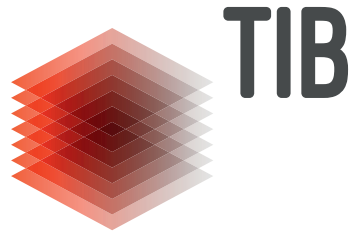

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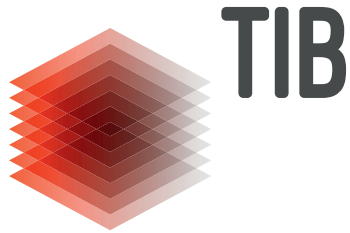

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- Simulations: Simulations in Chaos Theory

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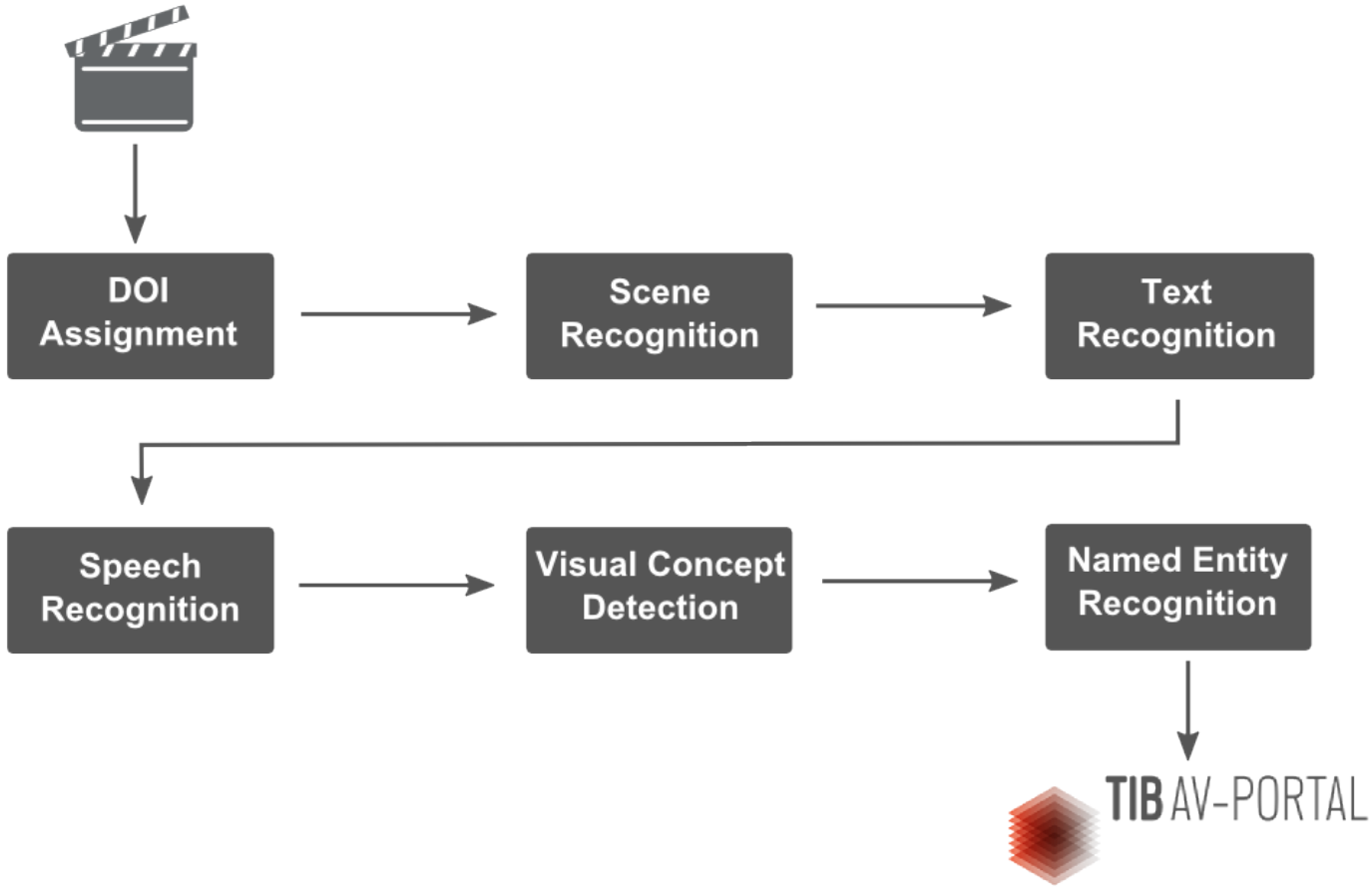
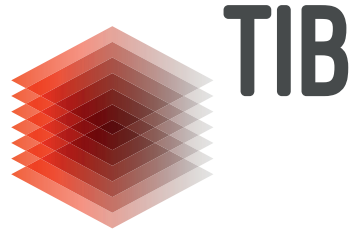
What does the TIB AV-Portal offer? - Workflow





Challenges in Mathematics

OCR for Maths

Claim

There are infinitely many primes.

Proof

Assume $p_1 = 2 < p_2 = 3 < \ldots < p_r$ are all primes.

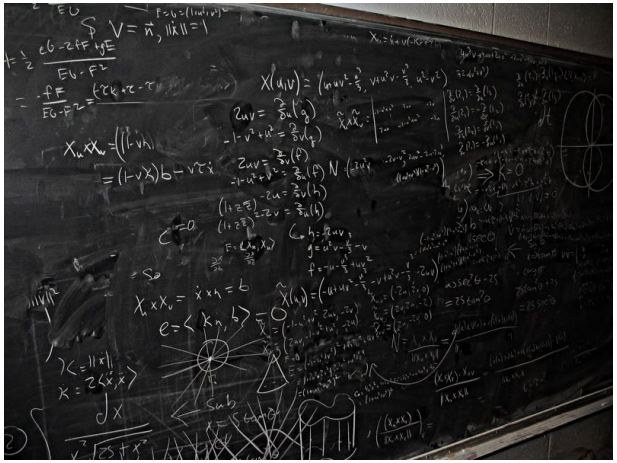
Consider $P = p_1 \cdot p_2 \cdot \ldots \cdot p_r + 1$.

Let p be a prime dividing P.

$\Rightarrow p \neq p_1 \wedge \ldots \wedge p \neq p_r$

(otherwise $p \mid \underbrace{P - p_1 \cdot \ldots \cdot p_r}_{=1}$)

p is yet another prime. $\square$



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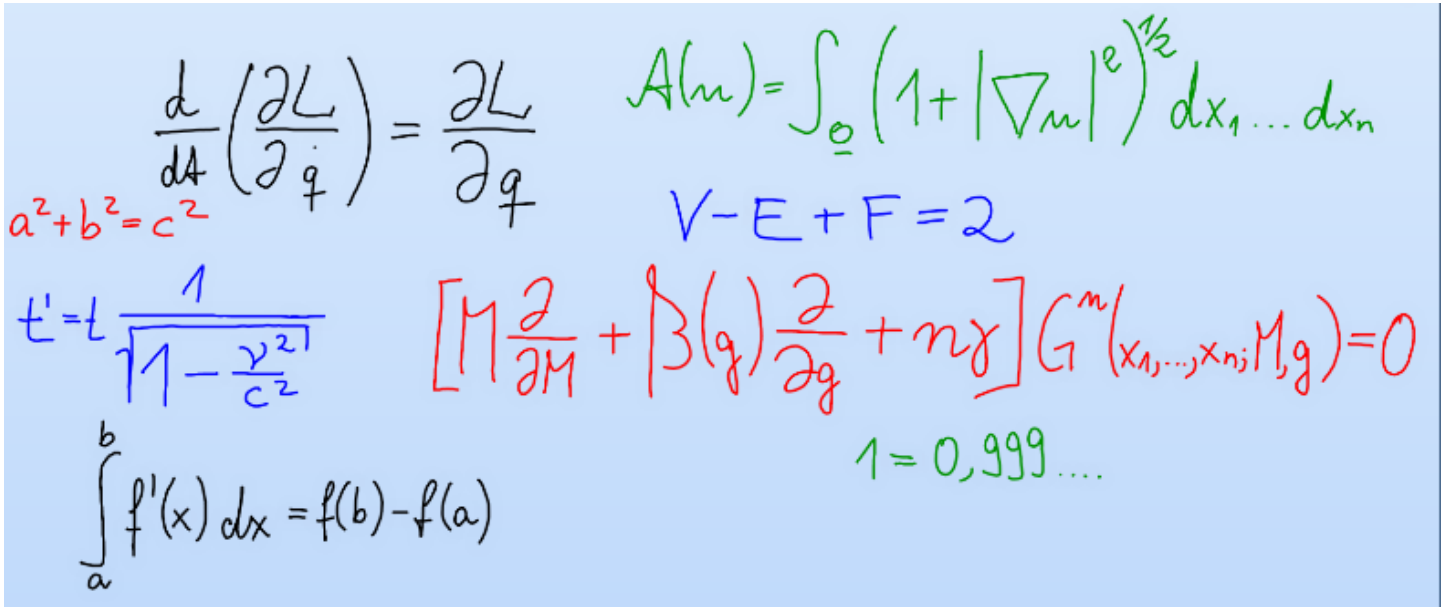
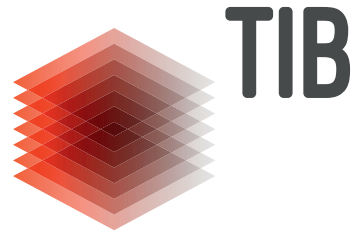
(Handwritten) Formulae Search

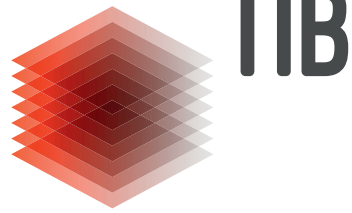


‘Unnatural’ Language



- Symbols (meaning and pronunciation) of various alphabets and typefaces and operations
- ‘if and only if’, ‘necessary’ / ‘sufficient’, without loss of generality’

Here is a comprehensive Wikipedia article on the subject.



Contact, Discussion, Questions

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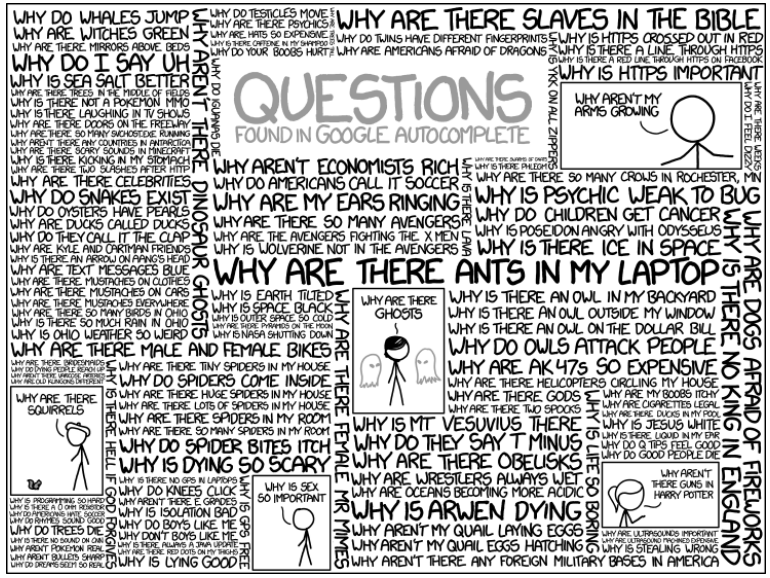
Here you find these slides.



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