



Organizing the Mathematical Literature

On the Road to MSC 2020

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History and Aims of MSC

- jointly produced by MR and zbMATH
- dates back to 1940s, official revisions every decade starting from 1990
- used by zbMATH and MR for internal workflow
- libraries use it for classifying journals and books
- search by area or keyword
- filter search results
- community driven

Is This Really Necessary?

HITS tried Topic Modeling on zbMATH reviews using ToPMine.

Results: some meaningful topic clusters in applied areas, useless for pure mathematics

- Bayesian inference, posterior distribution, Gibbs sampler (62F15)
- pull back, container loading (category theory vs. operations research)
- hyperplane arrangement, traffic jam, speed of light (???)

Current Status and Timeline

01/2015
– 06/2016

internal
discussions,
informal
announcement

07/2016
– 08/2018

msc2020.org
open for
comments

09/2018
– 12/2019

incorporation
of community
feedback

01/2020

MSC2020 goes
into effect

How Much Change is Needed?

Comparing human-awarded MSC codes $\text{zbMATH} \longleftrightarrow \text{MR}$:

Level	F_1
1	0.83
2	0.72
3	0.58

\implies no need for new top-level codes in MSC2020 (and few second-level ones).

Selected Highlights from Current Suggestions

14Q (Computational aspects in algebraic geometry):

- Numerical algebraic geometry

18D (Categories with structure):

- Higher categories

55U (Applied homological algebra and category theory):

- Topological data analysis

62 (Statistics):

- Algebraic Statistics

68 (Computer science):

- Computer-assisted proofs

What Can I Do?



Contribute!

<https://msc2020.org/>

open until after the ICM

And tell your colleagues!

