

## Short note: zbMATH Open

Klaus Hulek

A long term project has finally become reality: zbMATH has become an open access database as of 1st January 2021, allowing free usage worldwide. This is the result of a process which has lasted several years and our thanks go to all the individuals and institutions who have made this possible.

The mathematical community is invited to participate in the future development of the database. We will now be open to share data and links with other non-commercial databases. This opens up the way to new cooperations and, we hope, novel and potentially unexpected new developments in the future. We are currently working on an API which will allow much of our data for research to be downloaded for research and non-commercial purposes. Please share your ideas on the future of the database with us via [editor@zbmath.org](mailto:editor@zbmath.org). And of course, we are always

looking for new reviewers: you can register via our website: [zbmath.org/become-a-reviewer/](https://zbmath.org/become-a-reviewer/)

Last but not least: we thank Springer Verlag for many years of good cooperation. zbMATH would not exist without Springer Verlag. At the same time the landscape of publishing is undergoing fundamental changes and we believe that the new model is the right direction to follow in the future.

---

Klaus Hulek is professor of mathematics at Leibniz University Hannover and Editor-in-Chief of zbMATH Open. His field of research is algebraic geometry. [hulek@math.uni-hannover.de](mailto:hulek@math.uni-hannover.de)

DOI 10.4171/MAG-11

## zbMATH Open: Towards standardized machine interfaces to expose bibliographic metadata

Moritz Schubotz and Olaf Teschke

*In this article, we give motivation for the need for standardized machine interfaces to zbMATH open data, outline the target audience, describe our preliminary strategy to develop API interfaces, and report on the details of the first interface we implemented.*

### 1 Target audience

As announced in the previous note, zbMATH is becoming open access from the 1st of January 2021.<sup>1</sup> For most working mathematicians, this means that they can access zbMATH from anywhere in the world without a subscription or authentication. Additionally, we envision benefits to the community through our efforts to connect zbMATH data with information systems of re-

search data, collaborative platforms, funding agencies, and interdisciplinary efforts, as outlined in [2]. We expect that our efforts to disseminate the results of mathematical research will provide this research with increased visibility. However, to target domain-independent information systems, we need to comply with standardized information exchange protocols and interfaces.

In what follows, we describe potential partners that might interact with zbMATH. We will offer the data via so-called Application Programming Interfaces (APIs). Moreover, in this report, we focus on how others can make use of zbMATH open data, rather than how zbMATH can use other data sources. As depicted in Figure 1, the potential consumers can be clustered into at least five groups, which we will describe below.

<sup>1</sup> The open web platform is now available under the name zbMATH Open, while we will address the zbMATH content and services under the traditional umbrella name zbMATH for convenience.