

From the European Digital Mathematics Library to a Global Digital Mathematics Library

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Session: 19. Information and Communication in Mathematics

Mathematical publications are an important and persistent part of mathematical knowledge. To make this knowledge electronically accessible in a structured and searchable "Global Digital Mathematics Library" (GDML) is an old dream and vision of the mathematical community. However, the challenges are huge and include technical, organizational and political considerations. The mathematical literature covers currently nearly 3,500,000 (peer-reviewed) publications which are published by many different providers, in different formats, and the information is not provided in a machine-understandable format. Since several local or regional DMLs do already exist, it appears that a GDML should be decentralized. Moreover, new methods and tools have to be developed to make the content of the publications semantically searchable and available.

The European Digital Mathematics Library (EuDML) is an existing regional DML which successfully developed and realized new models and concepts for digital mathematics libraries during the last years and therefore should be an excellent starting point for GDML. Moreover, in order to achieve a world wide acceptance and to avoid that particular interests of special groups get a too strong impact, it seems to be essential that the International Mathematical Union (IMU) takes the political leadership in this important project.

The talk reports on the current activities for creating a GDML, including the results of the Panel Discussion at the ICM 2014 in Seoul, and discusses some concepts for a semantic searching in mathematical publications.