The Ninth National Information Day: Open Science, Open Data, Open Access

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Abstract. The paper draws current state of Bulgarian Open access (OA) activities
and discussion points for the Ninth National Information Day: Open Science,
Open Data, and Open Access.

1   Introduction

The National Information Day is devoted to the presentation of successful initiatives
and projects for open access (OA), open data sharing and open science; strategies for
the OA promotion; copyright and licenses under OA; best practices and examples of
policies for the development and promotion of open access at the national and institu-
tional levels, etc. It will support academic staff, research project managers, policy-mak-
ers and staff working in research funding bodies. It will give main concepts for the
implementation of OA principles and national OA roadmap, key terms, strategies, busi-
ness models, work plans, copyright and licenses, best practices, examples and policies
for open access, open data and open science. It will discuss: Open Access indicators;
disseminate partners' best practices; discuss research problems in the field; discuss the
possibilities of establishing a network of open-access repositories; contribute to the
problems of the harmonization of national legislation and practices; managers of scien-
tific digital repositories.

Bulgarian is a part of EU OpenAIRE-Advance project. OpenAIRE-Advance contin-
ues the mission of OpenAIRE to support the Open Access/Open Data mandates in Eu-
rope. By sustaining the current successful infrastructure, comprised of a human network
and robust technical services, it consolidates its achievements while working to shift
the momentum among its communities to Open Science, aiming to be a trusted e Infra-
structure within the realms of the European Open Science Cloud. OpenAIRE-Advance

strives to empower its National Open Access Desks so they become a pivotal part within their own national data infrastructures, positioning OA and open science onto national agendas. The capacity building activities bring together experts on topical task groups in thematic areas (open policies, RDM, legal issues, TDM), promoting a train the trainer approach, strengthening and expanding the pan-European Helpdesk with support and training toolkits, training resources and workshops. It examines key elements of scholarly communication, i.e., co-operative OA publishing and next generation repositories, to develop essential building blocks of the scholarly commons. Open-AIRE-Advance steps up its outreach activities with concrete pilots with major RIs, citizen science initiatives, and innovators via a rigorous Open Innovation programme.
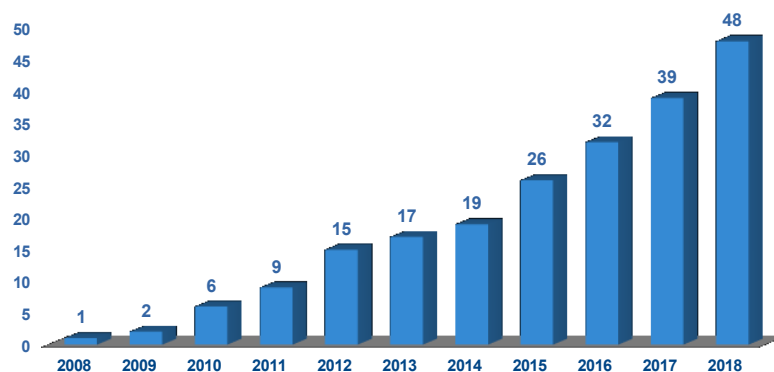
2   Bulgaria OA Repositories

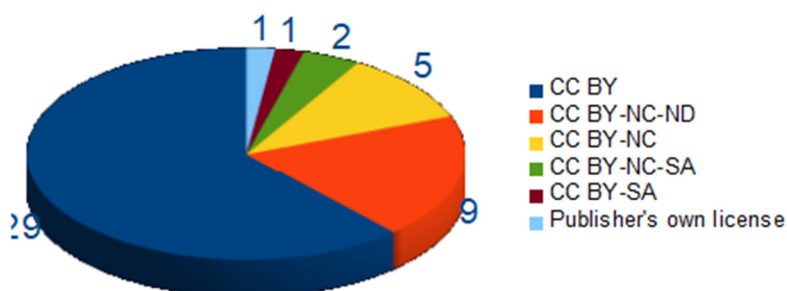In table 1 the current open access repositories in Bulgaria are given:

Table 1. The current open access repositories in Bulgaria

Open Access Bulgarian Repositories 2018	Publications	Software	Link
New Bulgarian University Repository	2631	EPrints 3.3.12	http://eprints.nbu.bg
BulDML at IMI-BAS	2549	DSpace 1.6	http://sci-gems.math.bas.bg
Digital repository of Sofia University	912	DSpace 1.8.2	https://research.uni-sofia.bg
Research BFU - Burgas Free University	801	DSpace 1.8.1	http://research.bfu.bg:8080/jspui/
Medical University - Varna Prof. Dr. Paraskev Stoyanov	351	EPrints 3.3.15	http://eprints.mu-varna.bg
BGOpenAIRE at IMI-BAS	119	DSpace 1.6.2	http://www.bg-openaire.eu

In Figure 1. the numbers of the open acess journals in Bulgaria are shown.

Figure 1. The numbers of open access journals in Bulgaria

Figure 2 The license types of open access journals in Bulgaria

The license types of open access journals in Bulgaria are highlighted in Figure 2.

3   Bulgaria Open Science Events

During the current year the following events connected also with Open Science, Open Data, and Open Access are hosted in Bulgaria:

- The international conference "e-infrastructures for excellent science in southeast Europe and eastern Mediterranean", Sofia, 15-16 May, 2018 https://viseem.eu/2018/04/03/regional-conference/
- The e-IRG workshop under Bulgarian EU Presidency, 14-15 May 2018, Sofia, Bulgaria. A session dedicated to the current developments of the European Open Science Cloud was organized. http://eirg.eu/e-irg-workshop-may-2018
- The Digital Assembly 2018 (https://ec.europa.eu/digital-single-market/en/events/digital-assembly-2018-sofia) take place on 25 and 26 June in Sofia, Bulgaria. The event was co-organized by the European Commission and the Bulgarian Presidency of the Council of the European Union. The Digital Assembly was a major annual forum that gathers more than 1,500 stakeholders and high-level policymakers to debate the EU digital policy and the implications of recent technological developments. This year's edition comes at a crucial time as the European Council has called for the full implementation of the Digital Single Market strategy by 2018. Important tasks discussed were: open data, security, health, new internet, Internet of Things, cloud computing. Special focus on how Central and Eastern Europe as well as Western Balkan countries can best benefit from the digitization of their economies and societies were discussed.

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This year Bulgaria OpenAREA activities

a. **In the aria of National Policy and Infrastructure:**

- Writing the Bulgarian pages in the study on open access to publications and research data management and sharing within ERC projects;

- Elaborating Expert Group on European Open Science Cloud at Ministry of Education and Science;
- Developing an Action plan for implementation of the European Open Science initiatives;
- Developing National Science Program "ICT for science, education and security" with working package "Open Science for Society";
- Starting national project for developing a Bulgarian Open Access Library;
- Writing a draft of "National science programme for information and communication technologies for a digital single market in science, education and security". It includes a paragraph about "Electronic infrastructure for open science and open access to research results";
- Developing a policy vision for the development of the Open Access and Open Data, presented to the EC;
- Writing a new page in the Ministry of Education and Science (https://www.mon.bg/bg/100188) web portal titled "National policy of open access to scientific information and scientific data".

b. **In the field of training and support**

- Organizing a Workshop on Open Access to Scientific Publications, Data and Data Science;
- Organizing National Seminar "Open Access for Open Science" during the Open Access week;
- Maintaining the National Open Access Desks, which connect researchers, research institutions, and policy makers at a national level on the one end, and the OpenAIRE-Advance project services on the other. The focus of the National Open Access Desks activities is on support for compliance with the EC Open Access policies;
- Teaching best practices, examples and policies for open access, open data and open science the academic staff (young and experienced researchers) and research project managers practiced OA and acquired knowledge and skills how to write, publish and deposit articles, scientific data and materials in OA repositories, OA repositories maintenance, etc.

c. **In the field of outreach and dissemination**

- Maintaining and operating two open access repositories at the IMI-BAS;
- Sending information to all Bulgarian coordinators how to put their paper and data in our archives;
- Developing a new version of Bulgarian page of the OpenAIRE portal;
- Including in the Bulgarian page of the OpenAIRE portal information about National Science Fund;
- Preparing an action plan for three years for Open Science and considering the next steps with the Minister of Education and Science;
- Conducting talks with scientific publishers about preferential pubs for publishing open access;
- Organizing two days meeting by the Expert Group on European Open Science Cloud at the Ministry of Education and Science and drafting "Action plan for implementation of the European open access initiatives ".

d. **In the field of working with funders**

- Working on the Rules of the National Science Fund (NSF) with the requirement that each funded project should provide open access to the results.

e. **In the field of Task Forces**

- Participating in the Expert Group on European Open Science Cloud at Ministry of Education and Science,

4   Discussion Topics during This Year National Information Day "Open Science, Open Data, Open Access "

- European Open Science Cloud;
- National Science Program "ICT for science, education and security";
- Open Data;
- Open Sources;
- Open Methodology;
- Open Peer Review;
- Open Access;
- Open Access Data E-Infrastructures;
- European Open Science Cloud;
- Open Educational Resource;
- Access to Research Facilities;

- Access to Processing Capabilities;
- Communication at all Levels of Research Life Cruces;
- Open Access Indicators;
- Disseminate Partners' Best Practices;
- Discuss Research Problems in the Field;
- Discuss the Possibilities of Establishing a Network of Open-Access Repositories;
- Contribute to the problems of the Harmonization of National Legislation and Practices.

Acknowledgments