

PERSONAL INFORMATION

Alessia Bardi

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Sex Female | Date of birth 29/04/1982 | Nationality Italy

PROFILE

After my Master degree in Information Technologies at the University of Pisa in 2019 I started my research activity at the Institute of Information Science and Technologies (ISTI) of the Italian National Research Council (CNR). During the period of my research fellowship, I continued my educational path and obtained a PhD in Information Engineering in May 2016, with a thesis titled “Enhanced Publication Management System: a systemic approach towards modern scientific communication”.

The topic of the thesis is in-line with my broader research interests, which I have been cultivating during my whole work experience at CNR: infrastructures for scholarly communication, aggregative data infrastructure, data and metadata interoperability, and services for Open Science. Research activities are applied to TRL9 (production) infrastructures realised in the context of several EC funded projects (e.g. OpenAIRE, ARIADNEplus), to which I participate with technical leading roles and advanced skills in Java programming, data modelling, database and software design and engineering, and technologies for data collection, processing, harmonization, and analysis.

WORK EXPERIENCE

December 2018 – Present
(November 2023)

Permanent Senior Researcher

Institute of Information Science and Technologies, Italian National Research Council, Pisa (Italy)

Research topics: Scholarly communication infrastructures and Open Science

As senior researcher, data and software engineer I am involved in the design, development, maintenance and operation to the European infrastructures OpenAIRE, ARIADNEplus, and the European Open Science Cloud (EOSC).

In particular I contribute to the OpenAIRE Graph in the ETL (Extract, Transform, Load) pipeline for its construction, and in the processes for its data curation and quality assurance.

Framework and technologies used: D-Net Framework Toolkit, Apache Spark, Apache Hive, Apache Zeppelin, Solr, PostgreSQL, MongoDB

Programming language: Java, XSLT2.0, Python

Since January 2018 I am the manager of the OpenAIRE CONNECT service, which delivers, on-demand, open research gateways that support research communities at implementing Open Science practices.

Since March 2021 I am co-chair of the GOFAIR Working Group “Discovery Implementation Network”.

From April 2022 until June 2023 I am the CNR-ISTI Unit coordinator for the OpenAIRE-Nexus project (GA 101017452).

I am contributing to the European Open Science Cloud via the EC project EOSC Future (GA 101017536). Since November 2022 I am chair of the EOSC Future Working Group on the EOSC Interoperability Guidelines for Research Product Publishing and I am involved into the technical activities for service interoperability.

For the ARIADNEplus infrastructure, funded by the EC project ARIADNEplus (GA 823914), I lead the design, implementation and operation of the metadata aggregator and the ARIADNEplus Knowledge Base.

Framework and technologies used: D-Net Framework Toolkit, GraphDB, Linked Data, Elasticsearch, OpenSearch, JupyterHub, MongoDB

Programming language: Java, XSLT2.0, Python, SPARQL

Since January 2023 I am the CNR scientific manager for the EC project CRAFT-OA (GA 101094397, in which CNR participates as affiliated entity of OpenAIRE AMKE), whose goal is to support a

sustainable network of institutional diamond open access journals and publishers.

June 2015 – December 2018

Senior Researcher

Institute of Information Science and Technologies, Italian National Research Council, Pisa (Italy)

Research topics: services and infrastructures for Open Access and Open Science

Research activities have been carried out also in the context of projects funded by the European Commission for the delivery of infrastructures and services for Open Access and Open Science. In particular, my expertise as data and software engineer and developer contributed to:

- The OpenAIRE infrastructure, as responsible for the maintenance of OpenAIRE data model and as member of the team for the design, implementation and operation of the APIs, the Broker service, CONNECT, MONITOR, and the metadata aggregator. I also supported Dr. Paolo Manghi at the technical coordination of the EC project OpenAIRE2020 (GA 643410).
- The PARTHENOS EC project (GA 654119), for which I collaborated to the design, implementation and operation of the metadata aggregator and the PARTHENOS resource catalogue

Framework and technologies used: D-Net Framework Toolkit, PostgreSQL, MongoDB, Apache Hadoop, Solr, Spring Framework, Web Services, RESTful services, svn, git, maven, Nexus, Jenkins, Apache Tomcat

Programming language: Java, XSLT2.0, Perl

September 2012 – June 2015

Senior Research fellow

Institute of Information Science and Technologies, Italian National Research Council, Pisa (Italy)

Research topics: e-infrastructures for scholarly communication and cultural heritage

I am actively involved with responsibility roles in EC funded projects for the realization of infrastructures for scholarly communication and cultural heritage:

- HOPE (GA 250549), with the role of task leader for the design, implementation, deployment, and operation of the Aggregative Data Infrastructure
- EFG1914 (GA 292276) with the role of responsible of the CNR activities for the extension of the data model and the definition of mappings
- OpenAIREPlus (GA 283595), with the role of task leader for the definition and update of the data model and responsible of the CNR activities for the pilot on enhanced publications and automated content classification.

In addition, I participated to the team that configured the D-Net Framework Toolkit for its application at MINCYT (Ministerio de Ciencia, Tecnología e Innovación, Argentina) and FECYT (Fundación Española para la Ciencia y Tecnología, Spain).

In this period, I also start my PhD in Information Engineering at the University of Pisa.

Framework and technologies used: D-Net Framework Toolkit, PostgreSQL, MongoDB, Apache Hadoop, Solr, Spring Framework, Web Services, RESTful services, svn, git, maven, Nexus, Jenkins, Apache Tomcat, Jetty

Programming language: Java, Groovy, XSLT2.0, Perl

17/12/2011–26/05/2012

Teacher Assistant

University of Pisa, Pisa (Italy)

Working in academic environment carrying out tutoring activities within the class "Business Information Systems" of the Post graduate course "Information Engineering for the Business Management" for a total of 24 hours covering the following topics:

- Software build systems and tools for dependency management (ant, maven)
- Distributed Java applications, Servlets, Web Services

- Data models (entity-relationships, relational)

May 2009 – August 2012

Research fellow

Institute of Information Science and Technologies, Italian National Research Council, Pisa (Italy)

Research topics: metadata interoperability

Alongside with research activities on information systems for the management of compound objects and repository interoperability, I entered the technical team for the design, implementation and maintenance of the D-Net Software Toolkit, a framework developed and maintained by CNR-ISTI for the development of scalable and customizable aggregative infrastructures.

Framework and technologies used: D-Net Framework Toolkit, PostgreSQL, MongoDB, Solr, Neo4j, Sesame, Hibernate, Spring Framework, Web Services, Bootstrap, AngularJS, Jetty, svn, ant, yvy, Apache Tomcat

Programming language: Java, Groovy, XSLT1.0, Velocity, StringTemplate, Perl, Javascript

EDUCATION AND TRAINING

2012–2016

Ph.D in Information Engineering

Scuola di Dottorato "Leonardo da Vinci", University of Pisa, Pisa (Italy)

Thesis: "Enhanced Publication Management System: a systemic approach towards modern scientific communication". Available at: <https://etd.adm.unipi.it/etd-05062016-113902>

15/01/2013–15/04/2013

Trainee in "Linking scientific literature and biomedical databases"

European Bioinformatics Institute, Hinxton, Cambridge (United Kingdom)

The 3 months training programme included seminars and lessons about tools for research reproducibility and scholarly communication in the field of Life Sciences.

During the programme I carried out a project on how scientific literature and the links to biological databases can be exploited to identify citation patterns, understand data citation trends and support the enhancement of knowledge that can be automatically extracted from the full-texts of scientific literature.

The work has been presented at the Doctoral Consortium of the conference "Theories and Practices of Digital Libraries" 2013.

2005–2009

Post graduate Master's Degree in Information Technologies

109/110

University of Pisa, Pisa (Italy)

Thesis: "Doroty: Digital Object Repository with Types. Realizzazione della componente di Storage di un sistema di gestione per Digital Library basato su tipi"

2001–2005

Bachelor's Degree in Computer Science

109/110

University of Pisa, Pisa (Italy)

1997–2001

High-School degree in language studies

93/100

Liceo Scientifico E. Fermi, Cecina (Italy)

Languages studied: English, French, and German.

PERSONAL SKILLS

Mother tongue(s)

Italian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C2	C1	C2	C2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Organisational / managerial skills

- Leadership (currently manager of one of the OpenAIRE products, chair of international working groups and task/work package lead in projects)
- Good organisational skills gained as assistant of the OpenAIRE2020 Technical coordinator (Dr. Paolo Manghi), as scientific coordinator for the CNR unit in the projects OpenAIRE Nexus and CRAFT-OA and thanks to organization of conferences, workshops, and technical meetings.

Communication skills

Good communication skills due to the participation in several working teams composed of people from different countries and with different background.

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

RESEARCH OUTPUTS

View on ORCID  <https://orcid.org/0000-0002-1112-1292>

[View on Institutional portal \(Open ISTI Portal\)](#)