
BIOGRAPHICAL SKETCH

NAME: Gabriel David

INESC TEC – INESC Technology and Science

POSITION TITLE: Researcher

H index= 6 (<http://www.scopus.com/authid/detail.url?authorId=16635163900>)

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Porto, Portugal	B.Sc.	1981	Electrical Engineering
University of Porto, Portugal	M.Sc.	1987	Computers and Digital Systems
University NOVA of Lisbon	Ph.D.	1994	Computer Science

A. Personal Statement

I got a Ph.D. in Informatics, Artificial Intelligence branch, at Universidade Nova de Lisboa, 1994.

I am currently Associate Professor at the Informatics Engineering Department, Engineering Faculty of the University of Porto (FEUP), where I integrate FEUP Scientific Board, the Scientific Committees of the MAP-i Doctoral Program in Computer Science and of the Information Science Bachelor and Master Programs, and the UPorto General Council. I have led the development team of SIGARRA, the U.Porto Academic Information System, from 1996 to 2010. I am a Researcher at INESC TEC since 1985.

My main research interests are in Information Management, Databases, and Digital Preservation. I have been the leader of projects (funded by Portuguese FCT) MetaMedia on multimedia archives and DBPreserve on preservation of databases.

I have collaborated between 2000 and 2010 in the project Cooperation with the National University of Timor Lorosa'e led by the Foundation of the Portuguese Universities, as coordinator of the Informatics Engineering bachelor (2006-2010).

I am a member of the Engineers Association Portugal where I belong to the Board of Admission and Qualification since 2010.

B. Positions and Honors

Positions and Employment

1981-1994 Assistant, FEUP, University of Porto
1994- 2003 Assistant Professor, FEUP, University of Porto
2003- Associate Professor, FEUP, University of Porto
1985- Researcher, INESC TEC

Prizes

2000 — EUNIS Award of Excellence for the academic information system SiFEUP.
1998 — Prémio Descartes – Secretariado para a Modernização Administrativa.

C. Publications

1. Selected Publications. I have authored/co-authored more than 27 international publications including journals such as:

- [1] Fábio Pinto da Costa, Álvaro Cunha, Gabriel David. "ViBest SHM: an information system and data repository for structural health monitoring". Eurodyn 2014: IX International Conference on Structural Dynamics, pp. 2407-2412, Porto, Portugal, 2014. WOSUID: WOS:000354786603046.
- [2] Sérgio Nunes, Cristina Ribeiro, Gabriel David. "The impact of time in link-based web ranking". Information Research, 18(3) paper 586. [Available at <http://InformationR.net/ir/18-3/paper586.html>], 2013.
- [3] Arif Ur Rahman, Gabriel David, Cristina Ribeiro. "SIARD Archive Browser" in Theory and Practice of Digital Libraries, TPD L 2012, Paphos, Cyprus, September 23-27, Lecture Notes in Computer Science 7489, pp.496-499, DOI: 10.1007/978-3-642-33290-6_58, 2012
- [4] Sérgio Nunes, Cristina Ribeiro, Gabriel David. "Term Weighting based on Document Revision History". Journal of the American Society for Information Science and Technology, Vol.62 nº 12, pp.2471-2478, 2011
- [5] Ademar Aguiar, Gabriel David. "Patterns for Effectively Documenting Frameworks" in "Transactions on Pattern Languages of Programming II", Lecture Notes in Computer Science 6510, pp.79-124, Springer-Verlag Berlin Heidelberg, 2011.

Completed Research Support

PT02_Aviso5_0002 - "**SeaBioData - Portuguese Seamounts Biodiversity Data Management**" (EEA Grants, 2015/2016) – Interest in the conservation and exploitation of seamounts and their associated biological communities has highlighted a need to improve understanding of seamount ecosystems and the threats they face, as well as considering the management of activities that take place around them. Survey data is usually dispersed in geographical locations and stored in heterogeneous formats, such as video, text documents, proprietary binary formats, spreadsheets, among others, making it a challenge to manage its life cycle and to provide dissemination means that enable its reuse by other stakeholders. Results of this project will provide new means to curate and access original datasets and a set of interoperable services to disseminate observation data, thus providing baseline information for management and sustainable use in the Portuguese marine environment, as well as to the development of the marine strategies for the continuous assessment and maintenance of the good environmental status (GES). Role: principal investigator.

MP_P-125997 "**Archival and Digital Preservation of Clinical Information**" (FCG, 2012/2014) – The project goal is the establishment of a requirements model for digitization and for digital preservation towards the elaboration of a Digital Preservation Plan for the São João Hospital Center, conforming to the guidelines from the National Archives, in order to reach effective dematerialization of hospital information processes. Role: principal investigator.

PTDC_ECM_109862_2009 "**DYNAMO - Advanced Tools for Dynamic Structural Health Monitoring of Bridges and Special Structures**" (FCT 2009/2013) – The project included the design and implementation of a research data repository adapted to structure health monitoring, able to store and fully describe large data sets and their creation context and also to visualize and share the data sets. Role: researcher.

PTDC/CCI/73166/2006 "**DBPreserve - Data Warehouses for the Long-term Preservation of Institutional Electronic Records and Databases**" (FCT, 2007/2010) – The project researched the application of data warehouse technology to the preservation of databases. The work has been developed under the general framework of OAIS (Open Archives Information System) and studied the transformation rules from operational systems to simplified process-centric systems. An XML representation of the resulting data warehouse has been specified and implemented, conceived as an extension of the SIARD database preservation model, which is platform independent and adequate for long-term preservation. A browsing tool directly for the preservation version has been developed that shows the data and the metadata used to describe the meaning of the underlying processes. Role: principal investigator.

PRAXIS/P/EEI/13208/1998 "**MetaMedia – Metadata for Multimedia Archives**" (FCT, 1998/2000) and POSI/SRI/34903/2000 "**Metadata for the Preservation and Retrieval of Multimedia Components**" (FCT, 2001/2003)

– A multimedia data model has been elaborated, based both on the archival description standard ISAD(G) and the multimedia description standard MPEG-7, with the ability to store the contextual information about the multimedia objects and their collections as well as the content description and the objects themselves, at several structure levels. The content description has been mostly done by XML descriptors. The architecture is open to new descriptors. A Multimedia Database prototype has been developed with Web interface according to the previous model, able to incorporate data from automated characteristic extraction of video objects. The XML schema of a language equivalent to the Multimedia Database model has been defined, enabling XML interoperability with other applications. A specific search interface for the Multimedia Database has been developed that combines search criteria related with the context and with the contents. Role: principal investigator.

PBIC/C/TIT/2502/95 “**Archivum – system of objects with temporal support for archival description**” (JNICT, 1996/1998) – the main result of this project was the development of an object-oriented data model for the archival description problem, according to the ISAD(G) international standard, improved with the awareness of the temporal dimension, taking into account the diversity of historical information to represent. Based on this model, two prototype applications have been developed, the first one supported by an object-oriented database and the second one by a relational database. Role: principal investigator.