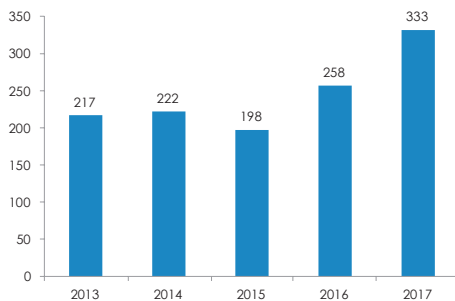
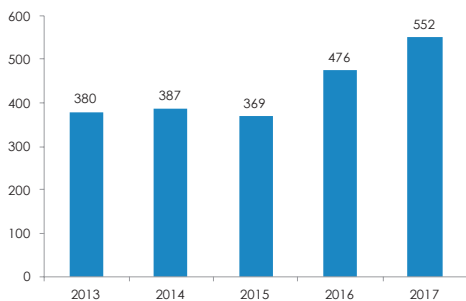


**CERIS - Civil Engineering Research and Innovation for Sustainability** - is an FCT-registered research unit operating in the Civil Engineering area. It is hosted by the Department of Civil Engineering, Architecture and Georesources (DECivil) of Instituto Superior Técnico (IST), University of Lisbon (ULisboa).

The quality and impact of research activities of CERIS in 2013-17 are attested by the individual awards and rankings of Ulisboa in the Civil Engineering area (in which CERIS is the only Ulisboa research unit), namely 7<sup>th</sup> and 8<sup>th</sup> in Europe (Shanghai and Taiwan university rankings 2017, respectively) and 1<sup>st</sup> in Portugal.

## People

CERIS research staff includes PhD members, PhD collaborators and non-PhD collaborators. In 2013-17, the number of integrated members remained constant (92), as set by FCT regulations. Non-PhD collaborators include PhD students enrolled at IST-CERIS and non-PhD researchers with CERIS scholarships provided through research and consultancy projects.



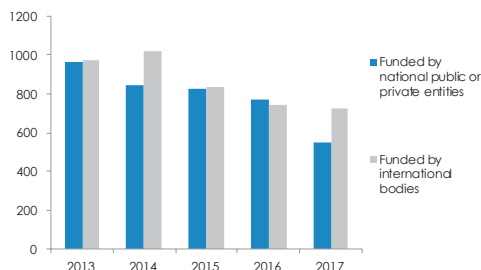
Research staff and PhD students

## Funding

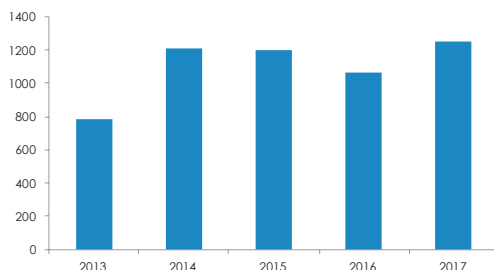
CERIS members developed 71 international research projects and 81 national research projects, raising a total of ~8.3 M€ (excluding base funding and scholarships awarded directly to CERIS PhD and MSc researchers/students).

Advanced consultancy contracts with public entities and private firms were an important source of funding. Overall these contracts raised ~5.5 M€ of income for CERIS.

Through FUNDEC, the knowledge transfer interface created by DECivil, life-long training activities allowed additional funding of ~1.3 M€ to be raised.



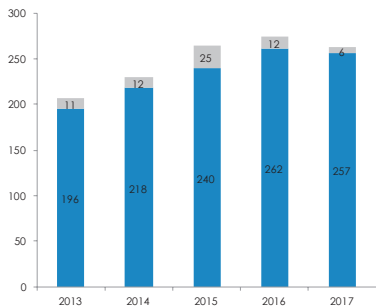
Research funding from ongoing projects (k€)



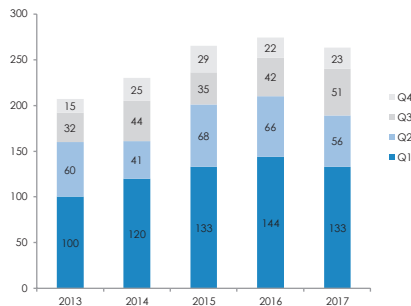
Advanced consultancy funding (k€)

## Scientific outputs

CERIS researchers co-authored a total 1239 ISI-Scopus papers, i.e. 2.7 papers per integrated member (92) and per year. Of these, 72% were published in Q1 and Q2 journals, with an average impact factor of 2.3. 34% of these papers were co-authored with researchers from foreign institutions and 27% from other national institutions. These papers received around 7700 citations in the period and 10 are "Highly Cited".

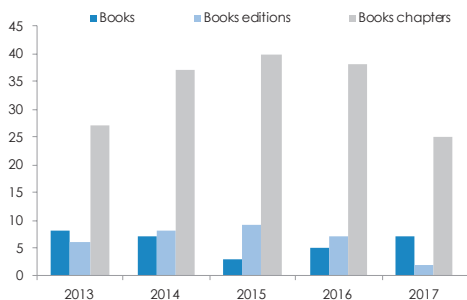


Papers in ISI Web of Knowledge and Scopus Journals

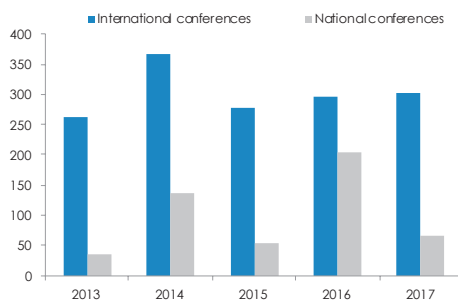


Publications by JCR Quartile

CERIS researchers co-authored 31 international and national books, edited 32 entire books and co-authored 167 book chapters. CERIS researchers also disseminated the results of their research through the publication of 1507 papers in international conferences and 495 papers in national conferences. CERIS researchers organized 53 international conferences (in addition to many workshops, seminars and other sessions, not included here) and 14 national conferences.



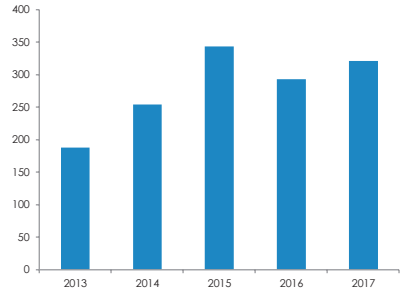
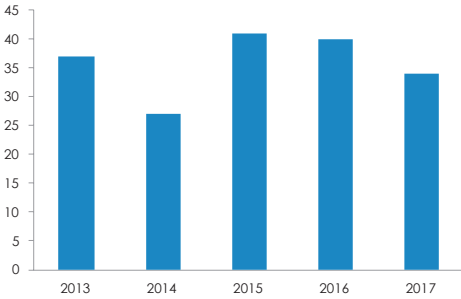
Books, books editions and books chapters



Publication in conferences

## Advanced training

CERIS members concluded the supervision of a total of 179 PhD theses, i.e. 1.95 theses per integrated member over the period. In addition, CERIS members successfully supervised a total of 1399 MSc dissertations, i.e. ~3 MSc dissertations per integrated member (92) and per year.

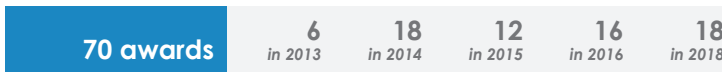


Concluded PhD theses and MSc dissertations

CERIS researchers led the following 5 competitively-funded FCT PhD programs (138 PhD grants, ~8.0 M€ for 2014-20), offered under international protocols with foreign partners (e.g. EPFL and MIT) and/or national consortia:

- Analysis and Mitigation of Risks in Infrastructures - <http://infrarisk.tecnico.ulisboa.pt>;
- Eco-Construction and Rehabilitation - <http://ecr.tecnico.ulisboa.pt>;
- Environmental Hydraulics and Hydrology - <http://envhidro.tecnico.ulisboa.pt>;
- River Restoration and Management - <http://rrm.tecnico.ulisboa.pt>;
- Transportation Systems – <https://www.mitportugal.org/education/transportation/doctoral-program>.

## Awards and distinctions



CERIS researchers earned 70 awards and distinctions, attesting the relevance of their work at both international and national levels. The following international awards and distinctions are highlighted.

Year	Researcher	Description	Institution
2013	José Oliveira Pedro	Baker Medal for the 3 <sup>rd</sup> Best Paper in all ICE Journals ("Design and construction of Zambezi River Bridge at Caia, Mozambique")	Institute of Civil Engineers (ICE), U.K.
2016	André Martins, Dinar Camotim, Pedro Borges Dinis	Structures Best Research Paper Award 2016 for the best paper published in the journal "Structures" during 2015 ("Local-distortional interaction in cold-formed steel columns: Mechanics, testing, numerical simulation and design", by Martins AD, Camotim D, Dinis PB, Young B)	Institution of Structural Engineers, U.K.
2016	João Ramôa Correia	2016 IIFC Distinguished Young Researcher Award	International Institute for FRP in Construction (IIFC)
2016	Maria Bacharel Carreira	Glenn Earthman Outstanding Dissertation Award for best PhD Thesis (Bacharel Carreira M), supervised by Teresa Heitor	International Society for Educational Planning
2017	José Oliveira Pedro	John Henry Garrood King Medal for best paper in Journal of Bridge Engineering ("Composite cable-stayed bridges: state of the art")	Institute of Civil Engineers (ICE), U.K.
2017	Rodrigo Gonçalves	2017 SSRC McGuire Award for Junior Researchers (MAJR Medal)	Structural Stability Research Council (SSRC)
2017	Rui Cunha Marques	Career Merit Award	International Water Association (IWA)

## Editorial activities

CERIS researchers played an important role in editorial activities in 112 scientific publications. Namely, they served as Editor-in-Chief (5), Associate Editor (22) and Editorial Board Members (102). The following editorial activities as Editor-in-Chief or Associated Editor of ISI-Scopus journals are highlighted.

Editor-in-Chief	Journal – International
<b>Eduardo S. Júlio</b>	Advances in Concrete Construction
<b>Rosário Macário</b>	Case Studies on Transport Policy
<b>Jorge de Brito</b>	Journal of Building Engineering

Associate Editor	Journal – International
<b>João Ramôa Correia</b>	Advances in Structural Engineering
<b>Rui Ferreira</b>	Advances in Water Resources
<b>Jorge de Brito</b>	Applied Sciences
<b>Carlos Sousa Oliveira</b>	Bulletin of European Earthquake Engineering
<b>Jorge de Brito</b>	European Journal of Environmental and Civil Engineering
<b>Carlos Chastre Rodrigues</b>	Frontiers in Materials
<b>Jorge de Brito</b>	Heliyon
<b>Eduardo Júlio</b>	Journal of Applied and Computational Mechanics
<b>Dinar Camotim</b>	Journal of Engineering Mechanics
<b>Rui Ferreira</b>	Journal of Hydraulic Engineering
<b>Dinar Camotim</b>	Journal of Structural Engineering
<b>Jorge de Brito</b>	Materials
<b>Emanuel Maranhã das Neves</b>	Soils and Rocks
<b>Rafaela Cardoso</b>	Soils and Rocks
<b>Jorge de Brito</b>	The Open Civil Engineering Journal
<b>Rui Cunha Marques</b>	Water Policy

## Advanced consultancy

CERIS researchers have supported the industry and the public administration with advanced and innovative consultancy in many areas. Examples of initiatives with national impact are: seismic studies of key infra-structures in the metropolitan area of Lisbon (e.g. schools and hospitals); hydraulic studies of over 20 bridge crossings; assessment and maintenance of the Vasco da Gama Bridge in Lisbon; risk assessment study of debris flow in the Madeira island; characterization and study of the vulnerabilities of infra-structure networks to earthquakes and tsunamis in the Algarve; expert inspections on the construction defects of 60 secondary schools and of the Lisbon Creative Hub; urban/regional planning for all Portuguese-speaking countries; strategic programme for road transportation; coordination of procurement processes in the PPP programme for new hospitals.

## Life-long training

Through FUNDEC, the knowledge transfer interface of DECivil ([www.fundec.pt](http://www.fundec.pt)), CERIS members organized 211 professional training courses, with a total of 2700 teaching hours and 3431 trainees, raising a total of 1.3 M€.

Year	Courses	Trainees	Teaching hours	Funding (k€)
2013	46	770	712	277
2014	56	1137	777	459
2015	42	569	537	244
2016	37	467	406	151
2017	30	488	269	139

## Technical standardisation committees

CERIS researchers had 88 participations in a wide range of international regulatory bodies and scientific associations and 73 participations in national technical standardization committees, where they translated into practice the results of their research activities.