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 7th and 8th in Europe (Shanghai and Taiwan university rankings 2017, respectively) and 1st 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.

**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.
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”.

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.

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.
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.

### 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](http://infrarisk.tecnico.ulisboa.pt);
- Eco-Construction and Rehabilitation - [http://ecr.tecnico.ulisboa.pt](http://ecr.tecnico.ulisboa.pt);
- Environmental Hydraulics and Hydrology - [http://envhidro.tecnico.ulisboa.pt](http://envhidro.tecnico.ulisboa.pt);
- River Restoration and Management - [http://rrm.tecnico.ulisboa.pt](http://rrm.tecnico.ulisboa.pt);

### Awards and distinctions

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<table>
<thead>
<tr>
<th>Year</th>
<th>Researcher</th>
<th>Description</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>José Oliveira Pedro</td>
<td>Baker Medal for the 3rd Best Paper in all ICE Journals (&quot;Design and construction of Zambezi River Bridge at Caia, Mozambique&quot;)</td>
<td>Institute of Civil Engineers (ICE), U.K.</td>
</tr>
<tr>
<td>2016</td>
<td>João Ramôa Correia</td>
<td>2016 IIFC Distinguished Young Researcher Award</td>
<td>International Institute for FRP in Construction (IIFC)</td>
</tr>
<tr>
<td>2016</td>
<td>Maria Bacharel Carreira</td>
<td>Glenn Earthman Outstanding Dissertation Award for best PhD Thesis (Bacharel Carreira M), supervised by Teresa Heitor</td>
<td>International Society for Educational Planning</td>
</tr>
<tr>
<td>2017</td>
<td>José Oliveira Pedro</td>
<td>John Henry Garrood King Medal for best paper in Journal of Bridge Engineering (&quot;Composite cable-stayed bridges: state of the art&quot;)</td>
<td>Institute of Civil Engineers (ICE), U.K.</td>
</tr>
<tr>
<td>2017</td>
<td>Rodrigo Gonçalves</td>
<td>2017 SSRC McGuire Award for Junior Researchers (MAJR Medal)</td>
<td>Structural Stability Research Council (SSRC)</td>
</tr>
<tr>
<td>2017</td>
<td>Rui Cunha Marques</td>
<td>Career Merit Award</td>
<td>International Water Association (IWA)</td>
</tr>
</tbody>
</table>
Editorial activities

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 infrastructures 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 infrastructure 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.

Advanced consultancy

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Life-long training

Through FUNDEC, the knowledge transfer interface of DECivil (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€.

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.