REPUBLIQUE ALGERIENNE DEMOCRATIQUE ET POPULAIRE
وزارة السكـــــن و العمران و المدينة

Ministry of Housing, Urban Planning and the City

المركز الوطني للبحث المطبق في هندسة مقاومة الزلازل

National Center for Applied Research in Earthquake Engineering (CGS)
Rue Kaddour Rahim (Extension, opposite the post office)
P.O. Box 252, Hussein Dey – 16040 Algiers
Tel: +213 (0)23 77 58 15 to 18 – +213 (0)23 77 58 27 / 28
Fax: +213 (0)23 77 23 23
Email: cgsd@cgs-dz.org
Website: www.cgs-dz.org

SCIENTIFIC OUTPUT OF THE CGS

(International and National Publications)

2000 – March 31, 2026

TABLE OF CONTENTS

Introduction

This report provides an overview of the scientific output of the *National Center for Applied Research in Earthquake Engineering (CGS)*, in terms of both international and national publications, over the period spanning from 2000 to March 31, 2026.

The activities of the CGS are primarily focused on applied research in the following areas:
• Seismic hazard assessment
• Seismic microzonation and earthquake engineering
• Seismic risk mitigation studies
• Expert evaluation and consultancy
• Training and capacity building

In order to assess the Center's scientific production during the period under review (2000–March 31, 2026), the following indicators have been considered:

1. International publications
2. National publications

The research outcomes achieved by the CGS during this period have resulted in:
• The publication of **195 articles** (as of March 31, 2026) in peer-reviewed international journals classified as A and B, positioning the Center among the leading research institutions in Algeria (source:DGRSDT).
• The publication of **33 articles** in national journals (from 2004 to March 31, 2026). This relatively modest number reflects both the limited availability of national journals and the absence of specialized journals in the field of earthquake engineering.

1. INTERNATIONAL PUBLICATIONS

Evolution number of international publications

date	Number of publications
2000	1
2001	2
2002	4
2003	2
2004	6
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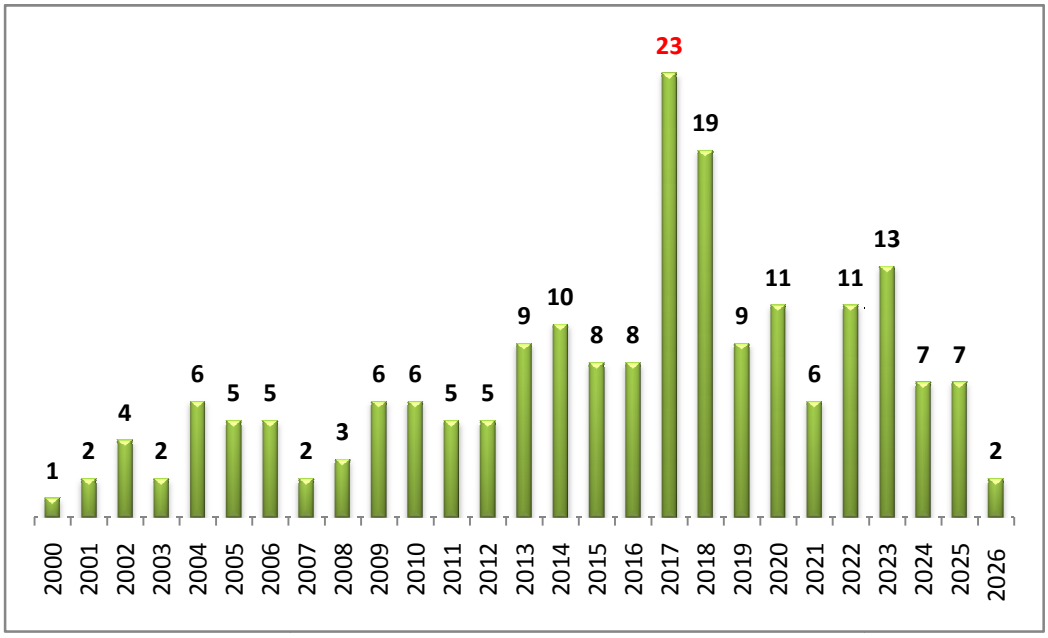
2022	11
2023	13
2024	7
2025	7
2026	2

TOTAL	195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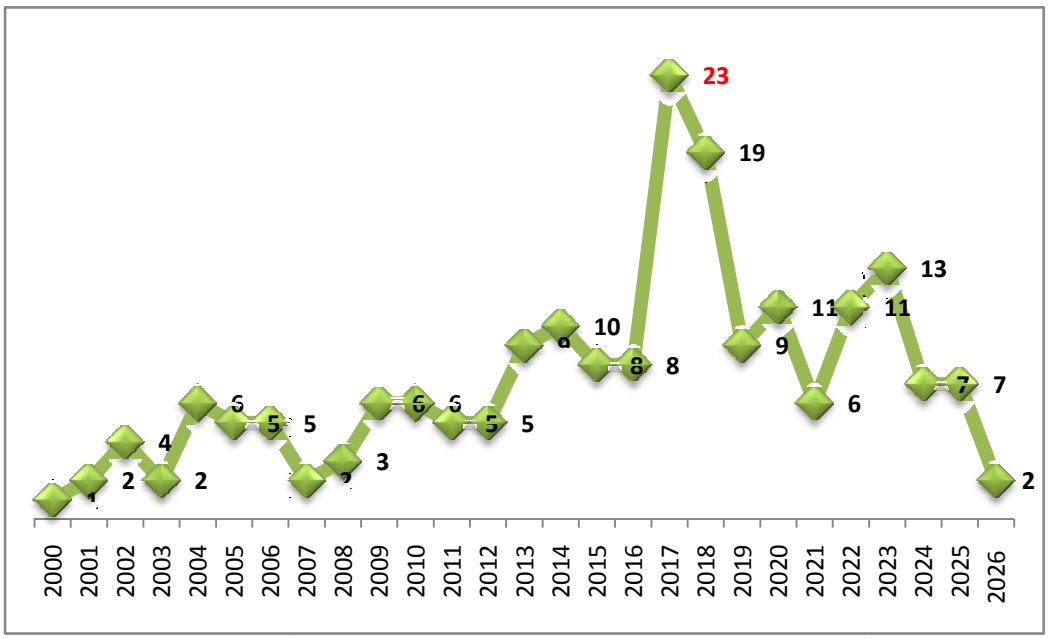
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1- International Publications

N°	Année	Auteurs, (Year). Intitulé. Journal, Issues, doi.
195		**Yousfi N, Boukri M, Braham M, Ait Belkacem M (2026)** Buildings Seismic Functionality Assessment. ***: Earthquake and Structures (EAS).*** 30(1): 101-129. DOI: https://doi.org/10.12989/eas.2026.30.1.101. *(Technopress).*
194		Karim, A., Nacim, K., **A, Nekmouche.,** Amar, K., Mohand, H., Leyla, B., & Djamel, A. (2025). Development of a relation model for damage categorization. *The Eurasia Proceedings of Science, Technology, Engineering and Mathematics* (EPSTEM), Vol. 38, pp. 69-80.
193	**2025**	.**Nacim Yousfi, Mounir Ait Belkacem, Hassan Aknouche, Hakim Bechtoula, Mehdi Boukri, Abdelhalim Airouche.**« *Numerical assessment of seismic performance enhancement in masonry-infilled RCframes using energy-dissipating material"* Journal: Advances in Concrete Construction an International journal ISSN:2287-5301(Print) 2287-531X (Online).Volume 20,N).4 octobre 2025 pp 227-238
192		**Mezouar, N, Bencharif R.** (2025), 'Influence of Engineering Bedrock Depth on Seismic Site Response in Thick Firm Marl Deposits' dans les actes de 'International Symposium on Seismic Risk, Urbanization, and Resilience in the Western Mediterranean - 40 years after the Constantine Earthquake of October 27, 1985', Université Mentouri de Constantine les 27 et 28 Octobre 2025.
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188		S. Zeroual, **A. Bouchelouh** , F. Kessasra et al. **(2024)**: « *Site response measurements and implications for soil deformation using geophysical and geotechnical characterization of Djen-Djen Port, Jijel, Northeast Algeria* » Journal of Applied Geophysics, Volume 232, January 2025, 105568.

187		Letif, M., Bahar, R. & **Mezouar, N**. Correlations Among CPT, MPT, and SPT in Clayey Soils: A Case Study from Central Northern Algeria. Geotech Geol Eng 43, 138 (2025). https://doi.org/10.1007/s10706-025-03099-x.
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185		Boualem, Ikhlef, **Kibboua Abderrahmane**, Bennacer Lyacine, Hemaidi Zourgui Nadjib, and **Kehila Fouad**. (**2024**). "Analysis of the Seismic Fragility of Slender Piers on Prestressed Concrete Viaducts". STUDIES IN ENGINEERING AND EXACT SCIENCES 5 (2):e8990. https://doi.org/10.54021/seesv5n2-319.
184		Zeroual, **A. Bouchelouh** , F. Kessasra et al. **(2024)**: « Site response measurements and implications for soil deformation using geophysical and geotechnical characterization of Djen-Djen Port, Jijel, Northeast Algeria » Journal of Applied Geophysics, Volume 232, January 2025, 105568.
183		**Bourenane H., Mezouar N.** Geomorphological, hydrogeological and geotechnical characteristics of the El Kherba large, deep-seated landslide induced by the August 7th, 2020 (Mw 4.9) earthquake in the city of Mila, northeast Algeria. Bull Eng Geol Environ 83, 288 (2024). https://doi.org/10.1007/s10064-024-03781-z.
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181		**Faouzi Gherboudj, Nourredine Mezouar, Toufiq Ouzandja, Youcef Bouhadad, Nasser Laouami (2024)'** Probabilistic seismic hazard maps and uniform hazardspectra with site effect integration for northern of algiers' Natural Hazards, doi.org/10.1007/s11069-02406502-7.
180		**Faouzi Gherboudj, Toufiq Ouzandja, Rabah Bensalem (2024),** 'Empirical spectral amplification functions using strong ground motion data and mixed effect analysis method, Application in Algeria' Bulletin of Geophysics and Oceanography.
179	**2023**	**Kehila F. Khelfi M. Ait Belkacem M. (2023). "**Scalar and vector-valued fragility analysis of typical Algerian RC bridge piers", GRANDEVINAR. 75(6), 177-186, DOI: https://doi.org/10. 14256/JCE.3630.2022.
178		Beneldjouzi, M. Hadid, **N. Laouami** et **M. Remki (2023)** "International Journal of Civil Engineering" (Springer) intitulé " *Analysis of Coupled Site and Soil–Structure Interaction Effects on the Seismic Response of Multistory Buildings According to EC-8and ASCE7-16 Code Provisions*" DOI: https://doi.org/10.1007/s40999-023-00840-6.

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176		Beneldjouzi M**, Remki M, Kehila F. (2023). "** Displacement-Based Methodology for Seismic Analysis of a Retrofitted Substandard Low-Rise RC Building Using Conditional Mean Spectra ». Iranian Journal of Science and Technology - Transactions of Civil Engineering. DOI: 10.1007/s40996-023-01266-9.
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172		Chebihi A., Dorbani S. and **Laouami N. (2023)** Correlation Between Ground Motion Parameters and Structural Response of Reinforced Concrete Buildings. Arabian Journal for Science and Engineering
171		Beneldjouzi M., Hadid M., **Laouami N. and Remki M. (2023) "** Frequency-domain preliminary assessment of coupled site and SSI effects according to the Algerian seismic provisions. " World Journal of Engineering. Emerald Publishing Limited. [DOI10.1108/WJE-07-2022-0313].
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159		M. Benziane, N. Della, **S. Bedr** (2022), Mechanical behavior of bio-cemented silty sand, Arabian Journal of Geosciences, Volume 15(Issue 7) DOI: 10.1007/s12517-022-09776-y.

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155	**2021**	**Benfedda Amar** , Serkhane Ahmed **, Bouhadad Youcef , Slimani Abdennasser , Abbouda Mustafa , Bourenane Hamid. "**The main events of the July–August 2020 Mila (NE Algeria) seismic sequence and the triggered landslides. Arabian Journal of Geosciences (2021) 14:1894.
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147		Bourenane H., Bouhadad Y, (2020) Spatial analysis, assessment and mapping of flood hazard in the alluvial plains of Boumerzoug and Rhumel (city of Constantine, north-eastern Algeria): application to development and urban planning projects. Bull. Eng Geol. Environ., doi.10.1007/s10064-017- https://doi.org/10.1007/s10064-020-01980-y
146		Hassan Aknouche, Abdelhalim Airouche and Hakim Bechtoula, (2020) "Influence of Earthquake Frequency Nonstationarity on Seismic Structural Response" Iranian Journal of Science and Technology, Transactions of Civil Engineering, Springer, 44, 603–614, https://doi.org/10.1007/s40996-020-00360-6
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140		Moulouel, H., Bouchelouh, A., Bensalem, R., Tebbouche, M. Y., Ait Benamar, D. A., Oubaiche, E. H., & Benamghar, A. (2020). The Mahelma fault: a secondary structure of the Sahel anticline?. *Arabian Journal of Geosciences*, *13*(15), 1-15.
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Evolution number of national publications

date	Number of publications
2004	5
2005	0
2006	0
2007	1
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2022	3
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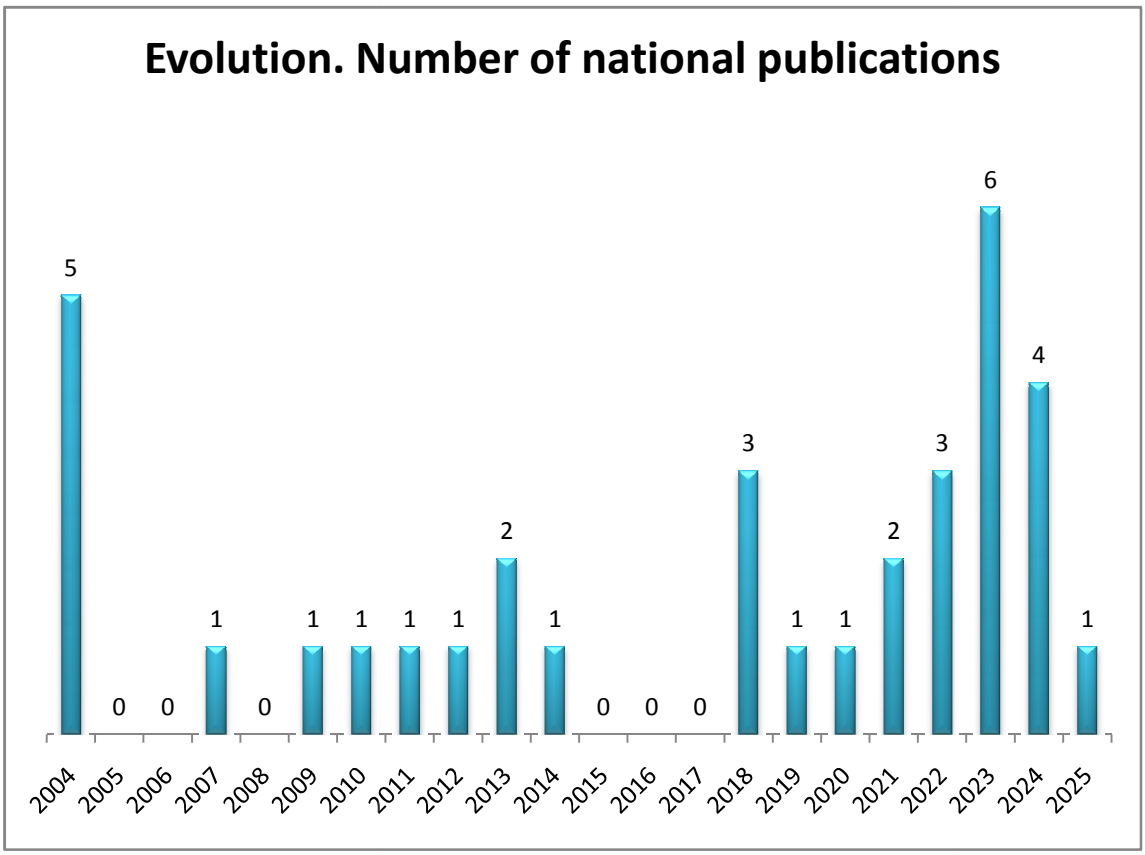
2024	4
2025	1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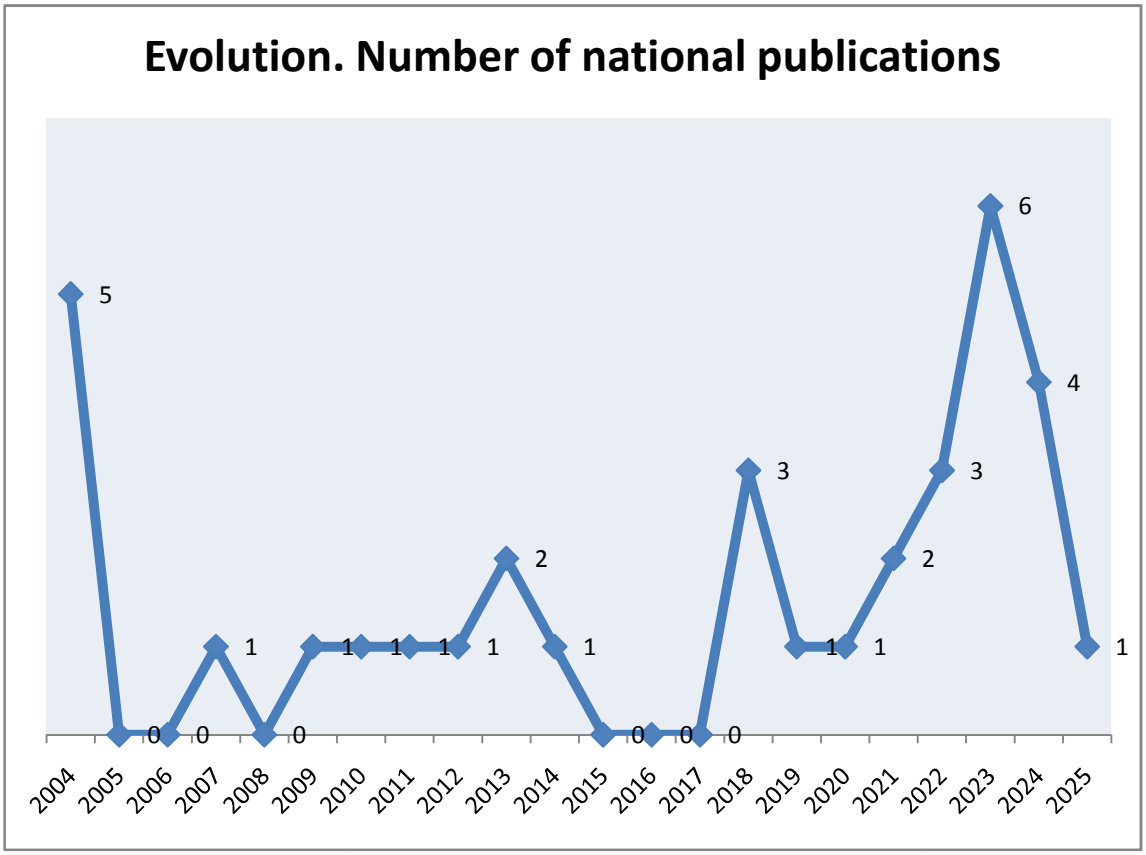
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2- National Publications

N°	Année	Auteurs, (année). Intitulé. Journal, Issues, doi.
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