الجمهورية الجزائرية الديمقراطية الشعبية
REPUBLIQUE ALGERIENNE DEMOCRATIQUE ET POPULAIRE

ةرازو نكسلا و رمعتلا و ةنيدملا
MINISTERE DE L'HABITAT DE L'URBANISME ET DE LA VILLE

زكرملا ينطولا ثحبلل قبطملا يف ةسدنه ةمواقم لزلازلا
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PRODUCTION SCIENTIFIQUE DU CGS

2000 - 2023

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SOMMAIRE

INTRODUCTION

Ce document est un récapitulatif de la production scientifique du Centre National de Recherche appliquée en Génie Parasismique (CGS) depuis l'année **2000 au 31/12/2023.**

Les activités du centre s'articulent autour de la recherche appliquée dans les domaines de l'aléa sismique, le microzonage sismique et le génie sismique, les études de réduction du risque sismique, les expertises et la formation.

Dans ce document, les indicateurs scientifiques suivants sont utilisés pour apprécier la production scientifique du centre depuis **2000 au 31/12/2023. :**

1. Publications Internationales
2. Publications Nationales

Durant cette période, les activités de recherche au CGS ont permis : (i) la production de **179 publications internationales** (de rang A et B), ce qui classe notre centre parmi les premiers en Algérie (source DGRSDT) ; (ii) la production de **29 publications nationales** (depuis l'année 2004 au 31/12/2023), ce chiffre traduit le peu de revues nationales et l'inexistence de revues spécialisées en génie parasismique.

1- Publications Internationales

N°	Année	Auteurs, (année). Intitulé. Journal, Issues, doi.
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.
177		**Bourenane H**. **Braham M.** · **Guessoum N.** Landslide susceptibility mapping using GIS-based statistical and machine learning modeling in the city of Sidi Abdellah, Northern Algéria. Modeling Earth Systems and Environment.
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.
175		M Annad, N H Zourgui, A Lefkir**, A Kibboua,** O Annad, (2023). Scour-dependent seismic fragility curves considering soil-structure interaction and fuzzy damage clustering: A case study of an Algerian RC Bridge with shallow foundations, Ocean Engineering, Volume 275, 114157, ISSN 0029-8018,
174		**Mechaala**, B. Chikh, H. Bechtoula, M. Ouali and **A. Nekmouche** (2023), Numerical investigation of the hysteretic response analysis and damage assessment of RC column, Advances in Computational Design, Vol. 8, No. 02, 97-112
173		**Hamid Bourenane (2023)** Landslide hazard mapping using temporal probability analysis of rainfall thresholds in the city of Azazga and surrounding areas, northern Algeria. Arabian Journal of Geosciences (2023) 16: 592
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].

170		**Bouhadad y, Guessoum n., Benfedda A**. 2023, Seismic Hazard Mapping in Northwestern Algeri,, Conference: 2023 International Conference on Earth Observation and Geo-Spatial Information (ICEOGI), DOI: 10.1109/ICEOGI57454.2023.10292966.
169		**Ouzandja T, Gherboudj F** and Hadid M. 2023,**"***Seismic Behavior of an Inhomogeneous poroviscoelastic Soil Profile with Spatial Variation in Soil Properties***"**.ICCEE2023, 1st International Conference on Civil and Earthquake Engineering,Annaba, Algeria. December 12-14, 2023.
168		**Nekmouche A, AkkoucheK, Ouzandja** T, Bouzid L, **Remki M.** 2023,**"***Assessment of Plastic Hinges Models for the Prediction of RC/Frame Structures Behavior***"**.ICCEE2023, 1st International Conference on Civil and Earthquake Engineering, Annaba, Algeria. December 12-14, 2023.
167		**Benfedda A.,Abbes K**., Ayadi A, Maouche S., **Bouhadad Y**.,Boughacha M.S.Bezzeghoud M. 2023, Source rupture process of the March 18th, 2021, Mw6.0 Béjaia (Algeria) earthquake associated with the Western segment – A link with the August 1856 Djidjelli earthquakes (Io = VIII-IX, M ≥ 6), Physics of the Earth and Planetary Interiors Volume 345, December 2023, 107115, https://doi.org/10.1016/j.pepi.2023.107115.
166	**2022**	**Bourenane H,** Bensalem R, Oubaiche, Braham M, Meziani A.A, Tebbouche M.Y (2022) The large deep-seated landslide induced by the march 12th, 2012 rainfall event in the city of Azazga, Northern Algeria: Deformation characteristics and failure mechanisms. **Environmental Earth Sciences** 81, 476 (2022). https://doi.org/10.1007/s12665-022-10612-5
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164		**Bedr S**., Dufour N., Javelaud E., Lenti L., Régnier J., Simon C. (2022) A new geotechnical database for dynamic soil properties Considering Resonant Column and Cyclic Triaxial Tests performed in France, Research Report, Project SIGMA2-2021-D4-083.
163		**Dalila Ait Benamar · Hakim Moulouel** · Djelloul Belhai · Fethi Semmane · Assia Harbi ·**Mohamed Yacine Tebbouche · Mehdi Boukri · Abdelghani Aghiles Meziani · Sahra Aourari · Massinissa Braham Djamel Machane** "The 17 July 2013 Hammam Melouane earthquake: observations and analysis of geological and seismological data" Journal of Iberian Geology. https://doi.org/10.1007/s41513-022-00187-228 July 2020

162		Belhamdi, N., **Kibboua, A.,** and Tahakourt, A. **(2022).** "Seismic vulnerability assessment of existing private RC constructions in northern Algeria". *Earthquake and Structures.* Vol.22, N°.1, pp. 25-38. DOI : : https://doi.org/10.12989/eas.2022.22.1.025
161		Boussa, Leila, Mohamed Chemrouk, Abdelmadjid Si Salem, et **Aghiles Nekmouche**. **(2022).** « Seismic reduction factor of reinforced concrete framed structures ». Asian Journal of Civil Engineering 23 (2): 153-71. https://doi.org/10.1007/s42107-021-00412-w.
160		**Ait Benamar D**: publication internationale dans la revue : Journal of Iberian Geology, intitulée : The 17 July 2013 Hammam Melouane earthquake: observations and analysis of geological and seismological data.
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.
158		**Boukri M,** Farsi MN, Mébarki A **(2022)** *Rapid earthquake loss estimation model for Algerian urban heritage: case of Blida city.* ***International Journal of Architectural Heritage***, *Taylor and Francis.* https://doi.org/10.1080/15583058.2021.1958394 (IF: 2.580).
157		**Ait Benamar D, Moulouel H,** Belhai D, Semmane F, Harbi A, Tebbouche MY, **Boukri M**, Meziani AA, **Aourari S, Braham M**, **Machane** D **(2022)** The 17 July 2013 Hammam Melouane earthquake: "*observations and analysis of geological and seismological data*. ***Journal of Iberian Geology***. https://doi.org/10.1007/s41513-022-00187-2 (IF: 859).
156		Serkhane A.; **Benfedda A**.. Guettouche M., **Bouhadad Y**. (2022) ."InSAR derived co-seismic deformation triggered by the Mihoub (Tell Atlas of Algeria) 28 May, 2016 (Mw = 5.4) earthquake combined to geomorphic features analysis to identify the causative active fault" Journal of African Earth Sciences, DOI:10.1016/j.jafrearsci.2022.104476
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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149	**2020**	Benfedda A, Bouhadad, Boughacha, Guessoum N, Abbes, Bezzeghoud M, (2020). The Oran January 9th (Mw 4.7) and June 6th, 2008 (Mw 5.4) earthquakes: Seismological study and seismotectonic implication, Journal of African Earth Sciences, Volume 169, 2020, 103896, ISSN 1464-343X, doi.org/10.1016/j.jafrearsci.2020.103896.
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144		Nasser Laouami. 2020. Proposal for a new sie classification tool using microtremor data. Bulletin of Earthquake Engineering. https://doi.org/10.1007/s10518-020-00882-4.
143		Mounir Ait Belkacem, Hakim Bechtoula, Nouredine Bourahla, Adel Ait Belkacem, (2020) "Damage index for reinforced concrete columns", GRAĐEVINAR 72 (2020) 2, 139-149, DOI: https://doi.org/10.14256/JCE.2626.2019

142		Hamal Sofiane, Nouredine Bourahla and Nasser Laouami. 2020. Neural-Network Based Prediction of Inelastic Response Spectra. Civil Engineering Journal 6(6):1124-1135. DOI: 10.28991/cej-2020-03091534
141		R. Bencharif, M. Hadid and N. Mezouar, (2020) Hybrid BEM-TLM-PML method for the dynamic impedance functions calculation of a rigid strip-footing on a nearly saturated poroelastic soil profile, Engineering Analysis with Boundary Elements Journal, https://doi.org/10.1016/j.enganabound.2020.03.001
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139		Y. MEHANI, A. KIBBOUA, C. BENAZOUZ, M. REMKI, (2020). «Seismic vulnerability of an existing strategic RC building using nonlinear static and dynamic analyses" DOI: https://doi.org/10.14256/JCE.2122.2017, GRAĐEVINAR 72 7, 617-626.
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137		Bourenane Hamid, Bouhadad Youcef, Guettouche Mohamed Said (2019) Flood hazard mapping in urban area using the hydrogeomorphological approach: case study of the Boumerzoug and Rhumel alluvial plains (Constantine city, NE Algeria). Journal of African Earth Sciences. https://doi.org/10.1016/j.jafrearsci.2019.103602
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133		Abbouda M.; Maouche S. , Bouhadad Y., Belhai D., (2019) Neotectonics and active tectonics of the Dahra- Lower Cheliff Basin (Tell Atlas, Algeria): Seismotectonic implication, Journal of African Earth Sciences 153 (2019) 250–267.
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131		Nait Amara B, Aissa D. E, Maouche S, Braham M, Machane D, & Guessoum N, (2019). Hydrothermal alteration mapping and structural features in the Guelma basin (Northeastern Algeria): contribution of Landsat-8 data. Arabian Journal of Geosciences, 12(3), 94. https://doi.org/10.1007/s12517-019-4224-4
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129	**2018**	Nasser Laouami, Mohamed Hadid, Noureddine Mezouar. 2018. Proposal of an empirical site classification method based on target simulated horizontal over vertical spectral ratio. Bulletin of Earthquake Engineering. 16:5843–5874, doi.org/10.1007/s10518-018-0420-y.
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118	Mustapha Remki, Benazouz Chikh, Abderrahmane Kibboua, Fouad Kehila, Youcef Mehani et Boubakeur Fettar (2018) « Seismic Vulnerability and Damage Assessment of an Existing URM Building". Iranian Journal of Science and Technology Transactions of Civil Engineering. https://doi.org/10.1007/s40996-018-0187-z.
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26		**Kehila F, Kibboua A, Remki M,** " Evaluation de la vulnérabilité sismique des piles de pont en béton armé à l'aide de la mesure de l'intensité vectorielle", Revue scientifique et technique de l'école National Supérieure des Travaux Publics, Algérie Equipement, N° 68 Résumé- janvier 2023, pp 35-50
25		**Hassan Aknouche, Abdelhalim Airouche et Hakim Bechtoula**. « Evaluation de la performance sismique de la première structure isolée, en algérie » Algérie Équipement, Juin 2022
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21		**Bourenane Hamid**, Kerkar Slim et **Bedr Samir** (2022) cartographie de la susceptibilité aux mouvements de terrain le long de la route national rn 8 au Sud de la ville de Larbaa (Nord-est de la wilaya de Blida) par modélisation statistique sous SIG. Revue Algérie Equipement - ENSTP. Algérie Equipement e-ISSN : 2716 - 7801. Juin 2022, N° 67 : 49-65.
20	**2021**	Tebbouche, M. Y., Ait Benamar, D. (2021). Contribution aux analyses des effets de site : cartographie de l'épaisseur des sédiments dans le bassin de la Mitidja (Algérie) à travers le bruit ambiant. *Algérie équipement, N°64* :60-70

19		Kehila F, Remki M, Kibboua A (2021),"Comparaison des courbes de fragilité des piles de ponts conçues avant et après l'application du code sismique Algérien", Revue scientifique et technique de l'école National Supérieure des Travaux Publics, Algérie Equipement, N°64 :47-59. e-ISSN : 2716-7801
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