



Democratic and Popular Republic of Algeria
Ministry of Higher Education and Scientific Research
University of Sciences and Technology
Houari Boumediene

Faculty of Civil Engineering
Structures and Materials Department
Building in Environment Laboratory "LBE-
"TAMAYOUZ"



CURRECULUM VITAE Pr. Saida DORBANI

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Research Team Leader: *"Earthquake Engineering, Engineering Seismology, Structural Dynamics, Building Acoustics and Thermal, Natural Risk Management"*.

ACADEMIC QUALIFICATIONS

- February 2024- present day: **Full Professor**
- June 2018 : **Accreditation to the research direction in Civil Engineering / USTHB- Algeria**
- December 2014: **PhD Degree: Field: RC building behavior under Seismic excitation /USTHB Algeria**
- July 2013: **Magister Degree, Field: Civil Engineering: Construction and Materials /USTHB Algeria**
- September 1998 : **Engineer's Degree , Field : Civil Engineering : Roads and Engineering Structures/ USTHB-Algeria**

Positions:

- **Full professor:** February 2024- present day:
- **Associate Professor:** December 2014-February 2024
- **Assistant Professor:** December 2005- December 2014

Administrative and academic responsibilities:

- From June 8, 2016 to March 2020: **Head of department “Structures and materials”**
- From December 2016 to March 2020: **Member of the department's Scientific Committee**
- From December 2016 to March 2020: **Member of the Scientific Council of the Faculty**
- From 2017 to 2020: **Member of the Faculty Organizing Committee.**
- From 2022 to the present: **Member of the department's Scientific Committee**
- From 2022 to the present: **Member of the Scientific Council of the Faculty**
- From 2022 to the present: **Member of the Scientific Council of the University.**

OTHERS:

- May 21th, 2023: **Member of the organizing and scientific committees for the 2nd scientific day organized by the “Building in Environment Laboratory”.**
- June 2023: **Member of the Educational Commission in charge of the file (Preparation of the National Conference on Higher Education and its Modernization) – Workshop 01: Teaching and Pedagogy.**
- August 6th, 2023: **Member of the recruitment committee for Assistant Professors (B)**
- December 10th, 2023: **Member of the Jury for the defense of the Doctorate in Science of Mr Benkhelil Mahmoud.**
- From 2015-2019 and 2021: Participation in the development and correction of competitive examination subjects for access to the LMD Doctorate.

RESEARCH ACTIVITIES

Area of interest:

- The valorization of local materials in the building sector
- Seismic behavior of the RC building
- Deterministic and probabilistic analysis through innovative methods

Research project

- **2004-2007: Formulation of Self-Compacting Concrete using the “Equivalent Concrete Mortar” method: J040472006005.**
- **2015-2018: Application of the probabilistic approach to the durability of reinforced concrete. A 01L02ES16132014002.**

- **2019-2022: Study of seismic responses of reinforced concrete structures taking into account uncertainties. A01L02UN160420190007.**
- **2019-2022: Valorization of demolition waste in cement matrices. A01L02UN160420190003**
- **PhD thesis: Deterministic study and probabilistic analysis of the responses of RC structures to a given earthquake**
- **Magister's thesis: Valorisation of the local materials in the building sector.**

DOCTORAL SUPERVISION:

- **Doctorate defended on February 27th, 2024: Ms. Chebihi Amina: “Investigation of Correlations between Seismic Responses of Buildings and the Characteristics of Strong Movements through non-linear seismic analyses”.**
- **Doctorate defended on February 2nd, 2025 Miss Yahiaoui asma : “Prediction of the fundamental period of the reinforced concrete frame structures with infill walls using Artificial Intelligence techniques”.**
- **2017 to the present: Mr AMMOURI Abderrahmane Amir: “Integration of uncertainties in predicting the seismic behavior of reinforced concrete structures”.**

I. INTERNATIONAL CONGRESSES

- **Duan Calitz1, Asma Yahiaoui2, George Markou3,1, Saida Dorbani:** “Use of HPC in the development of large datasets for the development of predictive models through machine learning algorithms”. COMPDYN 2025, 10th ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering. M. Papadrakakis, M. Fragiadakis (eds.), Rhodes Island, Greece, 15-18 June 2025.
- **Asma Yahiaoui, Jose C. Matos, Saida Dorbani:** “Probabilistic Forecast of Concrete Compressive Strength Using ML”. 20th International Probabilistic Workshop, 2024,p. 281-286, Minho, Portugal. https://doi.org/10.1007/978-3-031-60271-9_25
- **Asma Yahiaoui, Saida Dorbani:** “Estimation of the fundamental period of RC shear wall dominant buildings using various regression methods”. 1st International Conference on Civil and Earthquake Engineering (ICCEE 2023) Annaba 2023.
- **S. Dorbani, M. Badaoui, A. Badaoui and D. Benouar:** “Epicentral distance and Eigen period randomness effect on the RC buildings' seismic responses: The case study of Boumerdes (Algeria) 2003 earthquake”. Phenomenological Aspects in Civil Engineering (PACE-2021), Turquie.
- **S.Dorbani ; F.Kharchi, F.Salem, K. Arroudj and N. Chioukh:** "Valorization of the Algerian Plaster and Dune Sand in the Building Sector". 21th International Conference on Structural and Civil Engineering (ICSCE 2019).
- **S. Dorbani, M. Badaoui, A. BADAoui, D. Benouar,** "BASE SHEAR FORCE DEPENDING BUILDING NATURAL PERIOD AND PGA". International Civil Engineering and Architecture Conference. 17-21 Avril 2019, Trabzon, Turquie.

- **S. Dorbani**, M. Badaoui, D. Benouar, "Seismic Base Shear Force Depending on Building Fundamental Period and Site Conditions: Deterministic Formulation and Probabilistic Analysis". International Journal of Civil, Environmental, Structural, Construction and Architectural Engineering Vol:4, No:3, 2017. waset.org/Publication/10006510. pp 245 – 248. ISSN: 2010-376X, EISSN: 2010-3778.
- **S. Dorbani**, M. Badaoui, D. Benouar (2016). "Effect of building design and epicentral distance on structural seismic responses under a given earthquake". The 3rd International Congress on Technology and Concrete Durability. 26-27 September 2016, USTHB - Algiers, Algeria.
- **S. Dorbani**, M. Badaoui, D. Benouar (2016). "The seismic behavior of RC buildings with uncertain natural period and epicentral distance". Euromech colloquium 584, multi-uncertainty and multi-scale methods and related applications. 14 september – 16 september 2016, Porto, Portugal.
- **S. Dorbani**, M. Badaoui, D. Benouar, "Impact of Natural Period and Epicentral Distance on Storey Lateral Displacements". International Journal of Civil, Environmental, Structural, Construction and Architectural Engineering Vol:9, No:8, 2015. <http://waset.org/Publication/10001907>. pp 977 - 981 . ISSN:2010-376X, EISSN:2010-3778.
- **S. Dorbani**, M. Badaoui, D. Benouar. "Natural Period and Epicentral Distance Randomness Effect on the Base Shear Force", in J. Kruis, Y. Tsompanakis, B.H.V. Topping, (Editors), "Proceedings of the Fifteenth International Conference on Civil, Structural and Environmental Engineering Computing", Civil-Comp Press, Stirlingshire, UK, Paper 174, 2015. doi:10.4203/ccp.108.174.
- **S. Dorbani**, M. Badaoui, D. Benouar. "Impact of Natural Period and Epicentral Distance on Storey Lateral Displacements. ICCBE 2015 : 17th International Conference on Civil and Building Engineering, August, 17-18, 2015 at Istanbul, Turkey.
- **Dorbani. S**, Badaoui .M, Benouar. D. (2011). Influence de la hauteur du bâtiment et de la période fondamentale sur ses réponses sismiques-données séisme de Boumerdes 2003-Algérie-8^{ème} séminaire international de Lafarge, 13th-14th december 2011 Algiers, Algeria.
- **Dorbani. S**, Badaoui .M, Benouar. D. (2011). Influence de la conception d'un bâtiment et des conditions de site sur les réponses structurelles-données séisme de Boumerdes 2003-Algérie-Conférence sur la Vulnérabilité, l'Aléa, le Risque et la Gestion des Catastrophes (VAR 2011), U.S.T.H.B 6th-7th december 2011 Algiers, Algeria.
- **S.Dorbani** ; F.Kharchi, F.Salem : « *CONSTRUIRE EN PLATRE* », Journées Maghrébines des Sciences des Matériaux JMSM 2008 qui aura lieu du 04 au 08 Novembre 2008 à l'hôtel « VINCCI Nour Palace » à Mahdia.
- F Kharchi. **S. Dorbani**: « Valorisation du matériau plâtre dans la construction ». Conférence Internationale de la Gestion des Milieux Urbains. 16-18 Juin 2002. U.ST.H.B Alger

PUBLICATIONS

- Asma Yahiaoui, Jose C. Matos, Saida Dorbani, Hélder S. Sousa, Joaquim Tinoco. Determination of the fundamental period of infilled reinforced concrete frame structures through probabilistic analysis. *Structural Engineering International Journal*, Taylor & Francis Online DOI10.1080/10168664.202586837.
- Yahiaoui A, Markou G, Bakas N, **Dorbani S**. Prediction of the fundamental period of infilled reinforced concrete frame structures using advanced machine learning methods. *J. S. Afr. Inst. Civ. Eng.* 2025:67(2), Art. #1759, 12 pages. <http://dx.doi.org/10.17159/2309-8775/2025/v67n2a3>
- Chebihi, A., **Dorbani, S.** & Laouami, N. “Correlation Between Ground Motion Parameters and Structural Response of Reinforced Concrete Buildings”. *Arabian Journal of Science Engineering* (2023). <https://doi.org/10.1007/s13369-023-08274-x>.
- Asma Yahiaoui, **Saida Dorbani**, Lilya Yahiaoui : « Machine learning techniques to predict the fundamental period of infilled reinforced concrete frame buildings”. *Structures*, Volume 54, 2023, Pages 918-927, ISSN 2352-0124. <https://doi.org/10.1016/j.istruc.2023.05.052>.
- **S. Dorbani**, M. Badaoui, D. Benouar. "Effect of the uncertainty on the formulated seismic behavior of RC buildings to a given earthquake ". *Asian Journal of Civil engineering "AJCE"* ISSN: 1563-0854, EISSN: 2522-011X . Vol. 19, N°3, pp 1-9, doi: [10.1007/s42107-018-0029-0](https://doi.org/10.1007/s42107-018-0029-0)
- Karima ARROUDJ, **Saida DORBANI** , Mohamed Nadjib OUDJIT and Arezki TAGNIT-HAMOU “Use of Algerian Natural Mineral Deposit as Supplementary Cementitious Materials”. *International Journal of Engineering Research in Africa JERA*, Vol. 34, pp 48-58, 2018
- **S.Dorbani**, M.Badaoui, D.Benouar "Structural seismic response versus epicentral distance and natural period: The case study of Boumerdes (Algeria) 2003 earthquake". *Structural engineering and mecanic*, Technopress Journal, November 2013. DOI: <http://dx.doi.org/10.12989/sem.2013.48.3.333>
- S. Dorbani, F. Kharchi, F. Salem, K. Arroudj and N. Chioukh, "Influence of the Addition of Sand and Compaction on the Mechanical and Thermal Performances of Plaster," *Engineering*, Vol. 3 No. 9, 2011, pp. 895-899. doi: [10.4236/eng.2011.39109](https://doi.org/10.4236/eng.2011.39109)
- **S.Dorbani** . F.Kharchi. F.Salem “ Construire en plâtre”. **BATIMAG** numéro special 8^{ème} salon Bâtimatec Mai 2005 Alger Algérie.

Review:

- Review of many paper for “British journal of applied science and technology
- Rewiew of many paper for the “Current journal of of applied science and technology”

Professional experience

❖ Teaching activities:

- ✓ From December 1, 2005 to the present at the Faculty of Civil Engineering U.ST.H.B:

- Courses and supervised works: Reinforced Concrete and Prestressed Concrete
- Practical work: Soil Mechanics, Topography; Construction materials and Durability of concrete

- ✓ From May 2, 2005 to November 30, 2005 at SARL GESIRET
 - Responsible for coordinating GSM sites
 - From September 2003 to May 2005 at Design office: F. ISSAD: Engineer responsible for monitoring the reinforcement works.
 - **Supervising and examination of end of studies projects:**
 - From 2009 to 2012: Supervision and examination of several license theses.
 - From 2012 to present days: Supervision and examination of several Master theses.