

**POLYTECHNIC NATIONAL SCHOOL of CONSTANTINE**  
**Algeria**

**Mechanical Engineering Department**

**CURRICULUM VITAE**

**Pr. Dr. KHALFALLAH SALAH**  
**Grade: PROFESSOR**

**SPECIALITY: MECHANICS of STRUCTURES**

CURRICULUM VITAE



**Pr. Dr. KHALFALLAH Salah**

Professor of universities (C.U.N of 23/12/ 2008).

Associate Professor (C.U.N of 21/12/ 2003).

National Polytechnic School of Constantine, Algeria

- Ex. Director of Civil Engineering and Management Laboratory.
- Ex. Responsible of Civil Engineering Option, University of Jijel, Algeria.

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25000 Constantine,  
Algeria.

**Personal Address**

59, Cité de l'indépendance,  
Ibn Ziad, 25027, Constantine,  
Algeria.

Personal telephone: **(213) 7 75 98 11 19**

Date and locate of birth: February 18<sup>th</sup>, 1963 at Constantine, Algeria.

Familial Situation: Married with Five Children.

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[Khalfallah25@gmail.com](mailto:Khalfallah25@gmail.com)

Home page :

<http://www.freewebs.com/khalfallah/index.htm>

**EDUCATION**

- Ph. D. (Doctorate of state), 2003, Civil Engineering Department, University of Constantine, Algeria.  
Title: *Finite Element Modeling of Nonlinear Behavior of Reinforced Concrete Structures under Monotonic Loading*
- Magister degree, 1991, Civil Engineering Department, University of Annaba, Algeria  
Title: *Study of Reinforced Concrete Sections under Composed-Deviated Bending for any Law of Material Behavior*
- Engineer degree, 1988, Civil Engineering Department, University of Constantine, Algeria.  
Title: *Study and Analysis of an Industrial Building*

- Baccalaureate degree, 1983, Mathematical Stream, Academy of Constantine, Algeria.

### **Professional Experience**

**Professor of Universities:** December 2008 until now.

**Associate Professor:** December 2003 to December 2008.

**Assistant Professor:** October 1992 to December 2003.

### **Reattachment University**

**National Polytechnic School of Constantine:** from December 2014 until now.

**University of Jijel:** from October 1992 to November 2014.

### **Teaching in undergraduate degree**

- Mechanic of the Continuum for **Mechanical Engineering** (from 2014 until now)
- Mechanical Vibration for **Mechanical Engineering** (from 2015 until now)
- Finite Element Method for **Mechanical Engineering** (from 2015 until now)
- Structural Analysis **Civil Engineering** (from 1995 to 2013)
- Press-stressed Concrete, **Civil Engineering** (from 1995 to 2013)
- Reinforced Concrete, **Civil Engineering** (from 1993 to 1995)
- Soil-Structure interaction, **Civil Engineering** (from 2011 to 2013)
- Strength of Materials, **Civil Engineering** (from 1992 to 1995)
- Applied Informatics for Engineering, **Mechanical Engineering** (from 2015 to now)

### **Teaching in graduate degree**

- Advanced of Continuum Mechanic
- Numerical Methods (Finite element method)
- Reinforced Concrete Structure modeling
- Structural Dynamics
- Theory of Plasticity
- Soil-Structure Interaction

### **Programming languages**

FORTRAN, MATLAB.

### **Developed codes:**

- Linear static analysis of structures and reinforced concrete structures.
- Nonlinear static analysis of structures and reinforced concrete structures.
- Linear dynamic analysis of structures and reinforced concrete structures.
- Nonlinear analysis of structures and reinforced concrete structures.
- Dynamic modeling of the soil structure interaction (in preparation)

**Used Software**

Abaqus, Ansys, Sap 2000.

**Publications and Scientific Activities**

**Books**

1. **Indeterminate Structure Analysis: Collection of resolved problems (in French)**  
EdiLivre, Paris, France, 320 p., ISBN 978-2-332-71778-8  
[https://www.edilivre.com/analyse-des-structures-hyperstatiques-recueil-d-ex-1e81e20d78.html#.V\\_Xsh\\_ITKM9](https://www.edilivre.com/analyse-des-structures-hyperstatiques-recueil-d-ex-1e81e20d78.html#.V_Xsh_ITKM9)



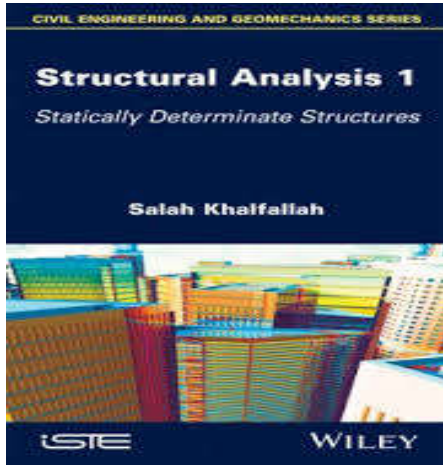
2. **Indeterminate Structure Analysis Methods (in French).**  
EdiLivre, Paris, France. 490 p. ISBN 9782332724861  
<http://www.edilivre.com/methodes-d-analyse-des-structures-hyperstatique-209f463706.html#.VL-PaCwYd1s>



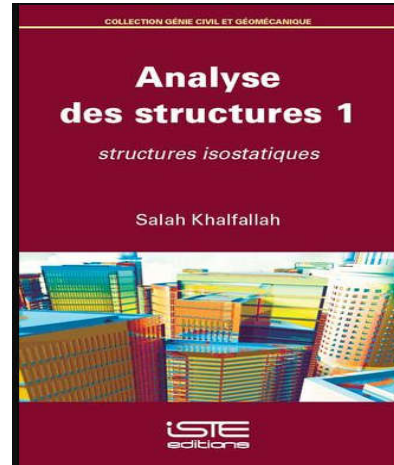
3. **Analysis of Statically Determinate Structures.**  
ISTE publishing in (French version), 284 p.

**Structural analysis 1:**

Statically determinate structures,



ISBN-10: 1786303388  
ISBN-13: 978-1786303387

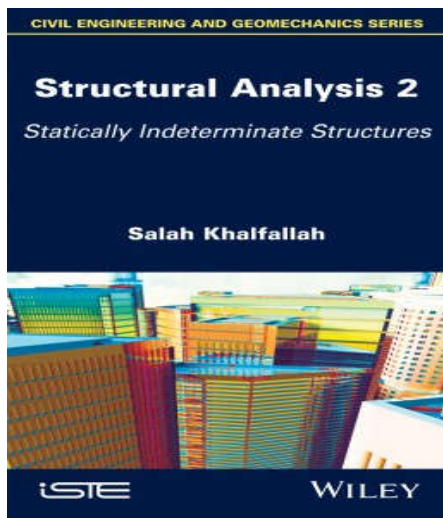


ISBN: 9781784054977 (papier)  
ISBN: 9781784064976 (ebook)

4. **Analysis of Statically Indeterminate Structures.**  
ISTE publishing in (French version), 294 p.

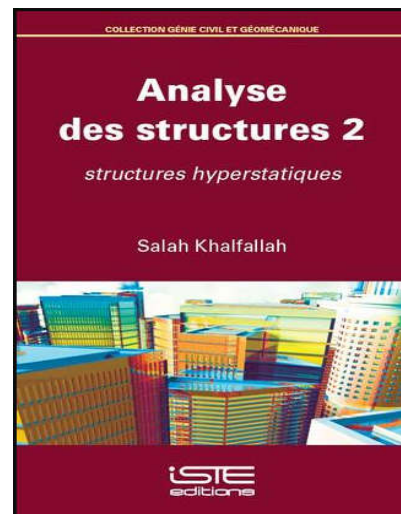
**Structural analysis 2:**

Analysis of statically indeterminate structures, 396 p.



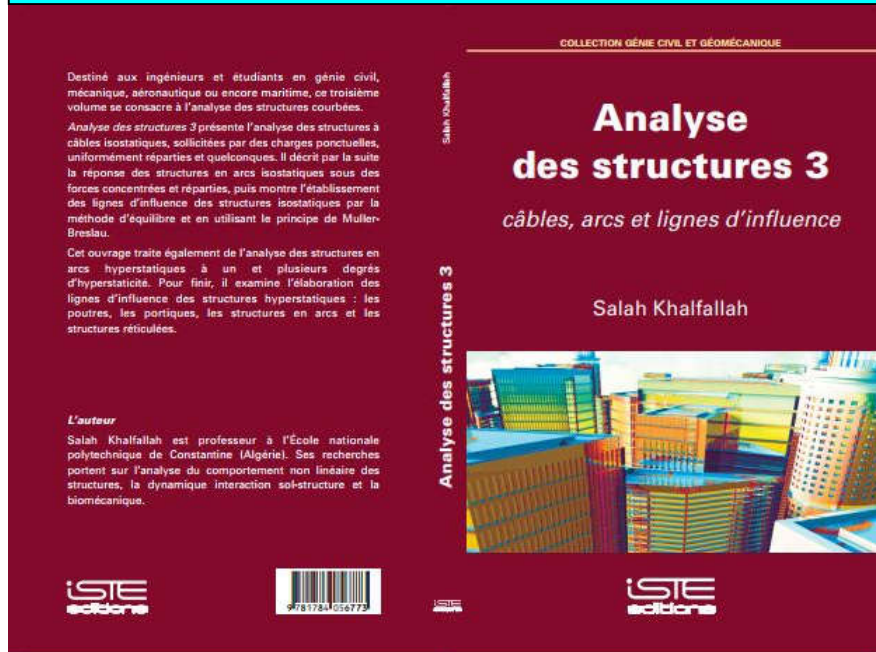
ISTE-Wiley (English version)

ISBN-10: 9781786303394  
ISBN-13: 978-1786303394



ISBN: 9781784054984 (papier)  
ISBN: 9781784064983 (ebook)

5. **Analysis of cables, arches and influence lines**



## 6. Continuum Mechanics for Engineers (in preparation)

### Publications in International Journals

- [1] HAMIPOUD S., **KHALFALLAH S.**, BILOTTA E. (?)  
Vibration of beams on variable Winkler elastic foundation by using the spectral element method.  
**Under review**
- [2] BOUDAA S., **KHALFALLAH S.**, BILOTTA E. (?)  
Influence of soil-structure interaction on the dynamic response of beam by the spectral element method.  
**Under review**
- [3] HAMIPOUD S., **KHALFALLAH S.**, BOUDAA S. (?)  
Vibration of Timoshenko beam-soil foundation interaction by using the spectral element method.  
**Under review.**
- [4] GUERDOUH D., **KHALFALLAH S. (2019)**  
Soil-Structure interaction Effects on the Seismic Performance of Frame Structures.  
Revista de la Construcción, Journal of Construction, Vol. 19(2): 349-363.  
<http://revistadelaconstruccion.uc.cl/index.php/rdlc/article/view/1607>
- [5] GUERDOUH D., **KHALFALLAH S. (2019)**  
Effects and behavior of soil-framed structure interaction under dynamic loading.  
**Accepted** in Gradevinar Journal.  
<http://www.casopis-gradjevinar.hr>
- [6] BOUDAA S., **KHALFALLAH S.**, HAMIPOUD S. (2019)  
Dynamic analysis of soil structure interaction by spectral element method.  
Innovative Infrastructure Solutions, 4 : 40.

<https://link.springer.com/article/10.1007/s41062-019-0227-y>

- [7] BOUROUAIAH W., **KHALFALLAH S.** (2019)  
Influence of soil properties on the dynamic response of structures.  
International Journal of Advanced Structural Engineering, Vol. 11(3): 309-319.  
<https://link.springer.com/article/10.1007/s40091-019-0232-6>
- [8] BOUROUAIAH W., **KHALFALLAH S.**, BOUDAA S. (2019)  
Soil non homogeneity and soil structure interaction effects on Euler-Bernoulli Beam vibration  
Structure and Building Journal, Vol. 176(7):  
<https://www.icevirtuallibrary.com/doi/abs/10.1680/jstbu.18.00091>
- [9] HAMIPOUD S., **KHALFALLAH S.** (2019)  
Vibration Analysis of a Beam on Elastic Foundation with Elastically Restrained Ends  
Using Spectral Element Method  
World Academy of Science, Engineering and Technology International Journal of Civil  
and Environmental Engineering Vol. 13(9): 600-604.
- [10] BOUDAA S., **KHALFALLAH S.**, Bilotta E. (2019)  
Static interaction analysis between beam and layered soil using a two-parameter elastic foundation  
International Journal of Advanced Structural Engineering, Vol. 11(1): 21-30.  
<https://link.springer.com/article/10.1007/s40091-019-0213-9>
- [11] HAMIPOUD S., **KHALFALLAH S.** (2018)  
Free-vibration of Timoshenko Beam using the spectral element method.  
International Journal for Engineering Modelling, Vol. 31(1-2), 2018, pp. 61-76.  
[http://gradst.unist.hr/Portals/9/docs/EM/EM-2018-NO\\_1-2/355.pdf](http://gradst.unist.hr/Portals/9/docs/EM/EM-2018-NO_1-2/355.pdf)
- [12] BOUROUAIAH W., **KHALFALLAH S.**, GUERDOUH D. (2017)  
Effect of soil mechanical properties on RC wall system responses.  
Technicki Glasnik Journal, Vol. 11(1-2), 2017, pp. 1-6.  
[http://hrcak.srce.hr/index.php?show=clanak&id\\_clanak\\_jezik=270882](http://hrcak.srce.hr/index.php?show=clanak&id_clanak_jezik=270882)
- [13] HAMIPOUD S., **KHALFALLAH S.** (2016)  
Free-vibration of Bernoulli-Euler Beam by the spectral element method.  
*Technical Journal*, Vol. 10 (3-4), 2016, pp. 106-112.  
[http://hrcak.srce.hr/index.php?show=clanak&id\\_clanak\\_jezik=253508](http://hrcak.srce.hr/index.php?show=clanak&id_clanak_jezik=253508)
- [14] **KHALFALLAH S.** (2015)  
Analytical approach of tension stiffening contribution of GFRP-members.  
Journal of Applied Science and Engineering, Vol. 18(1), 2015, pp. 1-8.  
[www2.tku.edu.tw/~tkjse/18-1/01-CE10201\\_907.pdf](http://www2.tku.edu.tw/~tkjse/18-1/01-CE10201_907.pdf)
- [15] **KHALFALLAH S.**, GUERDOUH D. (2014)  
Tension stiffening approach in concrete of tensioned members.  
*International Journal of advanced Structural Engineering*, Vol. 6:51, 2014.  
<http://link.springer.com/article/10.1007/s40091-014-0051-8>
- [16] **KALFALLAH S.** (2013)  
Tension stiffening model for nonlinear analysis of GFRP-RC members  
*IES Journal Part A: Civil & Structural Engineering*, Vol. 6 (3), 2013, pp. 269-277  
<http://www.tandfonline.com/doi/pdf/10.1080/19373260.2013.801329>

- [17] **KHALFALLAH S. (2011)**  
Explaining the Riddle of Effective Moment of Inertia Models for FRP Concrete Beams.  
*International Journal of Structural Engineering*, Vol. 2(1), 2011, pp. 23-34.  
<http://www.inderscienceonline.com/doi/abs/10.1504/IJSTRUCTE.2011.038067>
- [18] **KHALFALLAH S. (2009)**  
Tension stiffening model of RC beams based on fracture energy concept.  
*International Review of Mechanical Engineering*, 2009, vol. 3(5), 573-578.  
[http://www.praiseworthyprize.com/IREME-latest/IREME\\_vol\\_3\\_n\\_5.html](http://www.praiseworthyprize.com/IREME-latest/IREME_vol_3_n_5.html)
- [19] **KHALFALLAH S. (2009)**  
Modeling of bond in reinforced concrete structures.  
*Building research journal*, 2009, Vol. 57(1), pp. 45-54.  
[http://www.ustarch.sav.sk/ustarch/index.php?option=com\\_content&task=view&id=378&Itemid=32](http://www.ustarch.sav.sk/ustarch/index.php?option=com_content&task=view&id=378&Itemid=32)
- [20] **KHALFALLAH S. (2008)**  
Tension stiffening bond Modeling of Cracked Flexural Reinforced Concrete Beams.  
*Journal of Civil Engineering and Management*, 2008, Vol. 14(2). p. 131-137.  
<http://www.tandfonline.com/doi/abs/10.3846/1392-3730.2008.14.8>
- [21] **KHALFALLAH S. (2008)**  
Modeling of bond for pull-out tests.  
*Building research journal*, 2008, Vol. 56(1), pp. 37-48.  
[http://www.ustarch.sav.sk/ustarch/index.php?option=com\\_content&task=view&id=378&Itemid=32](http://www.ustarch.sav.sk/ustarch/index.php?option=com_content&task=view&id=378&Itemid=32)
- [22] **KHALFALLAH S., OUCHENANE M. (2008)**  
Prediction of bond between steel and concrete by numerical analysis.  
*Open Civil Engineering Journal*, 2008, Vol. 2, pp. 1-8.  
<https://benthamopen.com/contents/pdf/TOCIEJ/TOCIEJ-2-1.pdf>
- [23] **KHALFALLAH S., OUCHENANE M. (2007)**  
A numerical simulation of bond for pull-out tests- the direct problem.  
*Asian Journal of Civil Engineering*, 2007, Vol. 8(5), pp. 481-505.  
<http://ajce.bhrc.ac.ir/tabid/1529/agentType/View/PropertyID/6221/Default.aspx>
- [24] **KHALFALLAH S., BECHKET A. (2007)**  
FE Simulation of Shear Reinforced Concrete Beams.  
*Building Research Journal*, 2007, vol.57(3), pp. 133-147.  
[http://www.ustarch.sav.sk/ustarch/index.php?option=com\\_content&task=view&id=378&Itemid=32](http://www.ustarch.sav.sk/ustarch/index.php?option=com_content&task=view&id=378&Itemid=32)
- [25] **KHALFALLAH S. (2006)**  
Cracking analysis of RC tensioned members.  
*Structural Concrete, Official Journal of the FIB*, 2006, vol. 7(3), p. 111-115.  
<http://www.fib-international.org/structural-concrete-contents-for-volume-7-2006>
- [26] **KHALFALLAH S., HAMIMED S. (2005)**  
Bond-slip analysis of reinforced concrete members.  
*European Review of Civil Engineering*, 2005, Vol. 9(4), pp. 509-521.  
<http://www.tandfonline.com/doi/abs/10.1080/17747120.2005.9692767>



- [27] **KHALFALLAH S.**, CHARIF A., NAIMI M. (2004)  
Nonlinear analysis of reinforced concrete structures using a new constitutive model.  
European Review of Numerical Mechanics, 2004, Vol. 13 N° 8, pp. 841-856.  
<http://www.tandfonline.com/doi/abs/10.3166/reef.13.841-856>
- [28] **KHALFALLAH S.**, CHARIF A., GUENFOUD M. (2002)  
Nonlinear modeling of RC structure behavior.  
European Review of Civil Engineering, 2002, Vol.6, N° 7-8, pp. 1397-1414.  
<http://www.tandfonline.com/doi/abs/10.1080/12795119.2002.9692415>

### Publications in International Conferences and Proceedings

- [29] Hamioud S., **KHALFALLAH S.**  
Vibration Analysis of a Beam on Elastic Foundation with Elastically Restrained Ends Using Spectral Element Method.  
International conference in Canada
- [30] Boudaa S., **KHALFALLAH S.** (2019)  
Influence of soil-structure interaction on the behavior response of beam by the spectral element method, Structural Engineering and Concrete Technology, 19-21 April 2020, Lisbon, Portugal.
- [31] Hamioud S., **KHALFALLAH S.** (2019)  
Dynamics of beam-soil interaction by the spectral element method.  
International Conference on Structural and Civil Engineering, June, 6-7, 2019, Paris, France.
- [32] **KHALFALLAH S.** (2015)  
Effect of soil mechanical properties on RC wall system responses.  
5<sup>th</sup> Annual International Conference on Civil Engineering, Structural Engineering and Mechanics, 25-28 may 2015, Athens, Greece.  
<https://www.atiner.gr/2015/2015PRO-CIV.pdf>
- [33] **KHALFALLAH S.** (2014)  
Tension stiffening approach in concrete of tensioned members.  
4<sup>th</sup> Annual International Conference on Civil Engineering, Structural Engineering and Mechanics, 26-29 may 2014, Athens, Greece.  
<https://www.atiner.gr/abstracts/2014ABST-CIV.pdf>
- [34] **KHALFALLAH S.** (2012)  
Effective stiffness approach of FRP reinforced concrete beam. 15<sup>th</sup> European Conference on Composite materials, Italy, 24-28 June 2012.  
<http://www.escm.eu.org/eccm15/data/assets/1249.pdf>
- [35] **KHALFALLAH S.** (2012)  
Tension stiffening model for nonlinear analysis of reinforced concrete members.  
International Symposium on Composites and Aircraft Materials, 9-12 mai 2012, Fès, Maroc.  
<http://acma2012.esta.ac.ma/>
- [36] **KHALFALLAH S.** (2010)  
Effective moment of inertia problem of FRP- concrete Beams (in French).  
University meeting of Civil Engineering, France, pp. 1378-1387.  
[www.augc.asso.fr/](http://www.augc.asso.fr/)

- [37] **KHALFALLAH S.** (2010)  
Deflection Calculation based on modification of Gao equation of FRP reinforced concrete beams. International Symposium on Composites and Aircraft Materials, 12-14 mai 2010, Marrakech, Maroc  
<HTTP://WWW.ENIT.FR/ACMA2010/INSTRUCTIONS-FR.HTML>
- [38] **KHALFALLAH S.** (2009)  
Explaining the Riddle of effective moment of inertia models for FRP concrete beams.  
The first International Conference on Sustainable Built Environment Infrastructures in Developing Country, ENSET Oran, 12-14 October 2009, pp. 57-64.  
[http://www.enset-oran.dz/spip.php?page=album&id\\_article=202](http://www.enset-oran.dz/spip.php?page=album&id_article=202)
- [39] MERABET W., **KHALFALLAH S.** (2009)  
Beam modeling after cracking (in French).  
The first International Conference on Sustainable Built Environment Infrastructures in Developing Country, ENSET Oran, 12-14 October 2009, pp. 111-118.  
[http://www.enset-oran.dz/spip.php?page=album&id\\_article=202](http://www.enset-oran.dz/spip.php?page=album&id_article=202)
- [40] **KHALFALLAH S.** (2009)  
Tension stiffening model of RC beams based on the fracture energy concept.  
The international Conference of Structural Analysis of Advanced Materials, september 7-10, 2009, Tarbes, France.  
<http://www.enit.fr/ICSAAM2009/ICSAAM-PROGRAM.pdf>
- [41] MERABET W., **KHALFALLAH S.** (2008)  
Cracking behavior of reinforced concrete beams using finite element method. European Conference FEMS, 14-18 July 2008, Lausanne, Switzerland, pp. 175-184.  
[www.dgm.de/past/2008/junior-euromat/images/JE\\_Programm\\_2008.pdf](http://www.dgm.de/past/2008/junior-euromat/images/JE_Programm_2008.pdf)
- [42] OUCHENANE M., **KHALFALLAH S.** (2008)  
Steel-concrete interaction simulation: Anchorage length effect, bar diameter, and tensile of concrete. 6<sup>th</sup> International Conference of Material Sciences (ICMC\_6), 15-18 July 2008, Liban.  
[www.ul.edu.lb/csm/files/3.pdf](http://www.ul.edu.lb/csm/files/3.pdf)
- [43] **KHALFALLAH S.**, MERABET W. (2008)  
Tension Stiffening Model of RC beams based on fracture energy concept.  
6<sup>th</sup> International Conference of Material Sciences (ICMC\_6), 15-18 JULY, 2008, LIBAN.  
[www.ul.edu.lb/csm/files/3.pdf](http://www.ul.edu.lb/csm/files/3.pdf)
- [44] OUCHENANE M., **KHALFALLAH S.** (2007)  
Numerical simulation of bond, steel-concrete, Application: Pull-out tests.  
International Conference on metallurgy and Environment, CIME\_07, 23-25 april 2007, University of Annaba, Algeria.  
<http://www.andru.gov.dz/conf-inter.htm>
- [45] **KHALFALLAH S.**, OUCHENANE M. (2007)  
A numerical simulation of bond for pull-out tests – The direct problem.  
2<sup>nd</sup> Symposium on Connections between steel and concrete, Stuttgart, Germany, September 4<sup>th</sup>-7<sup>th</sup>, 2007, pp.849-858, ISBN: 978-3-89821-8.  
[www.iwb.uni-stuttgart.de/Symposium/download/Invitation\\_Program.pdf](http://www.iwb.uni-stuttgart.de/Symposium/download/Invitation_Program.pdf)
- [46] **KHALFALLAH S.**, ZENNIR A. (2005)  
Cracking analysis of reinforced concrete members.

33 Congrès International de génie civil, 4-5 Juin 2005, Toronto, Canada, pp. GC-281-1 -GC-281-11.

<http://www.CSCE2005.ca>

- [47] **KHALFALLAH S.**, CHARIF A. (2005)  
Contribution to the nonlinear analysis of RC structures.  
International Symposium International of Construction, 22-24 November 2005, University of Chlef, Algeria.
- [48] **KHALFALLAH S.**, CHARIF A., NAIMI M. (2003)  
Local and global behavior of reinforced concrete structures.  
First International Conference of Civil Engineering Science (ICCES1), 7-8 October 2003, Assiut, Egypt, pp. 592-603, ISSN 1687-1790.  
<http://www.aun.edu.eg/conferences/confeng/icces1.htm>
- [49] **KHALFALLAH S.**, CHARIF A., NAIMI M. (2003)  
Global Behavior of Reinforced Concrete Beams.  
Fourth International Conference on earthquake Resistant Engineering Structures ERES 2003. 22-24 September 2003, Ancona, Italy, pp. 322-332.  
ISBN: 1-85312-984-4  
<http://www.witpress.com/acatalog/9844.html>
- [50] **KHALFALLAH S.**, CHARIF A. (2001)  
2D modeling of elastoplastic of RC structures using finite element method (in French).  
International seminary on Numerical modeling of structures and geomaterials, 2001, University of Batna, Algeria, pp.124-133.

#### **Publications in National Journals**

- [51] GUERDOUH D., **KHALFALLAH S.**, BOUROUAIH W. (2018)  
Influence des propriétés du sol sur la réponse dynamique des portiques  
*Algerian & Equipment Journal*, Vol. 58, 2018, pp. 66-77.  
<http://www.entp.edu.dz/index.php/revue-algerie-equipement/le-nouveau-numero-de-la-revue>
- [52] HAMIPOUD S., **KHALFALLAH S.** (2017)  
Dynamic analysis of rods using the spectral element method.  
*Algerian & Equipment Journal*, Vol. 57, 2017, pp. 49-55.  
<http://www.entp.edu.dz/index.php/revue-algerie-equipement/le-nouveau-numero-de-la-revue>
- [53] **KHALFALLAH S.** (2010)  
Caliber of the bond in RC structures (in French).  
Campus Journal, Mouloud Mamaari University, Tizi Ouzou, Algerie, 2008, Vol. (10) . pp. 3-20  
<http://www.ummo.dz/spip.php?rubrique966>
- [54] **KHALFALLAH S.** (2010)  
Bond modeling in structures at service state (in French).  
Communication Science & Technology Journal, Vol. 8, pp. 41-50.  
[http://www.enset-oran.dz/IMG/file/communication\\_6.pdf](http://www.enset-oran.dz/IMG/file/communication_6.pdf)
- [55] **KHALFALLAH S.** (2010)  
Prediction of the inelastic response of RC walls (in French).  
Communication Science & Technology Journal, vol. 8, pp. 33-40.  
[http://www.enset-oran.dz/IMG/file/communication\\_5.pdf](http://www.enset-oran.dz/IMG/file/communication_5.pdf)

- [56] **KHALFALLAH S.**, BENOUATA S. (2009)  
Elastoplastic approach of annular structure behavior (in French).  
*Algeria & Equipements Journal*, N° 45(2), pp. 31-35.  
<http://www.entp.edu.dz/index.php/revue-algerie-equipement/collections-des-anciens-numeros/89-revue-45>
- [57] **KHALFALLAH S.**, CHARIF A. (2004)  
Modeling of the nonlinear behavior of RC structures.  
*Sciences & Technology Journal, University of Constantine*, N° 21, 2004, pp. 29-35.  
<http://revue.umc.edu.dz/index.php/b/issue/view/37/showToc>
- [58] **KHALFALLAH S.**, CHARIF A. (2004)  
Bi-dimensional behavior of structures under monotonic loading.  
*Algeria & Equipements Journal*, Vol. 37, 2004, pp. 18-23.  
<http://www.entp.edu.dz/index.php/revue-algerie-equipement/collections-des-anciens-numeros/83-revue-37>

### Publications in National Communications

- [59] Hamioud S., **KHALFALLAH S.**, (2018)  
Dynamic interaction between solid bodies,  
Journées Scientifiques sur les Sciences et l'Engineering, JSSE'18, Ecole Nationale Polytechnique de Constantine, 9-10 décembre 2018, Constantine, Algérie.
- [60] **KHALFALLAH S.** (2014)  
Nonlinear modeling of RC structure behavior integrating soil structure interaction.  
Scientific days, 13-14 may 2014, University of Jijel.
- [61] Guerdouh D., **KHALFALLAH S.** (2014)  
Dynamic behavior on nonlinear frames.  
Scientific days, 13-14 may 2014, University of Jijel.
- [62] Bourouaiah W., **KHALFALLAH S.** (2014)  
Interaction of soil-structure interaction on wall response: Linear and nonlinear analysis, Scientific days, 13-14 may 2014, University of Jijel.
- [63] **KHALFALLAH S.**, BOUZID M., REDJEL B. (2009)  
Prediction of the inelastic response of RC shear walls.  
Structural Mechanics JMS09, Soil and Structure Mechanics Laboratory, University of Constantine, 28 January 2009.
- [64] **KHALFALLAH S.** (2008)  
Tension stiffening model of FRP reinforced concrete beams.  
National Seminary of Civil Engineering SNGC08, University of Chlef, December, 15-16, 2008.
- [65] OUCHENANE M., **KHALFALLAH S.**, OUCHENANE K. (2008)  
Bond steel-concrete simulation and concrete behavior of pull out test.  
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#### **Directed PROJETS of RESEARCH**

1. **Numerical and kinematic modeling of biological organs**  
PRFU Project N° (submitted)  
Quality : Project manager  
Period : 1/1/2020 to 31/12/2023.
2. **Influence of the soil properties on the seismic response of structures (in French)**  
CNERPU Project N° **J0401720140060**  
Quality : Project manager  
Period : 1/1/2015 to 31/12/2018.
3. **Influence of superior modes of vibration on the dynamic response structures.**  
CNERPU Project N° **J0401720110010**  
Quality : Project manager  
Period : 1/1/2012 to 31/12/2015.
4. **Tridimensionnel simulation of nonlinear behavior of RC structures.**  
CNERPU Project N° **J0401720070005**  
Quality : Project manager  
Period : 1/1/2008 to 31/12/2011.
5. **Nonlinear behavior of RC structure: bidimensionnal modeling.**  
CNERPU Project N° **J1801/04/01/2005**  
Quality : Project manager  
Period : 1/1/2005 to 31/12/2007
6. **Optimization of local material in B.T.P projects.**  
CNERPU Project N° **J1801/04/01/1997**

Quality : Project member  
Period : 1/1/1997 to 31/12/1999.

**Directed Doctorate thesis**

1. **Mrs. BOUDAA Souad**, University of Constantine  
Soil-structure interaction analysis using spectral element method
2. **Mrs. BOUROUAIHA Widad**, University of Jijel (defence on December 4<sup>th</sup>, 2019).  
Influence of the soil nature on dynamic structure response
3. **Mrs. GUERDOUH Dhabia**, University of Bejaia.  
Influence of frame-soil interaction on seismic behavior of buildings: Linear and non linear studies.
4. **Miss. HAMILOUD Saida**, University of Jijel.  
Dynamic analysis of soil-structure interaction using the spectral element method.
5. **M. Abid Charef Okba**, Ecole Nationale Polytechnique de Constantine.  
Réduction passive des vibrations dans les systèmes mécaniques à l'aide des absorbeurs non linéaires.

**Directed Magister Thesis**

- 1- **M. BOURAOUI Ichème**, University of Skikda , (Defense 19/ 1/ 2012).  
Modeling the stability of slope with piles
- 2- **M. ZINE Adlène**, University of Jijel (**work not complete**).  
Contribution to wall behavior under seismic loading.
- 3- **Miss. BENOUATA Sihem**, Université de Jijel (Defense 23/ 6/ 2009).  
Plastic behavior of annular structures.
- 4- **M. BELKHALFA Abdeljallil**, University of Jijel, (Defense 7/7/2008).  
Analysis of limit load of elastic plates.
- 5- **Miss MERABET Widad**, University of Constantine, (Defense 11/02/2008).  
Modeling of the beam behavior after cracking "Tension stiffening effect".
- 6- **M. BECHKET Adel**, University of Jijel, (Defense 15/11/2007).  
Modeling of the longitudinally reinforced concrete shear beams.
- 7- **Miss OUCHENANT Meriem**, University of Jijel (Defense 08/07/2007).  
Bond simulation in reinforced concrete structures: Pull-out test.

**Supervisor of Master sciences and Engineer diplomas**

- Structural Analysis
- Matrix methods
- Applied dynamic methods for the behavior of walls
- Behavior of frames
- Dynamic analysis of frame structures and mixed structures.
- Programming of the structural analysis
- Structural analysis using the finite element method.

**Scientific Animations**

**Director** of the Laboratory of Mechanic and advanced Materials, Polytechnic National School of Constantine, Algeria.

**Director** of the Civil Engineering Laboratory (LGCE), University of Jijel, Algeria

**Responsible** of the Doctorate formation, Civil Engineering Department, University of Jijel.

**Responsible** of the Civil Engineering option, University of Jijel.

**Member** of the preparation and correction of the entrance examination for the first year of the Doctoral school, University of Skikda (October 2008).

**Expert** for the empowerment of graduate level courses and options and Doctoral schools for the academic year 2008-2009.

**Member** of preparation and correction of the entrance examination to the first year of the Doctoral school, University of Skikda (October 2007).

**Member** of the pedagogical committee of the Doctoral school, option: Geotechnics organized by the University of Skikda for the academic year 2007-2008.

**Member** of the organizing committee of scientific days of civil engineering, 16-17 April 2006, University of Jijel.

**President** of the Magister Pedagogical Committee, Academic Year 2004.

**Expert** for the enabling of courses and graduate degree, options in civil engineering. Academic Year 2004-2005.

**Member** of the Scientific Council of the Faculty of Science and Technology. Since 1997- 2013.

**President** of the scientific committee of the department: Mandate of the 2007-2009. Terms for 2003-2006.

**Member** of the commission for the preparation of the subjects of the regional competition for training abroad: Year 2005-2006.

### Fields of Competency

#### - **Axis of research in computational tools**

- Numerical methods
- Finite element method
- Spectral element method

#### - **First axis of research**

- Automatic analysis of structures
- Modeling of rheology of materials: plasticity, cracking, damage, ...
- Modeling of cracked RC structures: Tension stiffening effect.
- Modeling of bond and interfaces.
- Modeling of the nonlinear of RC structures
- Numerical modeling and resolution of nonlinear equations.

#### - **Second Axis of research**

- Dynamics of the soil-structure interaction
- Soil and structure dynamics
- Seismic Vulnerability of structures and soils

#### - **Third Axis of research**

- Numerical modeling in Biomechanics.
- Passive control of vibrations in mechanical systems using nonlinear absorbers.
- Minimizing and reducing vibrations of mechanical systems.