

## Curriculum Vitae

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### **Personal Information**

**First Name :** Mehran

**Last Name :** Roohnia

**Academic Grade:** Full Professor

**Place of Residence :** Karaj, Mehrshahr, Iran

**Nationality :** Iranian

**Birth :** Tehran, 1971

**Marital Status :** Married

**Children:** 1

**Nationality:** Iranian

**Capability:** Acoustics and Vibration, Nondestructive testing, Timber Engineering, Tree Risk Assessment, Solid Mechanics (Wood)



**Current Employer:** Islamic Azad University, Karaj branch – Iran.

- See the US News Academic Ranking for the 2<sup>nd</sup> best University in Iran (2019): <https://www.usnews.com/education/best-global-universities/islamic-azad-university-528829>

### **Educational Background**

- **PhD:** 2000 – 2005, Wood Science and Timber Engineering, Wood Mechanics and Acoustics, Islamic Azad University, Science and Research branch, Tehran, Iran,

#### **Supervisory Team:**

- Dr. Joseph Gril, Research Director in CNRS (equal to Full Professor), [University of Montpellier II, France](#)
- Dr. Kazem Doosthosseini, Full Professor, (PhD from Laval University, Canada)
- Dr. Habibolla Khademi Eslam, Associate Professor, (PhD obtained from [University of Montpellier II, France](#))

**Ph.D Dissertation :** Study on Some Influencing Factors on Acoustic Coefficient and Damping in Wood Using Non Destructive Tests

- **MSc :** 1996-1998, Wood & Paper Science and Technology, Gorgan University of Agriculture and Natural Resources,

**MSc Thesis:** Study on Pulping of Rinds from Sunflower Seeds by Soda Process.

#### **Supervisory Team:**

- Dr. Seyedziaeldin Hosseini, Full professor (PhD from University of Ljubljana, Slovenia)
- Dr. Ahmad Jahan-latibari, Full Professor (PhD from University of G. Washinton, USA)

- **BSc :** 1990 – 1995, Wood & Paper Science and Technology, University of Tehran,

**Research Interest**

- Non-destructive evaluation of Orthotropic Materials
  - Developing new inexpensive NDT devices and methodologies.
  - Identification of Internal Defects in materials via inexpensive methodologies.
  - Biomechanical analyses and residual strength evaluation.
- Acoustics of wood
- Cooperation with colleagues in all approaches in material science

**Hobbies**

- **Research**
  - Taking time in research fields and laboratories
  - Writing scientific manuscripts
  
- **Swimming**

**Professional Experiences****Teaching at Universities :**

- 2015 – On going. Full Professor, Islamic Azad University, Karaj Branch, Iran.
- 2011 – 2015. Associate Professor, Islamic Azad University, Karaj Branch, Iran.
- 2006 - 2011. Assistant Professor, Islamic Azad University, Karaj Branch, Iran
- 2002 – 2006. Faculty member (Instructor), Islamic Azad University, Karaj Branch, Iran
- 2001 - 2002. Invited Lecturer, Teacher Training University of Mirza-Koochak - Someae Sara
- 2000 - 2001. Invited Lecturer, Islamic Azad University, Noshahr and Chalus Branch.

**Official Academic Positions/Responsibilities:**

- 2014 – 2016. Vice-President for Economic Planning, Islamic Azad University, Karaj Branch, Iran
- 2014 – 2016. Director for International affairs, Islamic Azad University, Karaj Branch, Iran
- 2008 – 2012, Head of Research Council – Islamic Azad University, 12<sup>th</sup> District, Iran

- 2007 - 2010 - Vice-President for Research – Islamic Azad University, Karaj Branch, Iran
- 2006 - 2007. Director for Research – Islamic Azad University, Karaj Branch, Iran
- 2005 International Affairs Secretary in "The 1st International Congress on Biological Science" Islamic Azad University, Karaj-Iran

#### **Scientific Stays at Other Institutions:**

- 2012 – 2013, Sabbatical Invited Researcher, Production et valorisation des bois tropicaux, CIRAD, Montpellier, France – for 9 Months
- 2004 – 2004, Laboratory of Mechanics and Civil Engineering (LMGC) University of Montpellier II – France – for two Months
- 2004 – 2004, Valorization and Production of Tropical Woods, Forestry Department, CIRAD, Montpellier, France – For two Months

#### **Collaboration with Industry/ Acquiring research funding**

- 2010 – 2014, Chairman, NDTiranian knowledge-based company, Tehran, Iran
- 2013 – 2014, Research & Development advisor, Rabin Conformity Assessors Company, Tehran, Iran
- 2016 – 2017, Standing Tree Tomography, Research Project No. 89/5/139283 Date: 2015-2016, Employer: Karaj City Municipality. 50,000 US\$
- **2017 – Ongoing**, Managing Director, Darkoob NonDestructive Testers (D-NDT) Knowledge-based Enterprise, Installed at Islamic Azad University Incubator of Technologic Units, Karaj, Iran. **Certified by Presidency of Islamic Republic of Iran**

#### **Membership in International Academic Societies**

- 2003 - 2010. Member of ISIRI/TC6 Technical Committee, parallel to International ISO/TC6 Technical Committee.

#### **Certificates of Training**

- 2012. Strength Grading of Lumber using Vibration Techniques and Sonic Log Grading. University of West Hungary, Sopron - Hungary
- 2012. Instrumented Tree Stability Evaluation using Acoustic Tomography including Bio-Mechanical Evaluation. FAKOPP Enterprise Bt., Sopron – Hungary

#### **Innovations and/or Localization of Technology**

- Roohnia, M., (2007). NDT-lab®; Iranian System to Evaluate the Mechanical Properties of Wood by Vibration– Registered Patent - Iranian Industrial Ownership Right - Reg. No. 44032, Certified By: Presidency of the Islamic Republic of Iran – Vice-Presidency of Science and Technology
- Roohnia, M. and Zarrinmehr, J., (2017). D-NDT® Sonic Timber-Grader. Certified By: Presidency of the Islamic Republic of Iran – Vice-Presidency of Science and Technology
- Roohnia, M., Behnam, B. and Zarrinmehr, J., (2017). TOMOTREE® Tree

Acoustic Tomography Device. Certified By: Presidency of the Islamic Republic of Iran – Vice-Presidency of Science and Technology

### **Courses Taught ( BSc, MSc, PhD )**

- Strength of Materials (BSc)
- Thermodynamics (BSc)
- Mechanics of wood (BSc)
- Mechanical Vibration (BSc)
- Non Destructive Tests (MSc)
- Growth Stress and Strain in Wood (PhD)
- Mechanics of wood and Composites (PhD)
- Ranking of World Universities (Lateral Workshops)

### **Supervision of Doctoral or Master studies**

- 2019-Ongoing. Supervisor for PhD thesis at Islamic Azad University, Iran; In-situ Timber Assessment for Residual Density and Mechanical Strength, PhD Candidate: Ebrahim Khosravi
- 2017-2018. Supervisor for Master of Science at Islamic Azad University, Iran; Vibration-based non-destructive testing to evaluate flexural strength, Master student: Shahrzad Omrani-Ghahjavarestani
- 2017-2018. Supervisor for Master of Science at Islamic Azad University, Iran; Reviewing the density of different Iranian wood species through thermography nondestructive test, Master student: Parastoo Majdabadifarhani
- 2016-2017. Supervisor for Master of Science at Islamic Azad University, Iran; Comparing the Visual versus Machine Timber Grading; ISO9709 versus ISO13912, Master student: Samineh Almasian
- 2016-2017. Supervisor for Master of Science at Islamic Azad University, Iran; Effect of extractives from mulberry (*Morus alba*) wood on its acoustical properties, Master student: Maryam Farshijalali
- 2015-2016. Supervisor for Master of Science at Islamic Azad University, Iran; Shear strength evaluation in particle board through vibration based NDT, Master student: Shadabeh Fathi
- 2014 – 2015. Supervisor for Master of Science at Islamic Azad University, Iran; Nondestructive evaluation of Cardboard sheets, Master student: Masoumeh Chinichian
- 2014 – 2015. Advisor for Master of Science at Islamic Azad University, Iran; Assessing the physical and mechanical characteristics of cellulose fiber/polypropylene composite reinforced by carbon nanotubes, Master student: Roozbeh Abidnejad
- 2014 – 2015. Advisor for Master of Science at Islamic Azad University, Iran; On the Acoustic properties of WPC based on of polyethylene- & lignocellulosic materials of Mulberry tree branches with NDT testing, Master student: Maryam Einali
- 2014 – 2015. Supervisor for Master of Science at Islamic Azad University, Iran; Investigations on Elastic Properties of Steamed Finger and scarf joints, using Nondestructive tests, Master student: Shamin Shammaiirani
- 2013 – 2014. Supervisor for Master of Science at Islamic Azad University, Iran;

Potential of Non-destructive tests in strength characteristic evaluations for Medium Density Fiberboard, Master student: Parinaz Mirbolouk

- 2013 – 2014. Supervisor for Master of Science at Islamic Azad University, Iran; Non-destructive evaluation of steel welded connections compared to wood joints free vibration method, Master student: Hamed Jalilikordkandi
- 2013 – 2014. Supervisor for Master of Science at Islamic Azad University, Iran; Bending strength and internal bond, compared to the vibrational properties of particleboard, Master student: Ali Familboraghi
- 2013 – 2014. Advisor for Master of Science at Islamic Azad University, Iran; Ranking of the effecting factors on competitiveness of home wood furniture industry using multi-criteria decision techniques, Master student: Elham Goudarzi
- 2013 – 2014. Advisor for Master of Science at Islamic Azad University, Iran; Hydro -thermal treatment of Elm wood to improve its acoustical properties, Master student: Said Zarei
- 2013 – 2014. Advisor for Master of Science at Islamic Azad University, Iran; Evaluating the flexural characteristics of the laminated beams, varying the length and the layout, Master student: Homeira Asgari
- 2013 – 2014. Advisor for Master of Science at Gorgan University of Agriculture and Natural Resources, Iran; Investigation on dynamic and acoustical properties of wood modified with linear chain carboxylic acid anhydrides, Master student: Leila Hosseinnejad
- 2013 – 2014. Supervisor for Master of Science at Islamic Azad University, Iran; Evaluation of extractives removal on acoustical properties of maple, Master student: Morteza Mollaeikandelousi
- 2012 – 2013. Supervisor for Master of Science at Islamic Azad University, Iran; “Morus alba” impregnated wood acoustical properties using extractives from “Albizia Julibrissin”, Master Student: Amir Ghajar
- 2012 – 2013. Advisor for Master of Science at Islamic Azad University, Iran; Topo-chemical effect of the fiber surfaces on mechanical properties of wood fiber/polyethylene composites, Master student: Pouria Rezainiaraki
- 2012 – 2013. Advisor for Master of Science at Islamic Azad University, Iran; Effect of Acetylation process on Physical and mechanical Properties of Beech wood, Master student: Mojtaba Esfandiari
- 2012 – 2013. Supervisor for Master of Science at Islamic Azad University, Iran; Investigation of delamination and adhesive coverage rate on elastic properties of layered products made from poplar wood by free vibration method, Master Student: Ehsan Hajirafieha
- 2009 – 2013. Advisor for PhD thesis at Islamic Azad University, Iran; Evaluating the properties of finger-jointed and scarf-jointed oak wood using nondestructive test and static method, PhD Candidate: Ali Yavari
- 2011 – 2012. Advisor for Master of Science at Islamic Azad University, Iran; Effect of Extractives removing on Acoustical Properties of Locust(Robinia Pseudo acacia), Master student: Mehran Alizadeh
- 2011 – 2012. Advisor for Master of Science at Islamic Azad University, Iran; Comparing the surfactants and soaps efficiencies on deinking of the waste papers, Master student: Reza Jamali
- 2011 – 2012. Advisor for Master of Science at Islamic Azad University, Iran; The effect of Isocyanate and maleic anhydride coupling agents on physical and

mechanical characteristics of poplar sawdust/ HDPE, Master student: Abdollah Shakeri

- 2011 – 2012. Supervisor for Master of Science at Islamic Azad University, Iran; Acoustical timber Classification by traditional and scientific signal processing analyses, Master student: Maryam Ghorbani
- 2011 – 2012. Supervisor for Master of Science at Islamic Azad University, Iran; Effect of Removing Extractives on Acoustical Properties of Albizia Wood Using Forced Flexural Vibration, Master student: Farzin Farvardin
- 2011 – 2012. Supervisor for Master of Science at Islamic Azad University, Iran; Effect of Extractive Removal on Acoustical Properties of Elm (*Ulmus carpinifolia*) Wood in Forced Flexural Vibration Approach, Master Student: Ali Safari
- 2008 – 2011. Advisor for PhD thesis at Islamic Azad University, Iran; Study on some affecting factors of Acoustical and vibration behavior of ash and maple wood using NDT methods, PhD Candidate: Ali Abdollahian Sohi
- 2010 – 2011. Supervisor for Master of Science at Islamic Azad University, Iran; Non-destructive Evaluation of Mechanical Properties in Particleboard Using Free Vibration of Plates, Master Student: Mohammadreza Ghaznavi
- 2010- 2011. Supervisor for Master of Science at Islamic Azad University, Iran; Nondestructive Evaluation of Scarf Joint and Finger Joint in Beech Wood using Free Vibration on free-free bars, Master Student: Mostafa Kohantorabi
- 2010 – 2011. Supervisor for Master of Science at Islamic Azad University, Iran; Nondestructive testing of fixed-fixed beams in flexural vibration, Master Student: Abdolsaber Yaghmaeipour
- 2010 – 2011. Supervisor for Master of Science at Islamic Azad University, Iran; Effects of Lacquer and Coating on Acoustical Properties of Wood, Master Student: Ahmad Rostamisani
- 2009 – 2010. Supervisor for Master of Science at Islamic Azad University, Iran; Damping and the extractive content in *Morus alba* and *Juglans regia*, Master Student: Fariborz Hashemidizaji
- 2009 – 2010. Supervisor for Master of Science at Islamic Azad University, Iran; Designing a System to Evaluate the Modulus of Elasticity of Wood Using Free Vibration on a Cantilever Beam, Master Student: Pouria Shafiee
- 2009-2010. Supervisor for Master of Science at Islamic Azad University, Iran; Young and Shear moduli, In Static and Dynamic Standard approach, Master Student: Seyedehmasoumeh Hashemitabavandani
- 2008 – 2010. Supervisor for Master of Science at Islamic Azad University, Iran; Evaluating the mechanical characteristics of particle board and possibility of predicting the thickness cracks in products by the dynamic tests, Master Student: Iraj Karkhi
- 2007 – 2008. Supervisor for Master of Science at Islamic Azad University, Iran; Study on Some Defects in Wood Using The Vibration Analyses, Master Student: Ali Yavari

## **Publications**

### **Journals:**

#### **2004**

1. **Roohnia, Mehran.** Jahan-Latibari, A. Hosseini, S.Z. 2004 - Characteristics

of paper from rinds of sun flower seeds, *Iranian Journal of Wood and Paper Science*, Research Institute of Forests and Rangelands, Vol.18-2. – In Persian

#### 2006

2. **Roohnia, Mehran.** Doost-Hosseini, K. Khademi-Eslam, H. Gril, J. Bremaud, I. 2006, Study on Mechanical Properties of Wood Using NDT Methods. *Iranian Journal of Natural Resources*, Issue 59, No. 4 – In Persian

#### 2007

3. **Roohnia, Mehran.** Tajdini, Ajang. 2007, Study on the Possibility of Mechanical Measurements on Wood Using Free Vibration Method in comparison with the Static and Forced Vibration Methods. *Journal of Agriculture science*. Islamic Azad University, Science and Research Branch. 13(4):1017-1027 – In Persian
4. Jahan-Latibari, Ahmad. **Roohnia, Mehran.** Shokoei, Mojgan. 2007, Pulping Characteristics of Cotton Stalks Grown in Iran, *Journal of Applied Chemical Research*. 1(3):40-45

#### 2008

5. Jahan-Latibari, Ahmad. **Roohnia, Mehran.** Tajdini, Ajang. Darvishghadema, Farzad. Moradback, Amin. 2008, Feasibility of Utilizing Corn Stalk Residues in Chemi- Mechanical Pulping (CMP) and Papermaking, *Journal of Applied Chemical Research*. 6:34-44
6. Tajdini, Ajang. **Roohnia, Mehran.** 2008, Investigation and Prediction on Fluting Paper Supply & Demand in Iran, *Iranian Journal of Wood and Paper Science Research*. 23(2):123-135 – In Persian
7. Tajdini, Ajang. **Roohnia, Mehran.** Darvishghadema, Farzad. Moradback, Amin. 2008, The Analysis of Structure and Prediction of the Amount on Consumption of Fine Papers (Printing and Writing Papers and Newsprint) in Iran, *Journal of Science and Techniques in Natural Resources*. 3(3):27-42 – In Persian

#### 2009

8. Attarod, Pedram. Bayramzadeh, Vilma. Tajdini, Ajang. and **Roohnia, Mehran.** 2009, Annual Trends in Evapotranspiration from Major Vegetations of Thailand, *American Journal of Plant Physiology*. 4(3):100-108
9. Alavi-tabar, Seyed-ehsan. **Roohnia, Mehran.** Tajdini, Ajang. 2009, **Investigation on Quality and Damping in Iranian Beech Timbers**, *Journal of Science and Techniques in Natural Resources*. 4(2):59-68 – In Persian
10. Ahmadi, Abbas. **Roohnia, Mehran.** javadi, M. Mihandoust, F. Barghi, L. 2009, Synthesis with Improved Yield and Purity of a 1, 3, 5- Triazine Derivative using Polyethylenglycol Ether as the Catalyst, *Journal of Applied Chemical Research*. 8:39-42
11. Bayramzadeh, Vilma. Attarod, Pedram. Shirvani, Anoushirvan. Heshmatolvaezin S. M. **Roohnia, Mehran.** Tajdini, Ajang. 2009, Vessel Element length Related to the Physiological Traits of Leaves in *Fagus crenata* Seedlings Originated from Different Provenances, *Research Journal of Environmental Sciences*. 3(4):461-465

## 2010

12. **Roohnia, Mehran.** Yavari, Ali. Tajdini, Ajang. 2010, Elastic Parameters of Poplar Wood with End-Cracks. *Annals of Forest Science*, 67:409p1-6
13. **Roohnia, Mehran.** Behnam, Behzad. Hossein, Mohammad-ali. Alavi-tabar, Seyed-ehsan. Tajdini, Ajang. Manouchehri, Negin. 2010, Evaluating the Dynamic Modulus of Elasticity of Arizona Cypress Wood Using Iranian Forced Vibration System, *Journal of Science and Techniques in Natural Resources*. 5(2):61-73 – In Persian
14. Tajdini Ajang, Tavakkoli Amir, **Roohnia Mehran**, Jahanlatibari Ahmad. 2010, Factors Influencing Corrugated Board supply and Demand in Iran: A Systematic Approach, *Journal of Science and Techniques in Natural Resources*, 5(3):31-45 – In Persian
15. Biglari Mohsen, Tajdini Ajang, **Roohnia Mehran**, Borimnejad Vali. 2010, Estimation of Demand and Supply function of Writing & Printing Paper in Iran, *Journal of Science and Techniques in Natural Resources*, 5(1):39-53 – In Persian
16. Jahanlatibari Ahmad, **Mehran Roohnia**. 2010, Potential of utilization of the residues from poplar plantation for particleboard production in Iran, *Journal of Forestry Research*. 21(4):503-508

## 2011

17. Hossein Mohammadali, Shahverdi Mahdi, **Roohnia Mehran**. 2011, The effect of wood knot as a defect on modulus of elasticity (MOE) and damping correlation, *Not Sci Biol*. 3(3):145-149
18. Kademi-Eslam Habibolla, Hemmasi Amirhooman, Abdollahiansohi Amirmohammad, **Roohnia Mehran**, Talaiepour Mohammad. 2011, Nondestructive evaluation of the effect of hole diameter on Young's modulus of wood Using Flexural vibration, *World Applied Sciences Journal*. 13(1):66-72
19. **Roohnia Mehran**, Hashemitabavandani Seyedehmasoumeh, Shafiee Pourya, Tajdini Ajang. 2011, Damping factor of Pinus silvestris timbers in longitudinal, transverse and torsional free vibrations, *Journal of Science and Techniques in Natural Resources*. 5(4):19-30 – In Persian
20. Tajdini Ajang, Mofrad Hamed, Jahanlatibari Ahmad, **Mehran Roohnia**. 2011, Analysis of wood-based panels import to Iran: Simultaneous equations model approach, *African Journal of Business Management*. 5(34), 13169-13175
21. **Roohnia, Mehran**, Tajdini, Ajang, Manouchehri, Negin. 2011, Assessing wood in sound boards considering the ratio of acoustical anisotropy, *NDT&E International*, 44:13-20
22. **Roohnia Mehran**, Hossein Mohammadali, Alavitabar Seyedehsan, Jahanlatibari Ahmad, Manouchehri Negin. 2011, Acoustic properties in Arizona cypress logs: a tool to select wood for sounding board, *BioResources*. 6(1):386-399
23. **Roohnia Mehran**, Hashemidizaji Seyedfariborz, Brancheriau Loic, Tajdini Ajang, Hemmasi Amirhooman, Manouchehri Negin. 2011, Effect of soaking



- process in water on the acoustical quality of wood for traditional musical instruments, *BioResources*. 6(2):2055-2065
24. Abdolahiansohi Amirmohammad, Khademieslam Habibolla, Hemmasi Amirhooman, **Roohnia Mehran**, Talaiepour Mohammad. 2011, Nondestructive detection of the effect of drilling on acoustic performance of wood, *BioResources*. 6(3):2632-2646
25. **Roohnia Mehran**, Alavitabar Seyedehsan, Hossein Mohammadali, Brancheriau Loic, Tajdini Ajang. 2011, Dynamic modulus of elasticity of drilled wooden beams, *Nondestructive Testing and Evaluation*, 26(2):141-153
26. **Roohnia Mehran**, Manouchehri Negin, Tajdini Ajang, Yaghmaeipour Abdolsaber, Bayramzadeh Vilma. 2011, Modal frequencies to estimate the defect position in a flexural wooden beam, *BioResources*. 6(4):3676-3686
27. Tajdini Ajang, Tavakkoli Amir, Jahanlatibari Ahmad, **Roohnia Mehran**, Hajimirzatayeb Alireza. 2011, Application of simultaneous equations model to estimate particleboard demand and supply, *BioResources*. 6(3):3199-3209
28. Tavakkoli Ali, Tajdini Ajang, **Roohnia Mehran**, Jahanlatibari Ahmad. 2011, Simultaneous estimation of demand and supply functions & production and consumption projection of corrugated board in Iran, *Iranian Journal of Wood and Paper Science Research*. 26(2):256-270 – In Persian

## 2012

29. Eskandarijam Jafar, Pirayeshfar Amirsoheil, Jalili Mohammadmahdi, Mousavi Setedyahya, **Roohnia Mehran**. 2012, Designing and manufacturing of polyester composites reinforced with natural and synthetic fibers as an alternative for the wood in music instruments, *Iranian Journal of Wood and Paper Science Research*. 26(4):732-756
30. Tajdini Ajang, Tavakkoli Amir, Jahanlatibari Ahmad, **Roohnia Mehran**. 2012, The factors influencing corrugated board supply and demand in Iran: Simultaneous equations models, *African Journal of Business Management*. 6(1), Available online at <http://www.academicjournals.org/AJBM>
31. **Roohnia Mehran**, Kohantorabi Mostafa, Jahanlatibari Ahmad, Tajdini Ajang, Ghaznavi Mohammadreza. 2012, Nondestructive assessment of glued joints in timber applying vibration-based methods, *European Journal of Wood and Wood Products*. 70(6):791-799
32. Jahanlatibari Ahmad, Ghasebinasab Hana, **Roohnia Mehran**, Kargarfard Abolfazl. 2012, The effect of fiber moisture and drying temperature on hardwood fiber physical chemistry and strength of medium density fiberboard, *Lignocellulose*. 1(1):3-12
33. **Roohnia Mehran**, Tajdini Ajang, Ghaznavi Mohammadreza, Bayramzadeh Vilma. 2012, Specific dynamic shear modulus of drilled beech wood, *Lignocellulose*. 1(2): 100-107
34. Kohantorabi Mostafa, Ghaznavi Mohammadreza, **Roohnia Mehran**, Tajdini Ajang, Kazemi Najafi Saeed. 2012, Effect of joint type on acoustical properties in jointed beams, *Journal of Science and Techniques in Natural Resources*. 6(4):117-128 – In Persian
35. Yaghmaeipour Abdolsaber, **Roohnia Mehran**. 2012, Investigation of

acoustical properties in wood using fixed-fixed flexural vibration testing, *Journal of Science and Techniques in Natural Resources*. 7(3):91-99 – In Persian

36. Safdari Vahidreza, Shabanirad Behzad, Hosseinihashemi seyedkhalil, **Roohnia Mehran**, Bayramzadeh Vilma. 2012, The impact of air pollution on cross section anatomical characteristics of *Pinus eldarica* wood. *Iranian Journal of Wood and Paper Science Research*. 27(1): 129 – 142 – In Persian

### 2013

37. **Roohnia Mehran**, Yaghmaeipour Abdolsaber, Kubojima Yoshitaka, Tajdini Ajang. 2013, Free vibration of both-end clamped wooden beams: is it potentially applicable as an in-situ assessment method?, *Turkish Journal of Agriculture and Forestry*. 37(1): 121-125
38. Tajdini Ajang, Ghajebeigloo Jafar and **Roohnia Mehran**. 2013, Veneer supply and demand estimation using simultaneous equations model, *Journal of Business and Industrial Marketing*. 28(7):547-553
39. Shakeri Abdollah, Safdari Vahidreza, **Roohnia Mehran**, Noorbakhsh Amir. 2013, Simultaneous investigation of HMDI & MAPE coupling agents on mechanical properties of wood flour-HDPE composite, *Iranian Journal of Wood and Paper Science Research*. 28(2):24-34 – In Persian
40. Ghaznavi Mohamadreza, **Roohnia Mehran**, Yaghmaeipour Abdolsaber. 2013, Plate vibration in Particle board to evaluate some of its acoustical properties, *Iranian Journal of Wood and Paper Science Research*. 28(1):89-96 – In Persian
41. Kohantorabi Mostafa, **Roohnia Mehran**. 2013, Detection of defects in joints using the variations in dynamic shear modulus and correlation coefficient factor in beech wood, *Iranian Journal of Wood and Paper Science Research*. 28(2):238-251 – In Persian
42. Mollahassani Amir, Tajdini Ajang, Tavakkoli Amir, **Roohnia Mehran**. 2013, Investigation the causal relation of factors influencing on demand for lumber imports in Iran, *Iranian Journal of Wood and Paper Science Research*. 28(1):134-152 – In Persian
43. Ghaznavi MR, Rostamisani A, **Roohnia M**, Jahanlatibari A, Yaghmaeipour AS. 2013, Traditional varnishes and acoustical properties of wooden soundboards, *Science International*, 1(12):401-407– In Persian
44. Mollahassani A. Tajdini A. **Roohnia M**. 2013. Investigation the factors influencing on demand for lumber imports in Iran, *Iranian J Wood & Paper Industry*, 4(1): 101-116– In Persian
45. Tajdini A. Taghaddosi A. Pourmousa Sh. Jahanlatibari A. Safdari VR. **Roohnia M**. 2013, Study of the effective indices on wooden furniture imports in Iran, *Iranian Journal of Wood and Paper Science Research*, 28(2): 205-223– In Persian

### 2014

46. Hemmasi Amirhooman, Khademi-Eslam Habibolla, **Roohnia Mehran**, Bazyar Behzad, Yavari Ali. 2014, Elastic Properties of Oak Wood Finger Joints with Polyvinyl Acetate and Isocyanate Adhesives, *BioResources*. 9(1):

47. **Roohnia Mehran**. 2014, An estimation of dynamic modulus of elasticity in cantilever flexural timber beams, *DRVNA Industrija*. 65(1): 3-10
48. **Roohnia Mehran**, Tajdini Ajang. 2014, Identification of the severity and position of a single defect in a wooden beam, *BioResources*, 9(2):3428-3438
49. Rezaeiniaraki P, Jahanlatibari A, **Roohnia M**, Tajdini A. 2014, The influence of fiber lignin content on mechanical properties of wood fiber-polypropylene composites, *Iranian Journal of wood and paper research*, 29(1):1-11
50. **Roohnia M**, Hemmasi AH, Yavari A, Khademieslam H, Bazyar B. 2014, Modulus of elasticity in scarf jointed wooden beams: a case study with polyvinyl acetate and Isocyanate adhesives, *Journal of Wood Science*, 60(5): 321-326
51. Ghasemi H, Jahanlatibari A, **Roohnia M**, and Kohantorabi M. 2014, Investigating the effect of canola particles on acoustic properties of particleboard, *Iranian Journal of Wood and Paper Science Research*, 29(3): 399-410 – In Persian
52. Asgari H, Lashgari A, **Roohnia M**. 2014, Effects of layer lengths and arrangements on bending strength properties (MOE and MOR) of laminated lumber made of *Pinus sylvestris*, *Bulletin of Environment, Pharmacology and Life Sciences*, 3(12):8 -11

## **2015**

53. **Roohnia M**, Kohantorabi M, Tajdini A. 2015, Maple wood extraction for a better acoustical performance, *Eur J Wood Wood Prod*, 37(1): 139 – 142
54. Mirbolouk P, **Roohnia M**. 2015, Evaluation of dynamic modulus of elasticity of medium density fiberboard panel from longitudinal vibration tests on specimens, *BioResources*, 10(1): 613-621
55. Hajirafieeha E, **Roohnia M**, Jahanlatibari A, Tajdini A. 2015, The effect of glue coverage on laminates and the layering on shear and elastic moduli of poplar wood laminated sample using a vibration based nondestructive approach, *Iranian Journal of Wood and Paper Science Research*, 29(4): 550 - 559 – In Persian
56. **Roohnia M**, Brancheriau L. 2015, Orientation and position effects of a local heterogeneity on flexural vibration frequencies in wooden beams, *CERNE*, 21(2): 339-344
57. Jahanlatibari A, Jamali R, **Roohnia M**. 2015, Comparing the Performance of the Combination of Surfactant and Soap in Wastepaper Deinking, *Iranian Journal of Wood and Paper Science Research*, 30(1): 25-36 – In Persian
58. Farvardin F, **Roohnia M**, Lasgari A. 2015, The effect of extractives on acoustical properties of Persian silk wood (*Albizia julibrissin*), *Maderas-Cienc Technol*, 17(4): 749-758
59. **Roohnia M**, Kohantorabi M. 2015, Dynamic methods to evaluate the shear modulus of wood, *BioResources*, 10(3): 4867-4876
60. Badamchizadeh Sh, Jahanlatibari A, **Roohnia M**, Sepidedam SJ. 2015, Investigation on the effect of fiber surface characteristics on mechanical

properties of cellulosic fiber /polypropylene composite, *Iranian Journal of Wood and Paper Science Research*, 30(2): 183 – 193 – In Persian

61. Yavari A, **Roohnia M.** 2015, Quality assessment of scarf joints considering the acoustic parameters: A nondestructive approach, *BioResources*, 10(3): 5083-5095
62. Yavari A, Hemmasi AH, **Roohnia M**, Merusak R. 2015, Dynamic Young's Modulus of Scarf- and Finger-Jointed Beams using Longitudinal Vibration Method, *BioResources*, 10(4): 6886-6895
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68. Shamaairani Sh, **Roohnia M.** 2016, Dynamic modulus of wood containing water resistant glue finger joint after severe steaming, *BioResources*, 11(4):8900-8913

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## 2019

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## International Conferences:

### 2003

80. **Roohnia, Mehran**, Jahan-Latibari, A. Hosseini, S.Z. 2003 - Study on pulping of rinds from sunflower seeds, The first National Congress on Cellulosic Materials, Tehran University – Oral – Full Paper – In Persian

### 2004

81. **Roohnia, Mehran**. 2004 - Variation in Linear Shrinkage of *Cupressus Arizonica* Wood Planted in Karaj–Iran, International Symposium on Wood Sciences, IAWA-IAWS, Montpellier, France - Oral – Abstract

### 2005

82. **Roohnia, Mehran**. Tajdini, A. Manouchehri, N. 2005 - Variation in linear shrinkage of *Morus alba* wood planted in Karaj - Iran, International Symposium on Wood and Paper Science, ISWPS2005, Yokohama, Japan –

Oral – Extended Abstract

## 2006

83. **Roohnia, Mehran.** Brémaud, I. Guibal, D. Manouchehri. N. 2006 - NDT-lab; Software to Evaluate the Mechanical Properties of Wood, International Conference of ESWM4+Cost Action, Florence, Italy – Poster – Full Paper

## 2007

84. **Roohnia, Mehran.** Gril, J. Bremaud, I. Manouchehri, N. 2007 - Sound Velocity to evaluate a piece of wood in Acoustical Performances, The 3<sup>rd</sup> International Conference on Wood-Machining, Lausanne, Switzerland - Oral – Full Paper
85. Mohebbi, Behboud. Yaghoobi K. **Roohnia, M.** 2007. Acoustic Properties of Hydro-thermally Modified Mulberry (*Morus alba* L.) Wood. The 3<sup>rd</sup> European Conference on Wood Modification. Cardiff, UK. – Oral – Full Paper

## 2008

86. **Roohnia, Mehran.** Alavitabar, E. Tajdini, A. 2008 - Quality and Damping in Timbers from Iranian Beech (*Fagus Orientalis*) – FUNCFIBER International Symposium on Biology and Biotechnology of Wood – Umea – Sweden. – Oral – Abstract

## 2009

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89. Hossein Mohammad-ali, **Roohnia, Mehran.** Shahverdi, Mehdi. 2009 - Some Foot-prints of Internal Defects of Wood on Three First Mode-shapes of Free Vibration , 16th International Nondestructive Testing and Evaluation of Wood Symposium. Beijing, China – Poster – Abstract
90. Tajdini Ajang, Tavakkoli Amir, **Roohnia Mehran,** Jahanlatibari Ahmad. 2009 - Simultaneous estimation for demand and supply function of corrugated board in Iran, International conference on applied business & economics, Kavalla, Greece – Poster – Abstract

## 2010

91. Alavitabar Seyedehsan, **Roohnia Mehran,** Hossein Mohammadali. 2010 – Study on the effects of changing the percussion and recording place on the vibration modes of free-free beams, The first National Congress on New Technologies in Wood and Paper Industry, Kelarabad, Iran – Poster – Extended Abstract - In Persian
92. Shafiee Pouria, **Roohnia Mehran.** 2010 – Complex dynamic modulus of elasticity in longitudinal direction of Silvestre pine wood, The first National

Congress on New Technologies in Wood and Paper Industry, Kalarabad, Iran– Poster – Extended Abstract - In Persian

93. **Roohnia Mehran**, Tajdini Ajang, Alavitabar Seyedehsan. 2010 – Effect of drilling on dynamic modulus of elasticity of wooden beam, The first National Congress on New Technologies in Wood and Paper Industry, Kalarabad, Iran– Oral – Full paper - In Persian
94. **Roohnia Mehran**, Tajdini Ajang, Manouchehri Negin. 2010 - EFFECT OF DRILLINGS AS ARTIFICIAL DEFECTS ON DYNAMIC SHEAR MODULUS OF WOOD, 40th International Conference and NDT Technique Exposition - NDE for Safety 2010/ Defektoskopie, Plzen, Czech Republic – Oral – Full paper
95. Hashemitabalvandani Seyedehmasoumeh, **Roohnia Mehran**, Tajdini Ajang. 2010 – Flexural and longitudinal vibration based nondestructive tests to identify the sound wood, The first national congress on forests and wood and paper industry, Astara, Iran – Oral – Full paper - In Persian
96. Tajdini Ajang, Tavakkoli Amir, Jahanlatibari Ahmad, **Roohnia Mehran**. 2010 - The Investigation Effective factors on supply and Demand of Particleboard in Iran, SWST/UNCE-TC Annual Convention-The role of wood science in the green building movement, Geneva, Switzerland – Poster – Full paper
97. Yavari Ali, **Roohnia Mehran**, Tajdini Ajang. 2010 - A few Elastic Properties of Drilled Rectangular Bars of Poplar Wood, The Final Conference of COST Action E53 ‘The Future of Quality Control for Wood & Wood Products’, Edinburgh, Scotland – Oral – Full Paper

## 2011

98. Hashemitabalvandani Seyedehmasoumeh, **Roohnia Mehran**, Nabavi Seyyedmohammad, 2011 - Dynamic Shear and Torsional Modulus of Pine Beams, 17th International Nondestructive Testing and Evaluation of Wood Symposium, Sopron, Hungary – Oral – Full Paper
99. Yavari Ali, **Roohnia Mehran**, Khademi-Eslam Habobolla, Yavari Ali, 2011 - Hole influence and fft variation inspection in poplar Wood by free vibration method, 17th International Nondestructive Testing and Evaluation of Wood Symposium, Sopron, Hungary – Oral – Full Paper
100. **Roohnia Mehran**, Shafiee Pourya, Manouchehri Negin, Tajdini Ajang, 2011 - Fixed-free against free-free beams for dynamic young's modulus of wood, 17th International Nondestructive Testing and Evaluation of Wood Symposium, Sopron, Hungary – Oral – Full Paper

## 2012

101. **Roohnia Mehran**, Ghaznavi Mohamadreza, Shamaeirani Shamin and Yaghmaeipour Abdolsaber, 2012, Vibrational based nondestructive testing of wood; an acoustical approach from lumber to small beams, 7th Plant Biomechanics International Conference, Clermont-Ferrand, France – Oral – Abstract
102. Ghorbani Maryam, **Roohnia Mehran**, 2012 – Sorting the timber by a musician VS acoustical indexes, 7th Plant Biomechanics International

Conference, Clermont-Ferrand, France – Oral – Abstract

### 2013

103. **Roohnia Mehran**, Kohantorabi Mostafa. 2013, Shear moduli estimated in a parallel action of flexural vibration data with those provided in finite element method (case study: Oak wood), 3<sup>rd</sup> International conference on Acoustics and vibration, K.N. Toosi University of technology, Tehran – Iran
104. **Roohnia Mehran**. 2013, Iranian successful improvements in Nondestructive evaluations of wood and wood products in conformity with standards, Congress on standard conformity assessment in wood and paper industries, Karaj – Iran
105. Aghataheri Seyedesama, Khamseh Maryam, **Roohnia Mehran**. 2013, Conformity assessment of wood based panels using plate vibration ndt technique. Congress on standard conformity assessment in wood and paper industries, Karaj – Iran

### 2014

106. **Roohnia Mehran**. 2014, Shear moduli estimated in a parallel action of flexural vibration data with those provided in finite element method (case study: Maple wood), First International Conference on Welding and Non Destructive Testing (ICWNDT2014), February 25-26, 2014, Islamic Azad University –Karaj Branch-Karaj-Alborz –Iran
107. **Roohnia Mehran**, 2014, Finite element method in a parallel action with flexural vibration data to estimate Shear moduli of wood, 3<sup>rd</sup> International Conference on mathematical applications in engineering (ICMAE'14), 23-25 September, 2014, Kuala Lumpur, Malaysia.

### 2015

108. **Roohnia M**, 2015, Nondestructive estimation of modulus of rupture in a whole MDF panel, The 3<sup>rd</sup> Joint International Conference on Civil, Structural and Mechanical Engineering (ACSM), By IRED, 28-29 Dec. 2015, Bangkok – Thailand

### 2016

109. **Roohnia M**, Asgari R, 2016, Evaluation of Sound Velocity and Dynamic Modulus of Elasticity in Plywood Panel by Longitudinal Vibration Test, XLIV International Conference “Advanced Problems in Mechanics” June 27 – July 02, 2016, St. Petersburg, Russia

### Books/Book Chapters

1. Pourmohammadi P, Pourmohammadi M, **Roohnia M**. (2017), A Comprehensive Dictionary in Wood and Paper Science and Technology (English to Persian), Islamic Azad University Press, Karaj-Iran, 674p
2. **Roohnia M**. 2016, Wood: Acoustic Properties, *Reference module in materials science and materials engineering*, ELSEVIER reference works, Book Chapter #01996, ISBN: 978-0-12-803581-8. doi:10.1016/B978-0-12-803581-8.01996-2
3. **Roohnia M**. 2019, Wood: Vibration and Acoustic Properties, *The curated*



*reference collection in Materials Science and Materials Engineering*, ELSEVIER reference works, Book Chapter #01996, ISBN: 978-0-12-803581-8. <https://doi.org/10.1016/B978-0-12-803581-8.01996-2>

### **Skills**

- English Speaking and Listening, Writing and Reading
- French Reading (academic texts), Speaking and Listening (Basics and Daily)
- Azeri (native)
- Persian (native)
- Soft-wares (SPSS, MSOffice, MATLAB, NDTlab and subdivisions)
- Conformity assessments of lumber and wood based panels
- Acoustics of Musical Instruments
- Non Destructive Test (VT, UT, AE)

### **Assigned as reviewer/ Conference session moderator/ Conference chair**

1. *Journal of wood science*, Springer – Japan – reviewer
2. *BioResources*, Journal of Faculty of Natural Resources, North Carolina State University, USA – reviewer
3. 17<sup>th</sup> International Wood-ndt symposium, Sopron, Hungary, 2011 – Session Moderator.
4. All (Four) Iranian national scientific journals in field – reviewer
5. Congress on standard conformity assessment in wood and paper industry, Karaj, Iran, 2013 – Congress chair and reviewer
6. The Journal of the Acoustical society of America, USA, reviewer
7. European Journal of wood and wood products, Springer – Germany – reviewer
8. Wood Science and Technology, Springer – Germany – reviewer

### **Awards/ Honors/Research grant**

- The best Technologist of the Year 2018, Alborz Province, Iran
- Outstanding Researcher. 2018, Islamic Azad University, Karaj Branch. Based on three years of research records
- Research grant, 2016, wining additional 2000 US\$
- Research grant, 2015, wining 8000 US\$ (Max possible grant:10,000 US\$)
- PhD Scholarship from Islamic Azad University, Karaj Branch – Iran
- Outstanding City-Talent. 2008, Karaj Municipality – Iran
- Outstanding Researcher. 2013, Islamic Azad University, Karaj Branch. Based on three years of research records
- Outstanding Researcher. 2014, Islamic Azad University, Karaj Branch. Based on publishing in Top JCR Journals in “Material Science, Paper and Wood”.

### **Current Research projects (as leader)**

1. 2016-2017: “Technology improvement and localization of standing tree tomography device through vibration-based nondestructive test (Ordered to transfer the device to Karaj Municipality)”, Research Project No.

89/5/139283 Date: 20-1-2016, Grant Provider: Karaj City Municipality.  
50,000 US\$ (Completed).

2. 2016-Ongoing: "Manufacturing a timber grader based on Iranian national standard; ISIRI-9854-2013", Research Project No. 70/5712, Grant Provider: Islamic Azad University. 15000 US\$

And more than 8 completed research projects funded by Islamic Azad University in past 10 years.

#### **Contact information for three references**

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