

## **CURRICULUM VITAE**

**Andromachi V. Mitani**

*Assistant Professor in “Chemical treatments of wood”*

Department of Forestry, Wood Sciences and Design, University of Thessaly

### **1. GENERAL INFORMATION**

Date of birth: 18 August 1983

Home address: 22 Lamprou Katsoni Str., 43131 Karditsa, Greece

Phone: +30 6975857033

E-mail: amitani@uth.gr

### **2. STUDIES**

#### **2.1. Higher Education**

2008: Integrated Master’s degree in Forestry and Natural Environment, School of Forestry and Natural Environment, Aristotle University of Thessaloniki (AUTH), Greece. Degree grade: 6.95/10 (Very Good).

2010: Postgraduate thesis in Wood Technology / Adhesives, School of Forestry and Natural Environment, AUTH. Title: “Quality control of eco-friendly adhesives”.

2015: PhD in Forestry and Natural Environment, School of Forestry and Natural Environment, AUTH. Title: “Investigation of the effect of heat treatment on the properties and strength of fir wood (*Abies borisii-regis*) and various types of joints”.

2023: MSc in Special Education, School of Education and Social Sciences, Frederick University, Cyprus (grade: 9.11/10 – Excellent).

#### **2.2. Special training – International cooperation**

2016: Diploma in Pedagogical and Teaching Competence, School of Pedagogical and Technological Education (ASPETE), Greece.

2022: Educational trip “Timber constructions and CLT” (Rothoblaas, X-LAM Dolomiti, University of Trento, Italy) – training on CLT structures, connection systems and protection of timber housing.

2022–2023: Participation in the Erasmus+ Blended Intensive Programme (BIP) “Climate-Smart Forestry”, Karelia University of Applied Sciences, Finland (03/11/2022–11/11/2022).

2023: Participation in the Erasmus+ project “HOPE – Modular Houses for People in Need”, Department of Furniture Design and Technology, ATU Connemara, Letterfrack, Ireland (1–2 June 2023).

### **2.3. Foreign languages**

Greek: Native language.

English: Excellent command (C2). Certificate of Proficiency in English, City & Guilds.

## **3. PROFESSIONAL ACTIVITY**

2011–2014: Forester (fixed-term contract), School of Forestry and Natural Environment, Aristotle University of Thessaloniki. Main duty: coordination and supervision of student internships.

2015–2017, 2021–2022: Teaching staff (Forester – Environmental Scientist) at the Hellenic Army Non-Commissioned Officers Academy (SMY), Trikala. Course: Environmental Education.

2017–2023: Academic Scholar at the Programme of Studies in Wood and Furniture Design and Technology and later at the Department of Forestry, Wood Sciences and Design, University of Thessaly, teaching courses in wood technology, furniture production and furniture quality control.

2024–today: Assistant Professor in “Chemical treatments of wood”, Department of Forestry, Wood Sciences and Design, University of Thessaly.

## **4. RESEARCH ACTIVITY**

Her research interests focus on thermal modification of wood, composite wood products, furniture quality control, protection and maintenance of wooden constructions, and the utilisation of industrial residues and hemp for the development of innovative, sustainable materials in the context of the circular economy.

Participation as researcher in numerous funded research projects (selection):

- 2014: WOODLASER (MIS 377333), AUTH – Improvement of permeability of refractory softwoods using laser perforation.

- 2017: Development and installation of CE marking system for produced timber (Belos company), UTH.
- 2017–2023: Series of projects on quality control of furniture and wood products (PRAKTIKER, glued wood products, office seating, school furniture) according to EN standards, UTH.
- 2019–2023: Research on mechanical properties of wooden beams from old traditional buildings after natural ageing.
- 2023–2025: Horizon project “MarginUp: Raising the bio-based industrial feedstock capacity of marginal lands”.
- 2024–2028: Horizon project “iCOSHELLS: Innovative Co-Creation Soil Health Living Labs”.
- 2024–2027: Interreg project “FULAR: Shaping new paths towards furniture circularity”.

## **5. TEACHING ACTIVITY**

### **5.1. Higher Education (Universities/Technological Institutions)**

#### **5.1.1. Teaching in undergraduate programmes**

Indicative courses taught at the University of Thessaly:

- Wood Technology I: Solid Wood Products
- Furniture Production Technology II
- Protection and Maintenance of Wooden Constructions
- Furniture Surface Processing – Finishing
- Furniture Quality Control
- Furniture Conservation and Repair

#### **5.1.2. Teaching in postgraduate programmes (MSc)**

Courses taught in the MSc “Advanced Methods of Design, Technology and Management of Wood Products”, Department of Forestry, Wood Sciences and Design, University of Thessaly:

- Environmentally Friendly Wood Products Technologies
- Quality Control of Raw Materials and Packaging – Certification
- Innovative Wood Products

### **5.1.3. Supervision of undergraduate dissertations**

Supervision and co-supervision of numerous undergraduate dissertations in the fields of wood modification, composite materials from industrial hemp and agricultural residues, energy use of wood and biofuels, re-use of wood products, and improvement of wood properties by coating with nanoparticles.

### **5.1.4. Supervision of postgraduate dissertations**

Supervision and co-supervision of MSc theses in the MSc programme “Advanced Methods of Design, Technology and Management of Wood Products”, focusing on innovative wood products, thermal modification and quality control of wood and furniture.

## **5.2. Teaching at Institutes of Vocational Training (IEK)**

2021–2024: Teaching in public IEK in Karditsa in courses related to furniture construction, finishing and practical training in the field of furniture and wood.

## **6. PUBLICATIONS**

6.1. Scientific publications in journals and conference proceedings (selection):

- Mitani A., and Barboutis I. (2010). Shear strength by compression loading of some hardwoods glued with PVAc and casein adhesives. First Serbian Forestry Congress, Belgrade University, Faculty of Forestry, Serbia, 11-13 November 2010. pp 1352-1360
- Mitani A. and Barboutis I. (2012). Assessment of colour changes and hygroscopic properties of beech (*Fagus sylvatica*) wood after thermal modification. 23rd international scientific conference wood is good – with knowledge and technology to a competitive forestry and wood technology sector”. October 12, 2012, Zagreb
- Mitani A. and Barboutis I. (2012). The “quality” of standardization procedure in wood products sector in Greece. 9-th International Conference “Standardization, prototypes and quality: a means of Balkan countries cooperation” October 5 - 6, 2012.
- Barboutis I., Vassiliou V., Mitani A., Kamperidou V. (2011). Effects of short time thermal treatment on some properties of lime wood (*Tilia cordata*). PROLigno, International Journal in the Field of Wood Engineering, ISSN-L 1841-4737, Vol 7, No 4: 39 – 49
- Mitani A. and Barboutis I. (2012). Wood pallet. Epipleon, Vol. January-February, pp.108-109
- Mitani A., Barboutis I., (2013). Heat treatment effect on colour changes of beech (*Fagus sylvatica*) wood. PROLigno, International Journal in the Field of Wood Engineering, ISSN-L 1841-4737, Vol 9, No 4: 658 – 663.

- Μηττανη Α., Μπαρμπούτης Ι., (2013). Επίδραση του θερμικού χειρισμού στις υγροσκοπικές ιδιότητες ξύλου οξιάς. 16<sup>ο</sup> Πανελλήνιο Δασολογικό Συνέδριο. Θεσσαλονίκη 6-9 Οκτωβρίου 2013
- Mitani A., Barboutis I., (2014). Color changes and dimensional stability in fir wood (*Abies borissi-regis* Mattf.) modified by heat treatment. *International Journal of Engineering Inventions*. E-ISSN:2278-7461, Vol 4 Issue 3:26-32.
- Mitani A., Barboutis I., (2014). Changes caused by heat treatment in color and dimensional stability of beech (*Fagus sylvatica*) wood. *Drvna Industrija*, Vol 65 Issue 3:225-232.
- Mitani, A., Barboutis, I. (2014). Effects of heat-treatment and wood preservative on combustion resistance of oak wood. IUFRO. Processing Technologies for the Forest and Biobased Products Industries PTF BPI 2014 at the Salzburg University of Applied Sciences. Kuchl/Austria
- Μητάνη, Α. (2015). Μηχανικές και υγροσκοπικές ιδιότητες ξύλου ελάτης (*Abies borissii-regis*). 17<sup>ο</sup> Πανελλήνιο Δασολογικό Συνέδριο. Η Συμβολή της Σύγχρονης Δασοπονίας και των Προστατευόμενων Περιοχών στην Βιώσιμη Ανάπτυξη. Κεφαλλονιά 4-7 Οκτωβρίου
- Mitani A., (2015). Determination of some mechanical properties and nails withdrawal resistance of heat treated fir wood (*Abies borissii- Regis*). *PROLigno*, International Journal in the Field of Wood Engineering. ISSN-L 1841-4737. Vol 11, No : 344 – 350
- Mitani A., Barboutis I., (2015). Bonding Strength of Polyvinyl Acetate (PVAC) And Casein Adhesives in small diameter beech wood (*Fagus sylvatica* L.). IUFRO The 10th International Beech Symposium By organized IUFRO Working Party, 1.01.07 "Ecology and Silviculture of Beech" & 1.01.00 "Temperate and Boreal Silviculture". 1-6 September, 2015.
- Koutsianitis, D., Voulgaridis, E., Mitani, A. 2015. Wood production potential of beech (*Fagus sylvatica* L.) natural forests in West Central Greece. The 10th International Beech Symposium, Kastamonu, Safranbolu / Turkey, 1-6 September. (Σχετ.: PC14)
- Ninikas Konstantinos, Ntalos Georgios, Mitani Andromahi , Chroni Stamatia , (2017). Children's cot safety requirements based on European Standards. International Workshop "Information Technology, Sustainable Development, Scientific Network & Nature Protection". 8-10 October. Edessa, Greece.
- Mitani Andromahi , Ntalos Georgios, Rammou Ekaterini, Ninikas Konstantinos, Kehagia Ermina, (2017). Usage of *Posidonia oceanica* and wood for thermal energy production. International Workshop "Information Technology, Sustainable Development, Scientific Network & Nature Protection". 8-10 October. Edessa, Greece.
- Ntalos Georgios , Mitani Andromahi , Papantoni Theodora , Rammou Ekaterini, Ninikas Konstantinos, (2017). Animal extremities mixed with wood for energy production. International Workshop "Information Technology, Sustainable Development, Scientific Network & Nature Protection". 8-10 October. Edessa, Greece.

- Rammou Ekaterini ,Mitani Andromahi, Ntalos Georgios, (2017). Hygroscopical properties of particboards produced from seaweeds and cannabis. International Workshop “Information Technology, Sustainable Development, Scientific Network & Nature Protection”. 8-10 October. Edessa, Greece.
- Mitani Andromachi (2018). Adhesive bond performance of heat-treated fir wood (*Abies Borrisii regis*). Wood Research. 63(5), pp:909-916
- Mitani Andromachi, Ntalos Georgios, Skarvelis Michalis, Filippou Vasileios.,(2017). Hygroscopicity of heat-treated fir (*Abies borisii Regis*) wood. 13th INTERNATIONAL IUFRO WOOD DRYING CONFERENCE. WDC 2017 September 13-16 Bahçeköy, Sariyer, İstanbul-Turkey.
- Filippou Vasileios, Philippou Ioannis, Karastergiou Sotirios, Andromachi Mitani,(2017). Drying methods of fir lamber(*Abies borisii – regis*) in Greece. 13th INTERNATIONAL IUFRO WOOD DRYING CONFERENCE. WDC 2017 September 13-16 Bahçeköy, Sariyer, İstanbul-Turkey.
- Rammou, A., Mitani, A., Koutsianitis, D., Ntalos, G. 2018. Mechanical and physical properties of particleboards made from different mixtures of industrial Hemp (*Cannabis sativa L.*) and wood. Acad. J. Agric. Res. 6(11): 359-362.
- Skarvelis, M., Koutsianitis, D., Mitani, A., Ntalos, G. 2019. Drying chestnut sawn timber in central Greece. PRO Ligno, Vol 15, No 4, pp. 101-106.
- Ninikas, K., Ntalos, G., Mitani, A., Koutsianitis, D. 2019. Energy potentials for building materials from cellular based waste and by-products. 4th International Scientific Conference “Wood technology and product design”, Ohrid, North Macedonia, 4-7 September.
- Ninikas, K., Ntalos, G., Mitani, A., Koutsianitis, D. 2019. Calorific values from Greek spruce residues & bioenergy potentials via pellet production. PRO Ligno, Vol 15, No 4, pp. 300-305.
- Mitani A., Ntalos, G., Koutsianitis, D., Ninikas, K. 2019. Aging effect of some varnish coated wood species on color difference and surface roughness. PRO Ligno, Vol 15, No 4, pp. 173-178.
- Koutsianitis, D., Mitani, A., Ntalos, G., Ninikas, K. 2019. Hygroscopic properties after weathering of some varnish coated wood species. PRO Ligno, Vol 15, No 4, pp. 55-60.
- Ninikas, K.; Mitani, A.; Koutsianitis, D.; Ntalos, G.; Taghiyari, H.R.; Papadopoulos, A.N. Thermal and Mechanical Properties of Green Insulation Composites Made from Cannabis and Bark Residues. J. Compos. Sci. 2021, 5, 132. <https://doi.org/10.3390/jcs5050132>
- Rammou, E.; Mitani, A.; Ntalos, G.; Koutsianitis, D.; Taghiyari, H.R.; Papadopoulos, A.N. The Potential Use of Seaweed (*Posidonia oceanica*) as an Alternative Lignocellulosic Raw

Material for Wood Composites Manufacture. *Coatings* 2021, 11, 69. <https://doi.org/10.3390/coatings11010069>

• Koutsianitis, D.; Ninikas, K.; Mitani, A.; Ntalos, G.; Miltiadis, N.; Vasilios, A.; Taghiyari, H.R.; Papadopoulos, A.N. Thermal Transmittance, Dimensional Stability, and Mechanical Properties of a Three-Layer Laminated Wood Made from Fir and Meranti and Its Potential Application for Wood-Frame Windows. *Coatings* 2021, 11, 304. <https://doi.org/10.3390/coatings11030304>

• Ninikas, K.; Tallaros, P.; Mitani, A.; Koutsianitis, D.; Ntalos, G.; Taghiyari, H.R.; Papadopoulos, A.N. Thermal Behavior of a Light Timber-frameWall vs a Theoretical Simulation with Various Insulation Materials. *J. Compos. Sci.* 2022, 6, 22. <https://doi.org/10.3390/jcs6010022>.

• Mitani, A., Koutsianitis, D., Ninikas, K., Ntalos, G. 2022. The use of industrial hemp residues as an alternative lignocellulosic raw material for wood composites manufacture. *Acta Sci. Pol. Silv. Colendar. Ratio Ind. Lignar.* 21(4) 2022, 382 (pISSN 1644-0722 eISSN 2450-7997).

• Ntalos, G., Mitsanga, C., Mitani, A., Giavasis, G. 2022. Production of wood and polystyrene alternative composites from fungal mycelium and cellulosic biomass and a study of their functional properties. *Acta Sci. Pol. Silv. Colendar. Ratio Ind. Lignar.* 21(4) 2022, 382 (pISSN 1644-0722 eISSN 2450-7997).

• Ninikas, K., Ntalos, G., Mitani, A., Koutsianitis, D. 2019. Energy potentials for building materials from cellular based waste and by-products. 4th International Scientific Conference “Wood technology and product design”, Ohrid, North Macedonia, 4-7 September.

• Ninikas, K., Mitani, A., Koutsianitis, D., Ntalos, G. 2023. The use of industrial hemp residues as an alternative lignocellulosic raw material for wood composites manufacture. The 9th Annual World Congress of Advanced Materials, May 08-10, 2023, Tokyo, Japan.

• Mandraveli, E.; Mitani, A.; Terzopoulou, P.; Koutsianitis, D. Oil Heat Treatment of Wood—A Comprehensive Analysis of Physical, Chemical, and Mechanical Modifications. *Materials* 2024, 17, 2394. .

• Mitani, A., Kamperidou, V., & Terzopoulou, P. (2024). Surface Treatment of Oak Wood with Silica Dioxide Nanoparticles and Paraloid B72. *Forests*, 15(11), 1842.

• Mitani, A., Terzopoulou, P., Ninikas, K., Koutsianitis, D., & Ntalos, G. (2025). Coating Performance of Heat-Treated Wood: An Investigation in Populus, Quercus, and Pinus at Varying Temperatures. *Forests*, 16(7), 1159. <https://doi.org/10.3390/f16071159>

#### **6.4. Theses – monographs – studies**

2010: “Quality control of eco-friendly adhesives”. MSc thesis, School of Forestry and Natural Environment, AUTH.

2015: “Investigation of the effect of heat treatment on the properties and strength of fir wood (*Abies borisii-regis*) and various types of joints”. PhD thesis, School of Forestry and Natural Environment, AUTH.

## **7. AWARDS – DISTINCTIONS**

2014: Excellence Scholarship with honorary mention by the Research Committee of the Aristotle University of Thessaloniki for the continuation of her doctoral research in the Department of Forestry and Natural Environment.

## **8. OTHER SKILLS – CERTIFICATIONS**

2022: Certified Adult Educator in Non-Formal Education (EOPPEP – National Organisation for the Certification of Qualifications & Vocational Guidance). Certification code: EB 39622.

## **9. LIST OF SUPPORTING DOCUMENTS**

Copies of degrees, training certificates, employment contracts, project participation certificates and other supporting documents are available upon request.