Curriculum Vitae

Prof. Sotirios Karastergiou
Wood Technologist

GENERAL DATA - EDUCATION

General Data

Name:	SOTIRIOS
Surname:	KARASTERGIOU
Patronymic:	PASCHALIS
Date of birth:	09-09-1969
Place of birth:	Thessaloniki, Greece.
Citizenship:	Greek
Profession:	Professor of Wood Technology (Ph.D., M.Sc., Dipl)
Home address:	D. Lappa 74str., Karditsa, 43100, Greece.
Work address:	University of Thessaly, Department of Forestry, Wood Science and Design. V. Griva, 11str., Karditsa 43100, Greece. Tel : +30-4410-64744 +30-6947-300590 (mob.) Email: karaso@teilar.gr

Education

- **Doctor of Philosophy** (Ph.D) in Wood Technology. Title: Materials and methods study of fire resistance improvement of wood adhesive products. Department of Forestry and Natural Environment, Aristotelian University of Thessaloniki, Greece (2000).
- **Master of Sience** (M.Sc.) in Wood Technology. Title: Evaluation of chemically treated particleboard resistance to fire. Department of Renewable and Natural Resources, Mediterranean Agronomic Institute of Chania, International Center of Advanced Mediterranean Studies, Paris (1996).
- **Diploma of Post Graduated Studies** (D.S.P.U.). Department of Renewable and Natural Resources, Mediterranean Agronomic Institute of Chania, International Center of Advanced Mediterranean Studies, Paris (1994).
- **Diploma of Science** (Diploma). Department of Forestry and Natural Environment, Aristotelian University of Thessaloniki, Greece (1993).
- **Computer Certificate**. Informatics and Computer Educational Center of Thessaloniki – LCPC. Thessaloniki, Greece (1992).

PROFESSIONAL EXPERIENCE

- **Professor,** University of Thessaly, department of Forestry, Wood Science and Design, Greece (2019 - present).
- **Professor,** Technological & Educational Institute of Thessaly, Department of Wood Technology and Furniture Design, Greece (31-12-2012 - 2019).
- **Forester,** Region of Thessaly, Forest Service of Karditsa (10-01-2002 - 2-10-2002).
- **Exterior cooperator** in program EPEAEK entitled *'Establishment of the new Department of Wood Technology and Furniture Design'* (1/11/2000 - 30/08/2001).
- **Scientific Assistant,** Technological & Educational Institute of Larisa, Karditsa Branch, Department of Wood Technology and Furniture Design, Greece. Teaching lessons: 'Wood Technology' and 'Mechanical Wood 'Process'. (2000-2002)
- **Exterior cooperator,** in Center of Technology and Economy for Wood and Furniture (LIGNUM SA) (01-01-1995 - 24-12-2001).
- **Principal Investigator** in scientific project entitled 'Study of innovative wood finger joints for wooden constructions – Environmental applications in Greek furniture sector. Program Archimedes II (2005-2006).
- **Principal Investigator** in scientific project entitled 'Technical support in drying and impregnation techniques for softwoods. Program GSRT (2010-2011).
- **Principal Investigator** in scientific project entitled 'Development of an innovative method for improving the properties of wood after impregnation with natural oils – Application in furniture for exterior use. Program Archimedes III (2012-2015).
- **Principal Investigator** in educational project entitled 'PEGA – Design and Technology of wood and Furniture. Program PEGA (2015).
- **Scientific partner – Author** in educational project entitled 'Wood working'. Program GSEVEE (2016)
- **Principal Investigator** in scientific project entitled 'Reward of GSRT for European program FIBRE-RTD / FP7' (2017).

SCIENTIFIC INTERESTS

- Engineered wood adhesive products (particleboards, fiberboards, plywood, laminated wood.
- Fire properties of wood.
- Panels from waste agricultural fibres.
- Mechanical wood processing.
- CNC machines.

- Quality control of wood and wood products and furniture.

QUALIFICATIONS

- Computer: Windows, Word, Excell, Power Point, Access, Internet, Lotus 123
- Languages: Greek, English

THESES

Karastergiou, S. and L. Tsironis. 1992. Production study of beech wood in the sawmills of Litohoro and BALKAN EXPORT SA. *Diploma thesis*, Department of Forestry and Natural Environment, Aristotelian University of Thessaloniki, Greece.

Karastergiou, S. 1996. Evaluation of chemically treated particleboard resistance to fire. *M.Sc. thesis*. Department of Renewable and Natural Resources, Mediterranean Agronomic Institute of Chania, International Center of Advanced Mediterranean Studies, Paris.

Karastergiou, S. 2000. Materials and methods study of fire resistance improvement of wood adhesive products. *Ph.D. thesis*. Department of Forestry and Natural Environment, Aristotelian University of Thessaloniki, Greece (2000).

REFERRED PUBLICATIONS & PRESENTATIONS

Karastergiou, S. and J. Philippou. 1997. Improvement of fire resistance of wood products by the use of fire retardants. Application to partcleboards. Monument and Environment *(4) 1997, pp.* 97-109. (in Greek)

Karastergiou, P.S. and Philippou, L.J. 2000. Thermogravimetric analysis of fire retardant treated particleboard's. *Proc. 4th International Scientific Conference 'Wood and Fire Safety', pp. 385-394 (ISBN 80-228-0774-5).*

Karastergiou, S., Philippou, J. and A. Georgiou. 2000. Study of ignitability of various wood products. Proc. 9th Panhellenic Society of Forestry, pp. *518-529 (ISBN 960-87 107-0-7).* (In Greek)

Philippou, L. and **S. Karastergiou**. 2001. Lignocellulosic materials from annual plants and agricultural residues as raw materials for composite building materials. Proc. *International Conference, Forest Research: a Challenge for an Integrated European Approach, Volume II, pp. 817-821. (ISBN 960-869-47-4-4)*

Mantanis, G., Ntalos, G. and **S. Karastergiou.** 2003. Coloured medium density fibreboard. A new value added product. Its perspectives in Greece. Proc. 11th Panhellenic Society of Forestry, 1-3 Oct. 2003, Ancient Olympia, Greece. (In Greek)

Ntalos, G., Argyri, A., **Karastergiou, S.** and G. Mantanis. 2003. Levels of noise within the facilities of Greek wood mills. Proc. 11th Panhellenic Society of Forestry, 1-3 Oct. 2003, Ancient Olympia, Greece. (In Greek)

Karastergiou, S., Barboutis, J. and V. Vassiliou. 2005. Effect of the PVA gluing on bending strength properties of finger jointed turkey oakwood (*Quercus cerris L.*). Holz Als Roh- und Werkstoff, ISSN: 0018-3768 (paper) 1436-736X (online).

Vassiliou, V. **Karastergiou, S.** and J. Barboutis. 2005. Effect of the PVAc gluing on finger-joint strength of the steamed and unsteamed beech wood (*Fagus silvatica*). Applied for publication in Journal of Applied Polymer Science.

Papadopoulos, A., Hill, C, Gkaraveli, A., Ntalos, G., **Karastergiou, S.** (2004). Bamboochips, (*Bambusa vulgaris*) as an alternative lignocellulosic raw material for particleboard manufacture. Holz Roh Werkst (2004) 62:36-39

Karastergiou, S. and G. Ntalos. 2005. Bending Strength Properties of Scarf Jointed European Spruce Wood (*Picea excelsa*). International Scientific Conference 'Engineering Design (Interior and Furniture Design)'. Oct. 15-17, Sofia, Bulgaria.

Ntalos, G., Karvelas, A., **Karastergiou, S.** and I. Kakaras. 2005. The situation of design programs and CNC in furniture sector in Greece. International Scientific Conference 'Engineering Design (Interior and Furniture Design)'. Oct. 15-17, Sofia, Bulgaria.

Vassiliou. V., **Karastergiou. S.** and J. Barboutis. 2005. Bending strength properties of some finger-jointed oakwoods. International Conference 'Hardwood Research and Utilization in Europe – New Challenges', Univercity of Sopron, Hungary, Sept. 2005).

Barboutis, J. Vassiliou. V. and **S. Karastergiou.** 2005. Effect of the finger length on bending strength of the finger jointed steamed and unsteamed beech wood. International Conference 'Hardwood Research and Utilization in Europe – New Challenges', Univercity of Sopron, Hungary, Sept. 2005).

Ntalos G., Papadopoulos A., **Karastergiou S.,** Mantanis G. and J. Kakaras (2003). Dimension stability and decay resistance against coniophora puteana of scots pine sapwood due to reaction with propionic anhydride. *International conference – 75th anniversary of the Forest Research Institute of Bulgarian Academy,* Sept. 9-11, 2003, Sofia, Bulgaria.

Karastergiou, S. and G. Mantanis. 2005. Green gluing of wood - A new technology with application in finger jointed laminated wood. Applied for publication in Geotechnical Scientific Issue.

Vassiliou. V. Barboutis, J. and **S. Karastergiou.** 2005. Bending strength properties of finger jointed laminated wood with PVA type of glue of beech wood (*Fagus silvatica*). Scientific Anniversary of Aristoteles Univercity of Thessaloniki 2005.

Karastergiou, S. and J. Kakaras. 2005. Study of the bending strength of scarf jointed spruce wood (*Picea excelsa*) for the production of laminated lumber. Its perspectives in Greece. Proc. 12th Panhellenic Society of Forestry, Oct. 2005, Drama, Greece. (In Greek)

Barboutis, J. Vassiliou. V. and **S. Karastergiou.** 2005. Bending strength properties of finger jointed laminated wood with PVA type of glue of oak wood (*Quercus ilex L.*). Its perspectives in Greece. Proc. 12th Panhellenic Society of Forestry, Oct. 2005, Drama, Greece. (In Greek)

Karastergiou, S. Vassiliou V. Barboutis, J. and A. Papadopoulos. 2004. Study of the strength of small dimension finger joint steamed beech wood (*Fagus sylvatica*) for the production of laminated lumber. Proc. 1st Panhellenic Enviromental Conference. ISBN 960-87107-6-6, pp. 443-454, 7-9 May, Orestiada, 2004, Greece. (In Greek)

Karastergiou, S. Kakaras, J., Rammou A, and A. Papadopoylos. 2004. Existing situation and perspectives in wood sector in the area of Trikala - Karditsa – Kalambaka. Proc. 1st Panhellenic Enviromental Conference. ISBN 960-87107-6-6, pp. 729-739, 7-9 May, Orestiada, 2004, Greece. (In Greek)

Papadopoulos, A., **Karastergiou, S.** Ntalos, G., Mantanis G. and J. Kakaras. 2004. Thermal modified wood in Europe: existing situation – perspectives. Proc. 1st Panhellenic Enviromental Conference. ISBN 960-87107-6-6, pp. 418-424, 7-9 May, Orestiada, 2004, Greece. (In Greek)

Papadopoulos, A. C.A.S. Hill and **S. Karastergiou.** 2004. New technologies in the sector of synthetic materials. Proc. 1st Panhellenic Enviromental Conference. ISBN 960-87107-6-6, pp. 721-725, 7-9 May, Orestiada, 2004, Greece. (In Greek)

Vassiliou, V. **Karastergiou, S.** and J. Barboutis. 2005. Effect of the PVAc gluing on finger-joint strength of the steamed and unsteamed beech wood (*Fagus silvatica*). Journal of Applied Polymer Science.

Karastergiou S., Mantanis G. I. and K. Skoularakos (2008). Green gluing of oak wood (Quercus conferta L.) with a one-component polyurethane adhesive. Wood Material Science and Engineering 2008; 3-4: 79-82

Karastergiou, S., Barboutis, J. and V. Vassiliou. 2006. Effect of the PVA gluing on bending strength properties of finger jointed turkey oakwood (*Quercus cerris L.*). Holz Als Roh- und Werkstoff, Vol. 64, No 4: 339-340.

Thomas Tsioukas, Dimitrios Birbilis, **Sotirios Karastergiou**, Konstantinos V. Kakavas. 2015. Determining the bending and tensile strength of impregnated with rapeseed oil European beech (*Fagus sylvatica*) wood joints glued with PVAc and PU. *Journal of International Scientific Publications Materials, Methods & Technologies. Volume 8, ISSN 1314-7269, pp. 819-823.*

Mantanis G., **Karastergiou S.**, and I. Barboutis. (2011). Finger jointing of green Black pine wood (Pinus nigra L.). European Journal of Wood & Wood Products 69(1): 155-157.

Vassiliou V, I. Barboutis and **S. Karastergiou** (2007). Effect of PVAc Bonding on Finger-Joint Strength of Steamed and Unsteamed Beech Wood (Fagus sylvatica). Journal of Applied Polymer Science, Vol. 103: 1664–1669 (2007).

Karastergiou, S., Adamopoulos, S., Kakaras, I., Voulgaridis, E., Passialis, C., Foti, D., Koutsianitis, D., Voulgaridou, E. 2014. Impregnation of fir *(Abies borisii regis)* and spruce *(Picea excelsa)* wood with rape oil and CCB preservative. The 5-th RCCWS International Symposium WOOD STRUCTURE, PROPERTIES AND QUALITY – 2014, Moscow State Forest University, September 22–25, 2014.

Adamopoulos, S., Passialis, C., Voulgaridis, E., Kakaras, I., Moustaizis, S., Kortsalioudakis, N., Petrakis, P., **Karastergiou, S.,** Foti, D., Koutsianitis, D., Voulgaridou, E. 2014. Effect of laser drilling on mechanical properties of fir *(Abies borisii regis)* and spruce *(Picea excelsa)* wood. The 5-th RCCWS International Symposium WOOD STRUCTURE, PROPERTIES AND QUALITY – 2014, Moscow State Forest University, September 22–25, 2014.

Voulgaridis, E., Passialis, C., **Karastergiou, S.,** Adamopoulos, S., Kakaras, I., Foti, D., Koutsianitis, D., Voulgaridou, E. 2014. Effect of laser drilling on impregnability of fir *(Abies borisii regis)* and spruce *(Picea excelsa)* wood. The 5-th RCCWS International Symposium WOOD STRUCTURE, PROPERTIES AND QUALITY – 2014, Moscow State Forest University, September 22–25, 2014.

Kortsalioudakis, N., Petrakis, P., Moustaizis,S., Voulgaridis, E., Adamopoulos, S., **Karastergiou, S.,** Passialis, C. 2014. An application of a laser drilling technique to fir and spruce wood specimens to improve their permeability. The 7th International Scientific and Technical Conference on "Innovations in Forest Industry and Engineering Design", 13-15 November 2014, Sofia/Yundola, Bulgaria.

Voulgaridis, E., Adamopoulos, S., **Karastergiou, S.,** Passialis, C., Koutsianitis, D., Kortsalioudakis, N., Petrakis, P., Moustaizis, S. 2014. Effects of laser drilling on mechanical properties and impregnability of fir and spruce wood. The 7th International Scientific and Technical Conference on "Innovations in Forest Industry and Engineering Design", 13-15 November 2014, Sofia/Yundola, Bulgaria.

Birbilis, D., **Karastergiou, S.**, Adamopoulos, S., Kakavas, K. and T. Tsioukas. 2014. Properties of black pine (*Pinus nigra*) wood treated with hot rape oil. In Proceedings 25th RCCWS International Symposium WOOD STRUCTURE, PROPERTIES AND QUALITY – 2014, September 22 – 25, Moscow–Mytischi, Russia.

Birbilis, D., **Karastergiou, S.**, Adamopoulos, S., Kakavas, K. and T. Tsioukas. 2014. Properties of Pine (*Pinus nigra*) and Beech (*Fagus sylvatica*) wood impregnated with hot rape oil and surface treated with *turpentine. In Proceedings of: "25th International Scientific Conference: New materials and technologies in the function of wooden products", October 17-19, 2014, Zagreb, Croatia. pp. 1-6.*

Mantanis, G. and **S. Karastergiou**. 2007. Green gluing – a new technology for finger jointing wood, Forest Science 20: 3-10, 2007. (in Greek)

Birbilis, D., Karastergiou, S., Kakavas, K., Tsioukas, T., nad I. Kakaras. Bending and tensile strength of pine wood joints impregnated with rapeseed oil. *Proc. 17th Panhellenic Forestry Conference, 4-8 Oct. 2015, Argostoli, Greece. Pp. 261-268* (In Greek)

Voulgaridis, E., **Karastergiou, S**., Adamopoulos, S., Pasialis, C., Kortsalikoudis, N., Koutsianitis, D., Foti, D. and E. Voulgaridou. 2015. Effect of laser drilling in mechanical properties and impregnation of fir and spruce wood. *Proc. 17th Panhellenic Forestry Conference, 4-8 Oct. 2015, Argostoli, Greece. Pp. 282-291* (In Greek)

Kallivikas, P., Kaltsas, S. and **Karastergiou, S.** Study of Tensile Shear Strength of Wooden Lap Joints. 2015. *Proc. 17th Panhellenic Forestry Conference, 4-8 Oct. 2015, Argostoli, Greece. Pp. 292-301* (In Greek)

Karastergiou, S., Birbilis, D. and A. Rammou. 2013. Study of the static bending strength properties of beech wood (Fagus sylvatica) impregnated with hot rape oil**.** *Proc. 16th Panhellenic Forestry Conference, 6-9 Oct. 2013, Thessaloniki, Greece. Pp. 585-593* (In Greek)

Birbilis, D., **Karastergiou, S.** and J. Kakaras. 2013. Study of the bending strength of impregnated with rape oil black pine (Pinus nigra). *Proc. 16th Panhellenic Forestry Conference, 6-9 Oct. 2013, Thessaloniki, Greece. Pp. 638-648* (In Greek)

Phillipou, V., Phillipou, J. and **S. Karastergiou.** 2013. Effect of drying method (air and kiln) on the appearance of drying defects in macedonian fir lumber (*Abies borisii regis*) *Proc. 16th Panhellenic Forestry Conference, 6-9 Oct. 2013, Thessaloniki, Greece. Pp. 619-628 (In Greek)*

Karastergiou, S. and and J. Barboutis John. 2009. Study of the bending strength of finger jointed black pine wood (Pinus nigra) for the production of laminated wood - Application of the green gluing method. *Proc. 14th Panhellenic Forestry Conference, Oct. 2009, Patra, Greece.* (In Greek)

Karastergiou, S., Mantanis, G. and J. Kakaras. 2007. Study of the bending strength of finger jointed oak wood (*Quercus conferta*) for the production of laminated wood - Application of the green gluing method. *Proc. 13th Panhellenic Forestry Conference, Oct. 2007, Kastoria, Greece. Pp. 155-164* (In Greek)

Tsioukas, Th., J. Filippou and **S. Karastergiou**. 2011. Mechanical strength of various types of wood joints. *Proc. 15th Panhellenic Forestry Conference, Oct. 2007, Karditsa, Greece.* ISBN 978-960-89478-4-9. (In Greek)

Adamopoulos, S., **Karastergiou, S.,** Foti, D. and Filippou, V. 2017. Chips recovered from waste particleboards by hydromechanical methods. 17th Panhellenic Forestry Conference, Oct. 2017, Edessa, Greece. Pp. 331-339. ISBN 978-960-89478-7-0. (In Greek)

Sotirios Karastergiou, Dafni Foti, Vasileios Filippou & Antonios Papadopoulos (2020): Enhancement of bending strength properties of two wood species

reinforced with two types of carbon fibre fabrics and two layouts, International Wood Products Journal, DOI: 10.1080/20426445.2020.1729497

Foti Dafni, **Sotirios Karastergiou**, and Antonios N. Papadopoulos. 2022. Cold Water Immersion Pretreatment of Post-Consuming Particleboards for Wood Chips Recovery by the Hydromechanical Process. J. Compos. Sci. 2022, 6, 105. https://doi.org/10.3390/jcs6040105.