

**PAOLO CHERUBINI'S
CURRICULUM VITAE**

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Birth	Pisa (Italy), 29 October 1964
Dual Citizenship	Italian and Swiss
Languages	Italian, English, French, German, Spanish
Education	Maturità Classica, Liceo Classico "Galileo Galilei", Pisa (Italy), 1983 Degree in Forest Sciences, Università di Firenze (Italy), 1989 Ph.D. in Botany, Universität Basel (Switzerland), 1996
Employment History	Post-Degree Fellow, Università di Firenze (Italy), 1989-1990 Post-Degree Fellow, Istituto Sperimentale per lo Studio e la Difesa del Suolo, Firenze (Italy), 1990-1992 Fellowship "Hörer in Fortbildung", ETH Zürich (Switzerland), 1992-1993 PhD student, Universität Basel (Switzerland), 1993-1996 Research Scientist (1996-2003), Senior Scientist (2003-present) WSL Swiss Federal Research Institute, Birmensdorf (Switzerland)
Institutional Responsibilities	Deputy Head of the Section <i>Forest ecosystems and ecological risks</i> (2004-2005), Head of the Research Group <i>Tree Physiology</i> (2006-2010), Deputy Head of the Research Unit <i>Dendrosciences</i> (2006-2009), Head (a.i.) of the Research Unit <i>Dendrosciences</i> (2010), Head of the Research Group <i>Dendroecology</i> (2011-2012), a.i. Head of the Research Group <i>Dendrosciences</i> (2017) Member of the Steering Committee Libraries Research Institutes ETH Domain (LIB4RI) (2016-present) Chairman of the Research Commission (FoKo) WSL (2016-present)
Appointments	Adjunct Research Scientist, Lamont-Doherty Earth Observatory, Columbia University, Palisades, New York, U.S.A., 2002-present Adjunct Faculty, School of Natural Resources, University of Nebraska-Lincoln, Lincoln, Nebraska, U.S.A., 2009-present Guest Professor, Institute of Earth Environment, Chinese Academy of Sciences (CAS), Xian, China, 2012-present Lecturer, Department of Geography, Universität Zürich, Zurich, Switzerland, 2006-present

Swiss National Science Foundation
Grants (as Principal Investigator)

	<p>Tree growth-rings as early indicators of volcanic activity on Mt. Etna (2012-2016) 235'000 CHF Assessing past atmospheric particulate matter in Xi'an and northwestern Shaanxi Province (Northern China) using novel tree-ring analyses (2019-2022) 340'964 CHF International exchange visit 19'200 CHF</p>
Supervision students	<p>Main supervisor of 2 PhD-students, co-supervisor of 34 PhD, 41 Master students and 5 Post-Docs</p>
Teaching	<p>Lecturer at the Universität Zürich (2006-present): GEO818 Class "Dendro-Ecology", Master course GEO351.2 Class "Geochronologie I" Bachelor course GEO399/599 "Toskana Exkursion"</p> <p>Visiting Professor, Università degli Studi di Milano, Milano, Italy (2010, 2015), Guest Lecturer Albert-Ludwigs-Universität Freiburg, Freiburg i.B., Germany (2013, 2014, 2015), Visiting Professor, Università di Sassari, Sassari, Italy (2012), Member of Board, Doctorate School in Agriculture, Università degli Studi di Pisa (2015-...).</p> <p>Over 100 lectures at graduate or undergraduate courses in many countries all over the world (e.g., Europe, Israel, Russia, China, Japan, Canada, U.S.A., Argentina).</p>
Memberships in Panels, Boards	<p>Editor in Chief, <i>Dendrochronologia</i>, 2003-present Editor, <i>iForest</i>, 2004-present Member Editorial Board of <i>Journal of Vegetation Science</i>, 2007-present Member Editorial Review Board of <i>Tree Physiology</i>, 2014-present Member Editorial Board of <i>Journal of Forest Planning</i> 2018-present Associate Editor, <i>Tree-Ring Research</i>, 2002-2011 Associate Editor, <i>Canadian Journal Forest Research</i>, 2011-2018 Member Editorial Board of <i>Geochronometria</i>, 2007-2018 Member Editorial Board of <i>Scientifica</i>, 2012-2012 Member Editorial Board of <i>Scientific Reports</i>, 2017-2017 Swiss national representative, International Long Term Ecological Research (ILTER) (1998-2002)</p>
Scientific Organizations	<p>British Ecological Society (BES) (1999-...), Tree-Ring Society (1997-...), Società Italiana di Selvicoltura ed Ecologia Forestale (SISEF) (1997-...), Asian Dendrochronological Association ADA (2015-...)</p>
Organization of Meetings	<p>Tree Rings and People (Davos, September 2001) (242 attendees from 43 countries) Several workshops, schools, seminars, conferences and sessions as main or co-organizer</p>
Awards	<p>"Premier's Award, Innovation 2005/06 Finalists" (Victoria, British Columbia, Canada). "2007 Peace Nobel Prize" recipient, as Invited Expert Reviewer, Intergovernmental Panel on Climate Change (IPCC)</p>
Publications	<p>281 scientific publications, 173 of them published in ISI journals h-index=34, sum of the times cited: 3918 (according to ISI Web of Science, March 14th, 2019)</p>

Paolo Cherubini's PUBLICATIONS last five years (totally 281, ISI 173, March 14, 2019)

2014

- 106) BATTIPAGLIA G., DE MICCO V., BRAND W.A., SAURER M., ARONNE G., LINKE P., CHERUBINI P. , (2014). Drought impact on water use efficiency and intra-annual density fluctuations in *Erica arborea* on Elba (Italy). *Plant Cell Environment*, 37, 382-391.
- 107) CHURAKOVA (SIDOROVA) O.V., EUGSTER W., ZIELIS S., CHERUBINI P., ETZOLD S., SAURER M., SIEGWOLF R., BUCHMANN N. , (2014). Increasing relevance of spring temperatures for Norway spruce trees in Davos, Switzerland, after the 1950s. *Trees*, 28, 183-191.
- 108) PALOMBO C., BATTIPAGLIA G., CHERUBINI P., CHIRICI G., GARFI V., LASSERRE B., LOMBARDI F., MARCHETTI M., TOGNETTI R. , (2014). Warming-related growth responses at the southern limit distribution of mountain pine (*Pinus mugo* TURRA subsp. *mugo*). *Journal of Vegetation Science*, 25, 571-583.
- 109) CHERUBINI P., HUMBEL T., BEECKMAN H., GÄRTNER H., MANNES D., PEARSON C., SCHOCH W., TOGNETTI R., LEV-YADUN S. , (2014). The olive-branch dating of the Santorini eruption. *Antiquity*, 88, 267-273.
- 110) CHERUBINI P., LEV-YADUN S. , (2014). The olive tree-ring problematic dating. *Antiquity*, 88, 290-291.
- 111) DE MICCO V., BATTIPAGLIA G., CHERUBINI P., ARONNE G. , (2014). Comparing methods to analyse anatomical features of tree rings with and without intra-annual density fluctuations (IADFs). *Dendrochronologia*, 32, 1-6.
- 112) MASELLI F., CHERUBINI P., CHIESI M., AMPARO GILABERT M., LOMBARDI F., MORENO A., TEOBALDELLI M., TOGNETTI R. , (2014). Start of the dry season as a main determinant of inter-annual Mediterranean forest production variations. *Agricultural and Forest Meteorology*, 194, 197-206.
- 113) ANADON-ROSELL A., RIXEN C., CHERUBINI P., WIPF S., HAGEDORN F., DAWES M.A. , (2014). Growth and phenology of three dwarf shrub species in a six-year soil warming experiment at the Alpine treeline. *PLoS ONE*, 9, 6, e100577, 1-9.
- 114) LEONELLI G., PELFINI M., BATTIPAGLIA G., SAURER M., SIEGWOLF R.T.W., CHERUBINI P. , (2014). First detection of glacial meltwater signature in tree-ring $\delta^{18}O$: Reconstructing past major glacier runoff events at Lago Verde (Miage Glacier, Italy). *Boreas* 43, 600-607.
- 115) NABAIS C., CAMPELO F., VIEIRA J., CHERUBINI P. , (2014). Climatic signals of tree-ring width and intra-annual density fluctuations of *Pinus pinaster* and *Pinus pinea* along a latitudinal gradient in Portugal. *Forestry* 87, 598-605.
- 116) BATTIPAGLIA G., DE MICCO V., SASS-KLAASSEN U., CHERUBINI P. , (2014). Wood structure in plant biology and ecology. *Dendrochronologia* 32, 3, 282-283.
- 117) TOGNETTI R., LOMBARDI F., LASSERRE B., CHERUBINI P., MARCHETTI M. , (2014). Tree-ring stable isotopes reveal twentieth-century increases in water-use efficiency of *Fagus sylvatica* and *Nothofagus* spp. in Italian and Chilean mountains. *PLoS ONE* 9, 11, 1-16, e113136.
- 118) ROSSI L., SEBASTIANI L., TOGNETTI R., D'ANDRIA R., MORELLI G., CHERUBINI P. , (2014). Different irrigation regimes induce changes in vessel size in olive trees (*Olea europaea* L.) from Southern Italy. *Acta Horticulturae* 1038, 7, 455-462.

2015

- 119) CAMPELO F., VIEIRA J., BATTIPAGLIA G., DE LUIS M., NABAIS C., FREITAS H., CHERUBINI P. , (2015). Which matters most for the formation of intra-annual density fluctuations in *Pinus pinaster*: age or size? *Trees*, 29, 237-245 DOI 10.1007/s00468-014-1108-9
- 120) MORENO-GUTIÉRREZ C., BATTIPAGLIA G., CHERUBINI P., DELGADO HUERTAS A., QUEREJETA J.I. , (2015). Pine afforestation decreases the long-term performance of understory shrubs in a semiarid Mediterranean ecosystem: a stable isotope approach. *Functional Ecology*, 29, 15-25, DOI 10.1111/1365-2435.12311
- 121) GÄRTNER H., CHERUBINI P., FONTI P., VON ARX G., SCHNEIDER L., NIEVERGELT D., VERSTEGE A., BAST A., SCHWEINGRUBER F.H., BÜNTGEN U. , (2015). Technical perspective in modern tree-ring research - How to overcome dendroecological and wood anatomical challenges. *Journal of Visualized Experiments*, 97, e52337, DOI:10.3791/52337
- 122) CHERUBINI P. , (2015). Enigmatic High-Asian tree rings: A postcard from the roof of the world (Kathmandu, Nepal). *Dendrochronologia*, 34, 31-32.
- 123) SIDOR C.G., POPA I., VLAD R., CHERUBINI P. , (2015). Different tree-ring responses of Norway spruce to air temperature across an altitudinal gradient in the Eastern Carpathians (Romania). *Trees*, 29, 985-997. DOI 10.1007/s00468-015-1178-3
- 124) RITA A., CHERUBINI P. , LEONARDI S., TODARO L., BORGHETTI M. , (2015). Functional adjustments of xylem anatomy to climatic variability: insights from long-term *Ilex aquifolium* tree-ring series. *Tree Physiology*, 35, 817-828. DOI 10-1093/treephys/tpv055

125) SHEKEINE J., TURNBULL L.A., CHERUBINI P., DE JONG R., BAXTER R., HANSEN D., BUNBURY N., FLEISCHER-DOGLEY F., SCHAEPMAN-STRUB G., (2015). Primary productivity and its correlation with rainfall on Aldabra Atoll. *Biogeosciences Discussions* 12, 981-1013

126) PETRILLO M., CHERUBINI P., FRAVOLINI G., ASCHER J., SCHÄRER M., SYNAL H.-A., BERTOLDI D., CAMIN F., LARCHER R., EGLI M., (2015). Time since death and decay rate constants of Norway spruce and European larch deadwood in subalpine forests determined using dendrochronology and radiocarbon dating. *Biogeosciences Discussions*, 12, 14797-14832.

127) ALTIERI S., MEREU S., CHERUBINI P., CASTALDI S., SIRIGNANO C., LUBRITTO C., BATTIPAGLIA G. (2015). Tree-ring carbon and oxygen isotopes indicate different water use strategies in three Mediterranean shrubs at Capo Caccia (Sardinia, Italy). *Trees*, 29, 1593-1603.

128) AMOROSO M.M., DANIELS L.D., VILLALBA R., CHERUBINI P., (2015). Does drought incite tree decline and death in *Austrocedrus chilensis* forests? *Journal of Vegetation Science*, 26, 1171-1183.

129) DIE A., DE RIDDER M., CHERUBINI P., KOUAME F.N., VERHEYDEN A., KITIN P., TOIRAMBE B.B., VAN DEN BULCKE J., VAN ACKER J., BEECKMAN H., (2015). Tree rings show a different climate response in a managed and a non-managed plantation of teak (*Tectona grandis*) in West Africa. *IAWA J.*, 36, 4, 409-427.

2016

130) VITALI V., BRANG P., CHERUBINI P., ZINGG A., SIMEONOVA NIKOLOVA P., (2016). Radial growth changes in Norway spruce montane and subalpine forests after strip cutting in the Swiss Alps. *Forest Ecology and Management*, 364, 145-153.

131) PETRILLO M., CHERUBINI P., SARTORI G., ABIVEN S., ASCHER J., BERTOLDI D., CAMIN F., BARBERO A., LARCHER R., EGLI M., (2016). Decomposition of Norway spruce and European larch coarse woody debris (CWD) in relation to different elevation and exposition in an Alpine setting. *iForest*, 9, 154-164.

132) CHERUBINI P., (2016). In memoriam of Elio Corona (1930-2015). *Dendrochronologia*, 37, 128.

133) PETRILLO M., CHERUBINI P., FRAVOLINI G., MARCHETTI M., ASCHER-JENULL J., SCHÄRER M., SYNAL H.-A., BERTOLDI D., CAMIN F., LARCHER R., EGLI M., (2016). Time since death and decay rate constants of Norway spruce and European larch deadwood in subalpine forests determined using dendrochronology and radiocarbon dating. *Biogeosciences*, 13, 1537-1552.

134) BATTIPAGLIA G., CAMPELO F., VIEIRA J., GRABNER M., DE MICCO V., NABAIS C., CHERUBINI P., CARRER M., BRÄUNING A., CUFAR K., DI FILIPPO A., GARCÍA-GONZÁLEZ I., KOPROWSKI M., KLISZ M., KIRDYANOV A.V., ZAFIROV N., DE LUIS M., (2016). Structure and function of intra-annual density fluctuations: mind the gaps. *Frontiers in Plant Science* 7, article 595, doi: 10.3389/fpls.2016.00595.

135) COLOMBAROLI D., CHERUBINI P., DE RIDDER M., SAURER M., TOIRAMBE B., ZWEIFEL N., BEECKMAN H., (2016). Stable carbon and oxygen isotopes in tree rings show physiological responses of *Pericopsis elata* to precipitation in the Congo Basin. *Journal of Tropical Ecology*, 32, 213-225.

136) DE MICCO V., BATTIPAGLIA G., BALZANO A., CHERUBINI P., ARONNE G., (2016). Are wood fibres as sensitive to environmental conditions as vessels in tree rings with intra-annual density fluctuations (IADFs) in Mediterranean species? *Trees*, 30, 971-983.

137) DE MICCO V., CAMPELO F., DE LUIS M., BRÄUNING A., GRABNER M., BATTIPAGLIA G., CHERUBINI P., (2016). Intra-annual density fluctuations in tree rings: how, when, where and why? *IAWA Journal*, 37, 232-259.

138) COCOZZA C., RAVERA S., CHERUBINI P., LOMBARDI F., MARCHETTI M., TOGNETTI R., (2016). Integrated biomonitoring of airborne pollutants over space and time using tree rings, bark, leaves and epiphytic lichens. *Urban Forestry and Urban Greening*, 17, 177-191.

139) SASS-KLAASSEN U., FONTI P., CHERUBINI P., GRICAR J., ROBERT E.M.R., STEPPE K., BRÄUNING A., (2016). A tree-centered approach to assess impacts of extreme climatic events on forests. *Frontiers in Plant Science* 7, article 1069, doi: 10.3389/fpls.2016.01069.

140) FRAVOLINI G., EGLI M., DERUNGS C., CHERUBINI P., ASCHER-JENULL J., GÓMEZ-BRANDÓN M., BARDELLI T., TOGNETTI R., LOMBARDI F., MARCHETTI M., (2016). Soil attributes and microclimate are important drivers of initial deadwood decay in sub-alpine Norway spruce forests. *Science of the Total Environment*, 569-570, 1064-1076.

141) BÄTZ N., COLOMBINI P., CHERUBINI P., LANE S.N., (2016). Groundwater controls on biogeomorphic succession and river channel morphodynamics. *Journal of Geophysical Research: Earth Surface*, 121, 1763-1785, doi:10.1002/2016JF004009.

2017

142) RIEGER I., KOWARIK I., CHERUBINI P., CIERJACKS A., (2017). A novel dendrochronological approach reveals drivers of carbon sequestration in tree species of riparian forests across spatiotemporal scales. *Science of the Total Environment*, 574, 1261-1275.

143) LEONELLI G., BATTIPAGLIA G., CHERUBINI P., SAURER M., SIEGWOLF R., MAUGERI M., STENNI B., FUSCO S., MAGGI V., PELFINI M. , (2017). Larix decidua d18O tree-ring cellulose mainly reflects the isotopic signature of winter snow in a high-altitude glacial valley of the European Alps. *Science of the Total Environment*, 579, 230-237.

144) SEILER R., KIRCHNER J.W., KRUSIC P.J., TOGNETTI R., HOULIE N., ANDRONICO D., CULLOTTA S., EGLI M., D'ARRIGO R., CHERUBINI P. (2017). Insensitivity of tree-ring growth to temperature and precipitation sharpens the puzzle of enhanced pre-eruption NDVI on Mt. Etna (Italy). *PLoS ONE*, 12, 1, e0169297. doi:10.1371/journal.pone.0169297, 1-21.

145) GIAMMARCHI F., VACCHIANO G., BERTAGNOLLI A., VENTURA M., PANZACCHI P., CHERUBINI P., TONON G. , (2017). Effects of the lack of forest management on spatiotemporal dynamics of a subalpine *Pinus cembra* forest. *Scandinavian Journal of Forest Research*, 32, 2, 142-153.

146) GOMEZ-BRANDON M., ASCHER-JENULL J., BARDELLI T., FORNASIER F., FRAVOLINI G., ARFAIOLI P., CECCHERINI M.T., PIETRAMELLARA G., LAMORSKI K., SLAWINSKI C., BERTOLDI D., EGLI M., CHERUBINI P., INSAM H. , (2017). Physico-chemical and microbiological evidence of exposure effects on *Picea abies* - Coarse woody debris at different stages of decay. *Forest Ecology Management*, 391, 376-389.

147) SEILER R., HOULIE N., CHERUBINI P. , (2017). Tree-ring width reveals the preparation of the 1974 Mt. Etna eruption. *Scientific Reports*, 7:44019 | DOI: 10.1038/srep44019.

148) CAILLERET M., JANSEN S., ROBERT E.M.R., DESOTO L., AAKALA T., ANTOS J.A., BEIKIRCHER B., BIGLER C., BUGMANN H., CACCIANIGA M., ČADA V., CAMARERO J.J., CHERUBINI P., COCHARD H., COYEA M.R., ČUFAR K., DAS A.J., DAVI H., DELZON S., DORMAN M., GEA-IZQUIERDO G., GILLNER S., HAAVIK L.J., HARTMANN H., HEREŞ A.-M., HULTINE K.R., JANDA P., KANE J.M., KHARUK V.I., KITZBERGER T., KLEIN T., KRAMER K., LENS F., LEVANIC T., LINARES CALDERON J.C., LLORET F., LOBO-DO-VALE R., LOMBARDI F., LÓPEZ RODRÍGUEZ R., MÄKINEN H., MAYR S., MÉSZÁROS I., METSARANTA J.M., MINUNNO F., OBERHUBER W., PAPADOPOULOS A., PELTONIEMI M., PETRITAN A.M., ROHNER B., SANGÜESA-BARREDA G., SARRIS D., SMITH J.M., STAN A.B., STERCK F., STOJANOVIC D.B., SUAREZ M.L., SVOBODA M., TOGNETTI R., TORRES-RUIZ J.M., TROTSIUK V., VILLALBA R., VODDE F., WESTWOOD A.R., WYCKOFF P.H., ZAFIROV N., MARTÍNEZ-VILALTA J. , (2017). A synthesis of radial growth patterns preceding tree mortality. *Global Change Biology*, 23, 1675-1690.

149) GIAMMARCHI F., CHERUBINI P., PRETSCH H., TONON G. , (2017). The increase of atmospheric CO2 affects growth potential and intrinsic water-use efficiency of Norway spruce forests: insights from a multi-stable isotope analysis in tree rings of two Alpine chronosequences. *Trees*, 31, 503-515.

150) PETRUCCO L., NARDINI A., VON ARX G., SAURER M., CHERUBINI P. , (2017). Isotope signals and anatomical features in tree rings suggest a role for hydraulic strategies in diffuse drought-induced die-back of *Pinus nigra*. *Tree Physiology*, 37, 523-535.

151) BÜNTGEN U., KRUSIC P.J., VERSTEGE A., SANGUESA-BARREDA G., WAGNER S., CAMARERO J.J., CHARPENTIER LJUNGQVIST F., ZORITA E., OPPENHEIMER C., KONTER O., TEGEL W., GÄRTNER H., CHERUBINI P., REINIG F., ESPER J. , (2017). New tree-ring evidence from the Pyrenees reveals western Mediterranean climate variability since medieval times. *Journal of Climate*, 30, 5295-5318.

152) CHIESI M., FIBBI L., TOGNETTI R., LOMBARDI F., CHIRICI G., TEOBALDELLI M., CHERUBINI P., MASELLI F. , (2017). Assessment of inter-annual forest production variations in Italy by the use of remote-sensing and ancillary data. *European Journal of Remote Sensing*, 50, 1, 577-587.

153) LEONELLI G., COPPOLA A., SALVATORE M.C., BARONI C., BATTIPAGLIA G., GENTILESCA T., RIPULLONE F., BORGHETTI M., CONTE E., TOGNETTI R., MARCHETTI M., LOMBARDI F., BRUNETTI M., MAUGERI M., PELFINI M., CHERUBINI P., PROVENZALE A., MAGGI V. , (2017). Climate signals in a multi-species tree-ring network from central and southern Italy and reconstruction of the late summer temperatures since the early 1700s. *Climate of the Past*, 13, 1451-1471.

2018

154) FRAVOLINI G., TOGNETTI R., LOMBARDI F., EGLI M., ASCHER-JENULL J., ARFAIOLI P., BARDELLI T., CHERUBINI P., MARCHETTI M. , (2018). Quantifying decay progression of deadwood in Mediterranean mountain forests. *Forest Ecology and Management*, 408, 228-237.

155) PERONE A., COCOZZA C., CHERUBINI P., BACHMANN O., GUILLONG M., LASSERRE B., MARCHETTI M., TOGNETTI R. , (2018). Oak tree-rings record spatial-temporal pollution trends from different sources in Terni (Central Italy). *Environmental Pollution*, 233, 278-289.

156) LIU Y., TA W., CHERUBINI P., LIU R., WANG Y., SUN C. , (2018). Elements content in tree rings from Xi'an, China and environmental variations in the past 30 years. *Science of the Total Environment*, 619-620, 120-126.

157) CARDINALE M., LUVISI A., MEYER J.B., SABELLA E., DE BELLIS L., CRUZ A.C., AMPATZIDIS Y., CHERUBINI P. , (2018). Specific fluorescence *in situ* hybridization (FISH) test to highlight colonization of xylem vessels by *Xylella fastidiosa* in naturally infected olive trees (*Olea europaea* L.). *Frontiers in Plant Science*, doi: 10.3389/fpls.2018.00431

158) CHERUBINI P. , (2018). Publishing tree-ring science and serving the *dendrofamily*. *Dendrochronologia*, 48, A1.

159) ZALLONI E., BATTIPAGLIA G., CHERUBINI P., DE MICCO V. , (2018). Site conditions influence the climate signal of intra-annual density fluctuations in tree rings of *Q. ilex* L. *Annals of Forest Science*, 75, 68.

160) AUS DER AU R., AWADA T., HILLER J., BATTIPAGLIA G., SAURER M., CHERUBINI P. , (2018). Tree rings of *Pinus ponderosa* and *Juniperus virginiana* show different responses to stand density and water availability in the Nebraska Grasslands. *American Midland Naturalist*, 180, 18-36.

161) REBENACK C.E., CHERUBINI P., ANDERSON W.T. , (2018). Developing a carbon isotope chronology for a coastal subtropical tree species with variable subannual tree-ring growth. *Journal of Coastal Research*, 34, 4, 828-842.

162) CONG Y., WANG A., HE S.H., YU F.H., TOGNETTI R., CHERUBINI P., WANG X., LI M.H.. , (2018). Evergreen *Quercus aquifolioides* remobilizes more soluble carbon components but less N and P from leaves to shoots than deciduous *Betula ermanii* at the end-season. *iForest*, 11, 517-525.

163) BÜNTGEN U., WACKER L., GALVAN J.D., ARNOLD S., ARSENEAULT D., BAILLIE M., BEER J., BERNABEI M., BLEICHER N., BOSWIJK G., BRÄUNING A., CARRER M., CHARPENTIER L.JUNGQVIST F., CHERUBINI P., CHRISTL M., CHRISTIE D.A., CLARK P.W., COOK E.R., D'ARRIGO R., DAVI N., EGGERTSSON O., ESPER J., FOWLER A., GEDALOF Z., GENNARETTI F., GRIESSINGER J., GRISSINO-MAYER H., GRUDD H., GUNNARSON B.E., HANTEMIROV R., HERZIG F., HESSL A., HEUSSNER K.-U., JULI A.J.T., KUKARSKIH V., KIRDYANOV A., KOLAR T., KRUSIC P.J., KYNCL T., LARA A., LEQUESNE C., LINDERHOLM H.W., LOADER N.J., LUCKMAN B., MIYAKE F., MYGLAN V.S., NICOLUSSI K., OPPENHEIMER C., PALMER J., PANYUSHKINA I., PEDERSON N., RYBNICEK M., SCHWEINGRUBER F.H., SEIM A., SIGL M., CHURAKOVA (SIDOROVA) O., SPEER J.H., SYNAL H.-A., TEGEL W., TREYDTE K., VILLALBA R., WILES G., WILSON R., WINSHIP L.J., WUNDER J., YANG B., YOUNG G.H.F. , (2018). Tree rings reveal globally coherent signature of cosmogenic radiocarbon events in 774 and 993 CE. *Nature Communications*, 9, 3605, DOI: 10.1038/s41467-018-06036-0

164) ZALLONI E., BATTIPAGLIA G., CHERUBINI P., SAURER M., DE MICCO V. , (2018). Contrasting physiological responses to Mediterranean climate variability are revealed by intra-annual density fluctuations in tree rings of *Quercus ilex* L. and *Pinus pinea* L. *Tree Physiology*, 38, 1213-1224.

165) PALOMBO C., FONTI P., LASSERRE B., CHERUBINI P., MARCHETTI M., TOGNETTI R. , (2018). Xylogenesis of compression and opposite wood in mountain pine at a Mediterranean treeline. *Annals of Forest Science*, 75, 93.

166) ISAAC-RENTON M., MONTWE D., HAMANN A., SPIECKER H., CHERUBINI P., TREYDTE K. , (2018). Northern forest tree populations are physiologically maladapted to drought. *Nature Communications*, 9, 5254, DOI: 10.1038/s41467-018-07701-0