Training School:
Dendrochronological dating of music instruments

When
15–18 June 2015

Where
University of Ljubljana, Biotechnical Faculty, Department of Wood Science & Technology, Location: Cesta VIII /34, 1000 Ljubljana, Slovenia
Organizers and lecturers:
Katarina Čufar¹, Blaž Demšar², Maks Merela¹,
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Organizing committee:
Aleš Straže¹, Miran Merhar¹, Jože Kropivšek¹, Luka Krže¹, Anton Zupančič¹

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Participants
16+1=17
Female: 7 / Male: 10
Early stage 12

Countries
Belgium (4), France (3), Italy (1), Portugal (5), Romania (1), Serbia (1), UK (2)

Participants' profiles and their interests
violin maker, self-employed, luthier, museum curator, conservation-restoration,
doctoral student, researcher, teacher, instruments, music, wood science, acoustics
Objectives:
Dendrochronological dating of musical instruments: state-of-the art, tools, tutored practical work, interpretation of the results.

Contents of the training school:
- introduction in dendrochronological dating (state of the art)
- practical work (tutored individual work, discussions)
- general wood structure, analysis and dating of the wood (as a raw material) for violin production

Practical work (dating of a violin):
- inspection of the instrument and marking of critical points on the instrument
- measurements using magnifying lens
- image acquisition
- handling of digital images
- stitching and improvement of images with simple software
- measuring tree-ring widths with free image analysis program
- measuring tree-ring widths by using magnification lens, measuring table, and dendrochronological program (for comparison)
- work with data: tree-ring series in different formats used in dendrochronology
- cross-dating by using tree-ring chronologies of different sites and instruments from the archives of the organizers
- interpretation of the results - end date as a key result and content of the reports
- discussion of the results with the violin maker – producer of the instruments
- discussion on which elements are needed for a good report
Gained knowledge and benefits:
- transfer of knowledge to home institutions and environment
- knowledge about wood anatomy, wood properties and dendrochronology
- knowledge about strengths (and weaknesses) of dendrochronological dating of musical instruments

Take home messages:

Dendrochronological dating:
- How is it performed
- What do dendrochronologists do

Dendrochronological report
- How to understand and interpret a report (e.g. End Date 1820)
- Contents of good report

Strengths of dendrochronology
- Why is dendrochronological dating of an instrument important/useful
- Who can perform reliable dendrochronological dating
Limitations of dendrochronology

- Which answers cannot be solved by dendrochronology

Participants were very motivated and cooperative. They have rated the organization and the program very well. Through the course they obtained new competences useful for their future work. Some of them have already informed us on transfer of the new knowledge in their environments.