Research Networking Programmes

Short Visit Grant ☒ or Exchange Visit Grant ☐

(please tick the relevant box)

Scientific Report

Scientific report (one single document in WORD or PDF file) should be submitted online <u>within one month of the event</u>. It should not exceed eight A4 pages.

<u>*Proposal Title*</u>: Urbino Summer School in Paleoclimatology-Biljana Basarin

<u>*Application Reference N°*</u>: 5994

1)   Purpose of the visit

Attendance in Urbino Summer School of Paleoclimatology

2)   Description of the work carried out during the visit

Urbino summer school in paleoclimatology was led by more than 30 leading senior scientists from around the world, who gave lectures on the many different areas of paleoclimatology. The purpose of my visit was to enrich my knowledge in the field of paleoclimatology and gain valuable experience that will help me in my future work.
The lectures covered different areas of paleoclimate research covering paleoceanography, continental systems, biogeochemical cycles and paleoclimate modeling.
As a part of the course, the field trip was organized. Furlo Gorge and Gubbio area where famous Contessa Valley sequence was visited. Also, K/T boundary along the Contessa Highway was one of the stops during the field trip.
The quarry of the Vispi Cement Company near Gubbio is the most spectacular outcrop of pelagic Cretaceous sediments in the Umbria‐Marche Basin (UMB) of Italy. In the quarry the groups of students collected data by measuring each individual layer in 10m sequence (below Bonarelli Level).
The collected data was analyzed using cyclostratigraphic approach. For that purpose the software Analyseries (Paillard et al., 1996) was used. The data in depth domain were coded according to lithology. Data were interpolated in

order to obtain equally spaced data points. Blackman‐Tukey power spectra were calculated in the depth domain by the AnalySeries program (Paillard et al., 1996) using 80% confidence interval with Bandwidth and confidence limits were based on a Bartlett window. The spectral peaks were used to identify the frequencies and bandwidth used for filtering data in depth domain. To get more information on the spectral distribution through time the wavelet analysis is used. For this purpose the data was imported into an online wavelet program: http://ion.researchsystems.com/IONScript/wavelet/.

Student got the chance to do the climate and geochemical modeling using different software and approaches.

3) Description of the main results obtained

4) Future collaboration with host institution (if applicable)

5) **Projected publications / articles resulting or to result from the grant** *(ESF must be acknowledged in publications resulting from the grantee's work in relation with the grant)*

6) Other comments (if any)

Attending the Urbino Summer School in Paleoclimatology broadened my experience and I gained new skills which would strongly enrich my future work and help me in my prospective scientific career. Moreover, this program was an extraordinary occasion to meet many young scientists, with whom future work and close scientific collaboration could be established.