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Particulars: Date of Birth: 14/07/1977
Place of Birth: Budapest
Nationality: Hungarian

Education 1996-2001 Certified teacher of geography and mathematics, MSc

Advanced courses 2003 *18th International Dendroecological Fieldweek* – Selma, Switzerland
2004 *Climatic and tectonic controls on travertine formation: The case of the Pannonian Basin*, IAS course, Tata, Hungary
2008 *Late Quaternary chronology and timescale* – ESF Spring School Piran, Slovenia

Research interest Environmental and climate change, Quaternary research (dendroclimatology, dendrochemistry, cave ice, environmental isotopes, time series analysis, geomorphology)

Membership Hungarian Friends of Minerals (1998-)
European Geosciences Union, (student member 2006, regular member 2007-)
Hungarian Geological Society (2007-)
International Glaciological Society (2008-)
Association for Tree-Ring Research (2008-)

Language English: advanced (Oxford, First Certificate in English, 2001)
Russian: elementary (State Accredited Language Examination, 2008)

Grants and Scholarships 2003-2006 Eötvös Loránd University, Geography–Meteorology programme; PhD student
2006, 2007, 2008 ERAS-CT-2003-980409 ESF, EUROCORES Programme, EuroCLIMATE

Projects CN-48/2007 (Hungarian Science and Technological Foundation, bilateral cooperation) (2009-2010) Rates of soil development and erosion – an annual resolution study, participate researcher; (Project leaders: Kázmér Miklós & Zhou Yuncao)
OTKA K67583 (Hungarian National Science Foundation) (2007-2011) Environmental history with annual resolution. participate researcher (Project leader: Miklós Kázmér)
CRO-04/2006 (Hungarian Science and Technological Foundation, bilateral cooperation) (2007-2009) Investigation of environmental change on karstic sites – with special attention to recent processes. participate

researcher (Project leaders: Balázs Nagy & Andrija Bognar)

RO-37/05 (Hungarian Science and Technological Foundation, bilateral cooperation) (2006-2007) Investigation of spatial and temporal variability of environmental change of the Carpathian Region during the past five centuries. participate researcher (Project leaders: Balázs Nagy & Ionel Popa)

SLO-13/05 (Hungarian Science and Technological Foundation, bilateral cooperation), (2006-2007) Quaternary events in the western part of Pannonian Basin (Slovenia, Hungary). participate researcher (Project leaders: Miklós Kázmér & Milos Bavec)

OTKA T43666 (Hungarian National Science Foundation) (2003-2006), Geological and paleoclimatological applications of dendrochronology. participate researcher (Project leader: Miklós Kázmér)

Educational activity

2009-place: Eötvös Loránd University, Dept. of Physical Geography

Subject: Global Environmental Problems

2004- place: Eötvös Loránd University, Dept. of Palaeontology

Subject: Dendrochronology

2003-2006 place: Eötvös Loránd University, Dept. of Physical Geography

Subjects: Physical geography of Europe, Endogen processes of the Earth, Physical geography of Hungary

Publications from the last five years:

In review:

Kern, Z.; Grynaeus, A.; Morgós, A. (submitted) Reconstructed August-July precipitation for Southern Bakony Mountains (Transdanubia, Hungary) back to AD 1746 based on ring widths of oak trees. *Időjárás*

Kern, Z. (submitted) Dendrochronology – Dating by tree rings. In: Horváth, E. (ed.): Quaternary Research, Eötvös Kiadó (in Hungarian)

Peer reviewed papers:

Kern Z.; Fórizs I.; Perşoiu, A.; Nagy B. (accepted) Stable isotope study of water sources and of an ice core from the Borţig Ice Cave, Romania. *Data of Glaciological Studies (Materialy Glyatsiologicheskikh Issledovaniy)*

Kern Z.; Popa I.; Varga, Zs.; Széles, É. (2009) Degraded temperature sensitivity of a stone pine chronology explained by dendrochemical evidences. *Dendrochronologia* doi:10.1016/j.dendro.2009.06.005

Kern Z.; Molnár M.; Svingor, É., Perşoiu, A.; Nagy B. (2009) High resolution, well preserved tritium record in the ice of Borţig Ice Cave, Bihar Mountains, Romania. *The Holocene* **19** pp.729–736. doi:10.1177/0959683609105296

- Popa, I.; Kern, Z. (2009) Long-term summer temperature reconstruction inferred from tree-ring records from the Eastern Carpathians. *Climate Dynamics* **32**. pp.1107-1117 doi:10.1007/s00382-008-0439-x
- Kern, Z. (2008) Medical papyri and the date of the Minoan eruption of Santorini. *Medical Hypotheses* **71/2** pp.325 doi:10.1016/j.mehy.2008.03.008
- Kern Z.; Popa, I. (2008) Changes of frost damage and treeline advance for Swiss stone pine in the Calimani Mts. (Eastern Carpathians, Romania). *Acta Silvatica & Lignaria Hungarica* **4**. pp.39-48.
- Kern Z.; Molnár M.; Fórizs I.; Perşoiu, A.; Nagy B. (2007) Inferences on the development of the ice block in Borţig Ice Cave, based on glaciological measurements and geochemical analysis. (in Hungarian with English abstract) *KARSZTFEJLŐDÉS* **12**: pp.315-330.
- Kern, Z.; Popa, I. (2007) Imprints of late frosts in tree rings of stone pine at the timberline zone of the Calimani Mts, Romania between 1750 and 2004. (in Hungarian with English summary) *Erdő és Klíma* **V**. pp.323-334.
- Kern Z., Nagy B., Popa, I. (2007) Periglacial environment in Calimani Mts., Romania. – meteorology, geomorphology and dendrochronology. In: Kázmér M. (ed.): *Környezettörténet*, Hantken press, Budapest, pp.257-276. (in Hungarian with English summary)
- Kern, Z. (2007) Relationship between fluctuation of lake level of Balaton and ringwidth of oaks from the Balaton Highland, Hungary. In: Kázmér M. (ed.): *Környezettörténet*, Hantken press, Budapest, pp.303-312. (in Hungarian with English summary)
- Kern, Z.; Popa, I. (2007) Climate-growth relationship of tree species from a mixed stand of Apuseni Mts, Romania. *Dendrochronologia* **24/2-3** pp.109-115. doi: 10.1016/j.dendro.2006.10.006
- Popa, I.; Kern, Z.; Nagy, B. (2006) Frost ring: a biological indicator of widespread freezing days, and 1876 AD as a case study from the Eastern Carpathians. *Proceeding of the Romanian Academy series B*, **8/1** pp.55-61.
- Nagy, B.; Kern, Z.; Popa, I. (2006) Investigation of periglacial environment changes at the Calimani Mts. applying geomorphological and dendrochronological methods. (in Hungarian) *Földrajzi közlemények* **130/3-4** pp.155-169.
- Kern, Z.; Fórizs, I.; Kázmér, M.; Nagy, B.; Szántó, Zs., Gál, A.; Palcsu, L.; Molnár, M. (2004) Late Holocene environmental changes recorded at Gheţarul de la Focul Viu, Bihor Mts, Romania. *Theoretical and Applied Karstology* **17** pp.51-60.
- Fórizs, I.; Kern, Z.; Nagy, B.; Szántó, Zs.; Palcsu, L., Molnár, M. (2004) Environmental isotope study on perennial ice in the Focul Viu Ice Cave, Bihor Mts., Romania. *Theoretical and Applied Karstology* **17** pp.61-69.
- Kern Z., Nagy B., Fórizs I., Kázmér M., Szántó Zs. (2003) Age and evolution of cave ice based on isotope analysis. (in Hungarian) *KARSZTFEJLŐDÉS* **VIII**. Szombathely, pp.321-332.

Non-peer reviewed papers:

- Kern, Z., Bočić, N., Horvatinčić, N., Fórizs, I., Nagy, B., László, P. (2008) Palaeoenvironmental records from ice caves of Velebit Mountains - Ledena Pit and Vukušić Ice Cave, Croatia. In: Kadebskaya, O.; Mavlyudov, B.R.; Pyatunin, M (eds) *Proceedings of the 3rd International Workshop on Ice Caves*, Kungur, pp. 108-113.
- Kern, Z., Bočić, N., Horvatinčić, N., Fórizs, I., Nagy, B., László, P. (2008) Palaeoenvironmental records from ice caves of Velebit Mountains (Ledena Pit, Vukušić Ice Cave). In: Szabó, V.; Orosz, Z.; Nagy R.; Fazekas, I. (eds): *4th Hungarian Geographical Conference*, Debrecen, pp.126-133. (in Hungarian)
- Popa, I.; Kern, Z. (2007) Effect of extreme climatic events on growth at timberline in Calimani Mts. (in Romanian) *Revista Padurilor* **122/2** pp.23-27.
- Kern, Z., Molnár, M., Perşiou, A., Nagy, B. (2007) Radiochemical and stratigraphic analysis of two ice cores from Borţig Ice Cave, Apuseni Mts, Romania. In: Zelinka, J. (ed.) *Proceedings of the 2nd International Workshop on Ice Caves*, Liptovský Mikuláš, pp.65-69.
- Kern, Z., Surányi, G., Molnár, M., Nagy, B., Balogh, D. (2007) Investigation of natural perennial ice deposits of Durmitor Mts, Montenegro. In: Zelinka, J. (ed.) *Proceedings of the 2nd International Workshop on Ice Caves*, Liptovský Mikuláš, pp.70-73.
- Kern, Z. (2007) Tree-ring research in Balaton Highland and South Bakony Mts. In: Gömöri, J. (ed.): *Archeology and Ethnography of Forest and Wood*, Sopron, pp.89-102. (in Hungarian)
- Dávid, Sz.; Kern, Z. (2007) Dendrochronological and dendroecological research of oak from North Bakony Mts and Gerecse Mts. In: Gömöri, J. (ed.): *Archeology and Ethnography of Forest and Wood*, Sopron, pp.103-122. (in Hungarian)
- Kern, Z.; Nagy, B.; Kohán, B.; Bugya, É. (2006) Glaciological characterization of small palaeoglaciators from Călimani Mountains. *Analele Universităţii de Vest din Timişoara, GEOGRAFIE*, **16** pp.35-44.
- Nagy, B.; Kern, Z.; Bugya, É.; Kohán, B. (2004) Investigation of postglacial surface-evolution in the alpine region of the Călimani Mountains – with an outlook to the cirque region of the Rodnei Mountains. *Analele Universităţii de Vest din Timişoara, GEOGRAFIE*, **XIV** pp.101-118.
- Kern, Z.; Balogh, D.; Nagy, B. (2004) Investigations for the actual elevation of the mountain permafrost zone on postglacial landforms in the head of Lăpuşnicu Mare Valley, and the history of deglaciation of Ana Lake – Judele Peak region, Retezat Mountains, Romania. *Analele Universităţii de Vest din Timişoara, GEOGRAFIE*, **XIV** pp.119-132.
- Kern Z., Fórizs I., Kázmér M., Nagy B., Szántó Zs., Gál A., Palcsu L. (2004) Detailed analysis of climate fluctuation from the Last Millennium at the Focul Viu Ice Cave, Bihor Mts, Romania. (in Hungarian) *A magyar földrajz kurrens eredményei*, Szeged, CD, pp.854-868.