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Dr. Rolfe D. Mandel (Chair)
Kansas Geological Survey
1930 Constant Ave.
Lawrence, KS 66047-3726

Dear Rolfe,

I would like to recommend Dr. Panagiotis (Takis) Karkanas for the Rip Rapp Archaeological Geology award of the Geological Society of America for 2016. Takis brings a great amount of breadth and depth to the field of Geoarchaeology that is remarkable. One has only to look at his curriculum vitae and list of publications to be thoroughly impressed by his abilities and achievements.

Takis' PhD degree – awarded organic matter 1994 – is in geology (mineralogy, petrology, and geochemistry), and it was only shortly afterward that he became interested in geoarchaeology. I remember meeting him in Athens in 1994 when he showed me thin sections from the Palaeolithic cave site of Theopetra, I believe his initial plunge into geoarchaeology. Since then he has continued to do geoarchaeology at numerous hunter and gatherer sites, from Greece, Israel, France, South Africa and elsewhere; they are too numerous to enumerate here – as are his publications, which are detailed in the attached CV. He has authored or co-authored more than 100 scientific papers as of December, 2014. Two-thirds of them are in high-profile, peer-reviewed journals such as *Nature, PNAS, Journal of Human Evolution, Journal of Archeological Science, Geoarchaeology, Archaeological and Anthropological Sciences, Earth and Planetary Science Letters, Quaternary Science Reviews, Journal of Quaternary Science, Quaternary Geochronology, Quaternary International, Geomorphology, Radiocarbon, and Antiquity.*

What makes Takis special among geoarchaeologists is his rather unique set of capabilities and approaches that can't be found in many of the best practicing geoarchaeologists. These include:

- Detailed and significant field observations from a variety of contexts. These range from regional/landscape of site settings, geomorphology, structural geology, to microstratigraphic observations of individual layers; the above includes both hunter-gatherer sites as well as Classical and Bronze Age ones;

- Laboratory analyses and analytical aptitudes with a variety of techniques, such as micromorphology, FTIR, microprobe, XRD, etc. This is the payoff of having done a PhD on mineralogy and petrology.
- The natural ability to work through mineral stability fields for many of the diagenetic phosphates found in so commonly in prehistoric sites in the Mediterranean Basin.
- The facility of investigating sites of such differing ages, styles, types of deposits, and site formation processes, vacillating between geogenic to anthropogenic deposits.

Much of the above is epitomized by the following entry at the beginning of his CV:

> **AREAS OF INTEREST**
> Geoarchaeology: site formation processes (stratigraphy, micromorphology, post-depositional chemical alterations) palaeoenvironmental reconstructions, paleoclimate, methods and techniques (dating, petrography, mineralogy, sedimentary analysis, provenance analysis).

After his beginning foray into 'prehistoric' geoarchaeology, Takis has more recently switched geoarchaeological gears and has turned his geoarchaeological efforts toward later, Holocene, sites. His published papers on these later themes are landmark studies in the application of geoarchaeology to understanding past human activities at sites. They clearly demonstrate the notion that archaeological deposits are true parts of the archaeological record. Particularly noteworthy are (although this is a very eclectic choice on my part):

> Karkanas, P. Van de Moortel, A. 2014. Micromorphological analysis of sediments at the Bronze Age site of Mitrou, central Greece: patterns of floor construction and maintenance. *Journal of Archaeological Science* 43, 198-21
>
> Karkanas, P**.**, Dabney, M. K., Smith R. Angus K., Wright, J.C. 2012. The geoarchaeology of Mycenean chamber tombs. *Journal of Archaeological Science* 37, 2722-2732.
>
> Karkanas P. 2006. Late Neolithic household activities in marginal areas: the micromorphological evidence from the Kouveleiki caves, Peloponnese, Greece. *Journal of Archaeological Science* 33, 1628-1641.

In parallel with these efforts, he has been forefront in promoting ethno-geo-archaeological research (carried out with colleagues and former students) on how mudbricks decay. Since mudbricks are so common in the eastern Mediterranean and Levant, these baseline studies provide critical information about fundamental site formation processes about such widespread, massive, and quintessential anthropogenic sites.

About a year ago he moved to the American School of Classical Studies in Athens, where he is currently director of the Malcolm H. Wiener Laboratory for Archaeological Science. This move ensures that geoarchaeology will play a larger role in Mediterranean archaeology *and* geoarchaeology.

On a personal level, Takis is simply A1, and for me personally, one of the friendliest and most stimulating researchers I have worked with, regardless of discipline. He's humble, modest, and

simply a good friend, let along colleague. I have been working with Takis for more than 15 years and it has been really and intellectual and personal pleasure.

In short, I cannot think of a living geoarchaeologist who has such a vast array of credentials that befit the Rip Rap Award of the GSA. He has made vast contributions to geoarchaeology, prehistory, and archaeology, both in research and in promoting archaeological science in general, particularly within later time periods such as Classical Studies.

I have asked several geoarchaeologists to join me in supporting his nomination, and their letters will be sent to you separately.

Best wishes,

Paul Goldberg
Professor Emeritus