

Curriculum Vitae

Shmuel Raz
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Personal details

Citizenship: Israeli
Family status: Married
Military service: Intelligence 8200, 1996-1999
Languages: Hebrew, English

Academic Background

Ph.D. 2007-Present. Institute of Evolution ,Department of Evolutionary and Environmental Biology , Haifa University.

M.Sc. 2005-2007. Institute of Evolution, Department of evolutionary and environmental biology, Haifa University.

B.Sc. 2002-2004. Biology department, Ben Gurion University

Major research interests:

My main interest is in quantifying stress in various biological systems by developing and implementing computational models for asymmetry and distribution.

Publications - Full papers

E. Nevo, **S. Raz**, A. Beiles. 1996. Biodiversity of reptiles at "Evolution Canyon", Lower Nahal Oren, Mount Carmel, Israel. *Israel Journal of Zoology*. 42:395-402

D. Milner, H. Hel-Or, D. Keren, **S. Raz**, E. Nevo.2005 Analyzing Symmetry in Biological Systems. *International Conference on Image Processing (ICIP)*.

D. Milner, **S. Raz**, H. Hel-Or, D. Keren E. Nevo. 2007. "A New Measure of Symmetry and its Application to Classification of Bifurcating Structures. *Pattern Recognition*.40:2237-2250

T. Pavliček, H. Mienis, **S. Raz**, V. Hassid, A. Rubinyam, E. Nevo.2008 Biodiversity of Gastropods at the "Evolution Canyon" Microsite, Lower Nahal Oren, Mt. Carmel, Israel. *biological journal of the linnean society*.93:147:155.

S. Raz, S. Retzkin, T.Pavliček, A. Hoffman, H. Kimchi, D. Zehavi, A.Beiles, E. Nevo Scorpion Biodiversity and Interslope divergence at "Evolution Canyon", Lower Nahal Oren Microsite, Mt. Carmel, Israel. *PLoS ONE* .4(4): e5214.

Submitted papers

A.frid, **S.Raz**, H. Hel-Or Complete Symmetry of Multilevel Bifurcating Structures: Merging Global and Local Symmetry. 2010. Submitted to *Pattern Recognition*

S. Raz, J. H. Graham, H. Hel-Or, E. Nevo. Dvelopmental Instability of Vascular Plants In Contrasting Microclimates at "Evolution Canyon". Submitted to *the Biological Journal of the Linnean Society*

Reviews

J. H. Graham*, **S. Raz***, H. Hel-Or, E. Nevo. 2010. Fluctuating asymmetry: methods, theory, and applications. *Symmetry*. 2(2):466-540.

*These authors contributed equally to this work.

Meeting abstracts

S. Raz, H. Hel-Or, D. Keren, D.Milner, R. Aloni, E. Nevo A Vectorial approach for quantifying asymmetry in leaves and implementation in "Evolution Canyon" model system.2006. Proc. Meeting of the Israel society of Plant Biology (ISPB), pp21, Israel.

S. Raz, I. Grishkan, N.Dvir, E. Nevo, Growth at different temperatures of *Aspergillus niger* isolated from soil of "Evolution Canyon" I (Lower Nahal Oren, Mount Carmel, Israel).2006.Proc. Meeting of the Israel society of Plant Biology (ISPB), Israel, February.

T. Pavliček, H.Mienis, **S. Raz**, V. Hassid, A. Rubinyam, E. Nevo. Biodiversity of Gastropods at the "Evolution Canyon" Microsite, Lower Nahal Oren, Mt. Carmel, Israel.2006 Proc. Meeting Israel Society of ecology and environmrntal quality sciences (ISEEQS).

Oral Presentations in conferences

Shmuel Raz, John H. Graham, Hagit Hel-Or, Eviatar Nevo. 2009. Developmental instability of eight plant species in divergent microclimates at Evolution Canyon, Mount Carmel,Israel. The annual meeting of the society for the study of Evolution (SSE)

Patents

S. Raz, H. Hel-Or, I. Diner, T. Pavlicek, E. Nevo. A Medical Diagnostic System and Method Using Asymmetry and Quantification of Space-Time Facial Features. 2010. Submitted *U.S. Patent provisional application*.