

PASCAL HERSEN, Ph.D.

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SUMMARY

Physicist with more than three years experience in granular physics and hydrodynamics with a comprehensive background in classic and non-linear physics. Dedicated team player, particularly interested in issues related to interdisciplinary works (geophysics, biophysics) and scientific questions arising from everyday life observations.

SELECTED ACCOMPLISHMENTS

- Conception of original tabletop experiments for the study of dunes patterns in the lab.
- Improvement of numerical simulations dedicated to Aeolian dunes study.
- Fieldwork survey of Aeolian dunes in desert. (Three visits to South Morocco)
- Supervision and training of several undergraduate students.
- Teaching general physics (mechanics /optics) to first year students in the Université Paris VII, France.
- Development of a web page to present the physics of sand dune to a broad audience.
- Development of interactions with journalists (newspapers, TVs, radios).

EDUCATION

2004 Ph.D., Granular physics, Geomorphology, Ecole Normale Supérieure de Paris, France.
2004 Interdisciplinary workshop (biology oriented) with scientific project preparation, Journal Club, book criticisms.
2001 M.Sc, Non linear and statistical physics, Ecole Normale Supérieure de Lyon, France
2000 French Teaching Degree (Agrégation) in general physics.
1999 Graduate studies, general physics, Ecole Normale Supérieure de Lyon, France.

SELECTED PUBLICATIONS

- P. Hersen, On the crescentic shape of barchan dune. To appear in Eur. Phys. Jour. B.
- P. Hersen, K.H. Andersen, H. Elbelrhiti, B. Andreotti, P. Claudin and S. Douady, Corridors of barchan dunes: stability and size selection. Phys. Rev. E., 69, 011304 (2004).
- P. Hersen, S. Douady, B. Andreotti. Relevant length scale for barchan dunes. Phys. Rev. Lett., 264301, (2002), and Physical Review Focus.

SELECTED PRESENTATIONS

- Stability of barchan dunes (2004). EGS/AGU meeting, Nice, France (oral presentation)
- Flow effect on the morphology and dynamics of barchan dunes (2004). 2nd MARID conference, University of Twente, The Netherlands (oral presentation).
- Relevant length-scale for barchan dunes (2003). APS/DFD 56th meeting, New York, USA. (oral presentation)
- Small barchans in the lab (2003). Poster Session. EGS/AGU meeting, Nice, France.
- La Physique des dunes de sable (2002). Invited presentation, LMDH, Paris, France.
- Small barchans in the lab (2002). 24th International Conference on Mathematical Geomorphology, Torino, Italy.