

Curriculum Vitae - Ehud Meron

Date of birth August 14th, 1954
Marital Status Married, two children
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Education

1973 - 1977 BSc, Chemistry (physics enhanced 4 years program), Technion
1982 - 1985 Ph.D., Chemical Physics Department, Weizmann Institute of Science
1985 - 1987 Postdoctoral fellow, Physics Department, University of Chicago
1987 - 1988 Postdoctoral fellow, Astronomy Department, Columbia University

Academic experience

1994 – present Blaustein Institutes for Desert Research (BIDR) and Physics Department, Ben-Gurion University (Professor since 2001)
1991 - 1994 Department of Mathematics, University of Arizona (Visiting Assistant Professor)
1988 - 1991 Chemical Physics Department, Weizmann Institute of Science (Scientist)

Awards and fellowships

1977 Kolthoff Prize, Technion
1984 Brenner Prize, Weizmann Institute of Science
1985 Dr. Chaim Weizmann Post-Doctoral Fellowship for Scientific Research
1988 Wolf Foundation Research Fellowship
1989 Bantrell Career Development Fellowship for Scientific Research
1996 Sheba Prize, David and Paula Ben-Gurion Fund
2003 James S. McDonnell Foundation Research Award
2017 University of Bayreuth International Senior Fellow
2018 Phyllis and Kurt Kilstock Chair in Environmental Physics of Arid Zones
2018 IIASA-Israel Program Visiting Professor

Research interests

Nonlinear dynamics and pattern formation, complex systems, spatial ecology, sustainability

Selected publications

Book: Meron E. (2015). *Nonlinear Physics of Ecosystems*, CRC Press, Taylor & Francis Group.

Undergraduate paper: Meron E., and Katriel J. (1977), A Hohenberg-Kohn Theorem for Non-Local Potentials, *Phys. Lett. A* 61a, 19-21.

Ten selected papers:

1. Elphick C., Meron E., and Spiegel E.A. (1990). Patterns of Propagating Pulses, *SIAM J. Appl. Math.* 50, 490-503.
2. Meron E. (1992). Pattern Formation in Excitable Media, *Physics Reports* 218, 1-66.
3. Hagberg A. and Meron E. (1994). Pattern Formation in Non-Gradient Reaction Diffusion Systems: The Effects of Front Bifurcations, *Nonlinearity* 7, 805-835.
4. Hagberg A. and Meron E. (1994). From Labyrinthine Patterns to Spiral Turbulence. *Phys. Rev. Lett.* 72, 2494-2497.
5. Elphick C., Hagberg A., and Meron E. (1998). Phase Front Instability in Periodically Forced oscillatory Systems. *Phys. Rev. Lett.* 80, 5007-5010.

6. Von Hardenberg J., Meron E., Shachak M., and Zarmi Y. (2001). Diversity of Vegetation Patterns and Desertification. *Phys. Rev. Lett.* 87, 198101(1-4).
7. Gilad E., von Hardenberg J., Provenzale A., Shachak M., and Meron E. (2004). Ecosystem Engineers: From Pattern Formation to Habitat Creation. *Phys. Rev. Lett.* 93, 098105(1-4).
8. Zelnik Y. R., Meron E., Bel G. (2015). Gradual Regime Shifts in Fairy Circles. *Proceedings of the National Academy of Sciences* 112, 12327–12331.
9. Getzin S., Yizhaq H., Bell B., Erickson T. E., Postle A. C., Katra I., Tzuk O., Zelnik Y. R., Wiegand K., Wiegand T., and Meron E. (2016). Discovery of fairy circles in Australia supports self-organization theory. *Proceedings of the National Academy of Sciences*, 113, 3551–3556.
10. Meron E. (2018). From Patterns to Function in Living Systems: Dryland Ecosystems as a Case Study. *Annual Review of Condensed Matter Physics* 9, 79-103.