

# RAMI KEREN

## CURRICULUM VITAE

### Short version

Institute of Soil, Water and Environmental Sciences  
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### Personal:

Date of Birth: May 14, 1942  
Place of Birth: Petach Tikva, Israel.  
Military Service: 1960-1963.

**April 1989** Received the scientific rank of **A<sup>+</sup> (Equivalent to Full Professor)**.

**April 2000** Received the title **Full Professor** by the Hebrew University of Jerusalem.

### University Education and Additional Training:

1963-1966 B.Sc. in Agronomy, The Hebrew University, Faculty of Agriculture. Graduated Jan. 26, 1967.  
1967-1969 M.Sc. in Soil Science, The Hebrew University, Faculty of Agriculture. Graduated June 22, 1969. Thesis title "The Distribution of Iron Oxides in red Sandy Soils of Israel".  
1970-1973 Ph.D. in Soil Science at the Hebrew University, Faculty of Agriculture. Israel. Graduated July 11, 1974. Thesis title: "Thermodynamic of Water Adsorption on Sodium and Calcium Montmorillonite".  
1974-1975 Post-doctoral fellow with Prof. R. Gast at the Department of Soil Science at University of Minnesota, Saint-Paul, Minnesota. USA.

### Research Interests:

Research interests range from fundamental studies on thermodynamics of water, solutions, water – soil and ion exchange to kinetic processes.

Current emphasis is on fly ash – water - soil interactions, boron transport in soils irrigated with recycled water, increasing water use efficiency in agriculture, municipal sewage recycled water for irrigation and soil reclamation.

**Positions Held and Academic Status (Last 5 years)):**

- 2003- 2007 Deputy Director, Agricultural Research Organization (ARO), Ministry of Agriculture and Rural Development, Bet Dagan, Israel.**
- 2007-2008 Visiting professor, College of Art and Sciences, Florida Gulf Coast University, Fort Myers, Florida, USA.

**Selected Professional Society Activities (Last 5 years):**

- 1999 -2003 A member of the Technical Advisory Committee (TAC), United States-Israel Bi-national Agricultural Research and Development Fund (BARD).
- 2004 - 2009 A member of the Technical Advisory Committee (TAC), Texas-Israel Binational Agricultural Research and Development Fund (BARD).
- 2004 – 2007 Initiate the idea and established the foundation for the Bi-Lateral cooperation in agriculture research between Israel and Canada and Queensland, Australia. These two foundations are active since 2006.
- 2005 – 2007 A member of the Standing Committee in Agriculture Research (SCAR), European Union, Brussels, Belgium.

**Teaching (Last 5 years) :**

- 1998, 2001, 2002 Course on water quality in relation to soil properties. Arid Land Research Center, Tottori University, Tottori, Japan.
- 1996 - 2007 Soil Erosion and soil reclamation. The Hebrew University of Jerusalem, Faculty of Agriculture, Food and Environmental Quality Sciences, Rehovot, Israel.
- 2007-2008 Clay particles interaction and water quality relations. Florida Gulf Coast University, Fort Myers, Florida, USA.

**Advising Graduate Students:**

- 1984 Appointed by the Hebrew University in Jerusalem as a supervisor for doctoral students.**
- 1988-1991 Member of a Graduate Student's advisory committee, Texas A&M University, College Station, Texas, USA.**
- 1998 Appointed by the University of Tottori, Tottori, Japan as a supervisor for doctoral students.**

**M.Sc students: 13; Ph.D. Students: 5**

**Reviewing of Scientific Manuscripts for 13 Journals**

**Membership in Professional Societies: 5**

**Invited Lectures: 53**

### **Refereed Journal Articles (last 5 years, out of 88 ):**

74. Agassi, M. Y. Binyamini, E. Fizik, J. Tarchizky, **R. Keren** , D. Goldshtein and Y. Chen. 2003. The effect of long-term irrigation with effluent on water infiltration rate of a soil. *Journal of Environmental Quality*. (May-June Issue)
75. Arai Masae, **R. Keren** T. Yamamoto and M. Inoue. 2003. Effect of Water Quality on Saturated Hydraulic Conductivity of Soils with 2:1 and 1:1 Clay Minerals. *Transactions of the Japanese Society of Irrigation, Drainage and Reclamation Engineering*. 71: 11-17.
76. Arai Masae, **R. Keren** T. Yamamoto and M. Inoue. 2003. Aggregate Stability Evaluation of Sodic Soils Using Water-Ethanol Mixtures. *Transactions of the Japanese Society of Irrigation, Drainage and Reclamation Engineering*. 71: 65-71.
77. Heller, H. and **R. Keren**. 2003. Anionic polyacrylamide polymer adsorption by pyrophyllite and montmorillonite. *Clays and Clay Minerals*. 51:334-339.
78. **Keren, R.** and M. Ben-Hur. 2003. Interaction effects of clay swelling and dispersion and CaCO<sub>3</sub> content on saturated hydraulic conductivity. *Australian Journal of Soil Research*. 41: 979-989.
79. Yermiyahu, U., **R. Keren**, I. Finegold, Y. Cohen, H. Yehezkel, and D. Shmoel. 2003. Response of pepper to boron and salinity under greenhouse conditions. *Acta Hort*. 609:149-154.
80. Communar, G., **R. Keren** and FaHu Li. 2004. Deriving boron adsorption isotherms from soil column displacement experiments. *Soil Sci. Soc. Am. J.* 68: 481-488.
81. Communar, G., **R. Keren** 2005. Equilibrium and nonequilibrium transport of boron in soil. *Soil Sci. Soc. Am. J.* 69: 311-317.
82. Communar, G., and **R. Keren**. 2006. Rate-Limited boron transport in soils: The effect of soil texture and solution pH. *Soil Sci. Soc. Am. J.* 70:882-892.
83. Communar, G., and **R. Keren**. 2007. Effect of Transient Irrigation on Boron Transport in Soils. *Soil Sci. Soc. Am. J.* 71:306-313.
84. Communar, G., and **R. Keren**. 2008. Boron Adsorption by Soils as affected by Dissolved Organic Matter from Treated Sewage Effluent. *Soil Sci. Soc. Am. J.* 72: 492-499.
85. Fahu Li and **R. Keren**. 2008. Native CaCO<sub>3</sub> mineral dissolution and its contribution to sodic calcareous soil reclamation under laboratory conditions. *Arid Land Research and Management*. 22:1-15.
86. Yermiyahu U., A. Ben-Gal, **R. Keren** and R.J. Reid. 2008. Combined effect of salinity and excess boron on plant growth and yield. *Plant Soil* 304:73-87.

87. **Keren, R.** and G. Communar. 2009. Boron sorption on wastewater dissolved organic matter: pH effect. *Soil Sci. Soc. Am. J.* 73: 2021-2025.
88. **Keren, R.** and G. Communar. 2009. Boron transport in soils as affected by dissolved organic matter in treated sewage effluent. *Soil Sci. Soc. Am. J.* 73: 1988-1994.

### **Relevant Reviewed Chapters in Books (out of 13):**

3. **Keren, R.** and F.T. Bingham. 1985. Boron in water, soils and plants. A review chapter in: "Advances in Soil Science". (B.A. Stewart, ed.). pp. 229-276.
4. **Keren, R.** and S. Miyamoto. 1990. Reclamation of saline-, sodic-, and boron-affected soils. A review chapter in: "Agricultural Salinity Assessment and Management". (K.K. Tanji, ed.) ASCE Manuals and reports in Engineering Practice. American Society of Civil Engineering. New York. NY. pp. 410-431.
5. **Keren, R.** 1995. Reclamation of sodic affected soils. A review chapter in "Soil erosion, conservation and rehabilitation" (M. Agassi, ed.). Marcel Dekker, Inc. pp. 353-374.
6. **Keren, R.** 1996. Boron. A review chapter in "Methods of Soil Analysis, Part 3 - Chemical Methods" (D.L. Sparks et al., eds.) SSSA Book Series 5:603-626. Soil Science Society of America, Inc. Madison, WI USA. pp. 603-626.
7. **Keren, R.** 1999. Salinity. A review chapter in "Handbook of Soil Science" (M.E. Sumner, ed.). CRC Press, Inc. pp G3-G25.
8. **Keren, R.** 2003. Soil alkalization. A review chapter in: "Processes in the soil-plant system: Modeling concepts and applications". ( D.K. Benbi and R. Nieder, eds). The Haworth Press, Inc. Binghamton, NY, USA. (199-225)
9. **Keren, R.** 2003. Boron in Water Supplies. A review chapter in: "Encyclopedia of Water Science. (B. A. Stewart and T. Howell, eds.). Marcel Dekker, Inc. New York, NY, USA.
10. **Keren, R.** 2003. Salt-affected soils, reclamation. A review chapter in: "Encyclopedia of Soils in the Environment". (D. Hillel, ed.). Academic Press. London, UK. (454-461).
11. **Keren, R.** and S. Miyamoto. 2008. Reclamation of saline-, sodic-, and boron-affected soils. A review chapter in: "Agricultural Salinity Assessment and Management". (K.K. Tanji, ed.) ASCE Manuals and reports in Engineering Practice. American Society of Civil Engineering. New York. NY. Second Edition (in press).
12. Yermiyahu, U., A. Ben-Gal and **R. Keren.** 2008. Boron in Water, Soils and Crops. (in preparation).
13. **Keren, R.** 2008. Salinity. A review chapter in "Handbook of Soil Science" (M.E. Sumner, ed.). Second addition CRC Press, Inc. pp G3-G25.

**Articles in Non-Reviewed Journals: 23 papers**