

## Curriculum Vitae

**Date and Place of Birth:** September 6, 1936, Rehovot, Israel.

**Citizenship:** Israeli

**Marital Status:** Married, two children.

**Present Position:** Professor Emeritus  
Department of Science Teaching  
The Weizmann Institute of Science

**Address:** Department of Science Teaching  
The Weizmann Institute of Science, Rehovot 76100, Israel.

**Phone:** 972-8-9343895 (office); 972-8-9461270 (home);  
972-54-7517725 (mobile)

**FAX:** 972-8-9473677

**E-mail:** uri.ganiel@weizmann.ac.il

### Education

1954: Graduated from "Herzlia" High School, Tel-Aviv.

1954-1957: Military Service, Israel Defense Forces.

1958-1963: Hebrew University, Jerusalem, Israel: Physics (Major),  
Mathematics and Applied Mathematics (Minors).

1963: M.Sc. (Theoretical Physics), with distinction.  
Thesis: "The Configuration  $f^6$  ( $^7F$ ) sp in Sm I".  
Adviser: Prof. G. Racah.

1963-1968: Feinberg Graduate School, The Weizmann Institute of  
Science, Rehovot, Israel:  
Ph.D. student.

1968: Ph.D. (Physics).  
Thesis: "Investigations Utilizing the Nuclear Quadrupole Interaction in Solids". Advisers: Profs. S. Alexander and S. Shtrikman.

### **Prizes and Awards**

1958,1959,1960,1961: Hebrew University, Jerusalem, prizes for excellence in scholastic performance.

1967: Weizmann Institute of Science: Mif'al Ha'pais prize for outstanding scholastic performance.

1983: National Association for Research in Science Teaching (NARST), USA: Award for an "outstanding paper emphasizing classroom application". Full version of the paper was published afterwards (No. 46 in attached list of publications A).

1984: National Association for Research in Science Teaching (NARST), USA: "Outstanding Paper Award". Full version of the paper was published afterwards (No. 51 in attached list of publications A).

1985: Award of Merit from the Editorial Board of Science Education for the paper: "Forgetting Versus Savings: The Many Facets of Long Term Retention" (No. 51 in attached list of publications A).

### **Chronological Summary of Professional Activities**

1959: Mathematics and Physics teacher - high school of the Israel Defense Forces (Jerusalem).

1961-1962: Teaching Assistant, Department of Theoretical Physics, Hebrew University, Jerusalem.

1962-1963: Mathematics and Physics teacher, Hebrew High School, Jerusalem.

- 1963-1968: Research towards Ph.D.: Nuclear Quadrupole Resonance Spectroscopy; Mössbauer Spectroscopy applied to Crystal Field Theory, Nuclear Hyperfine Interactions in Magnetic Materials, Magnetic Susceptibilities.
- 1965: Physics and Mathematics teacher, Rehovot Unified High School, Rehovot.
- 1965-1967: Member of the "Rehovot Team", developing new Physics curricula for Israeli high schools (under the late Prof. A. de-Shalit).
- 1967: Consultant, Physics Dept., Nuclear Research Center - Negev, Beer Sheva, Israel.
- 1968: Research Associate, Department of Electronics, The Weizmann Institute of Science.
- 1968-1969: Research Physicist, Physics Department, Carnegie-Mellon University, Pittsburgh, PA. USA.  
Research in Mössbauer Spectroscopy, Crystal Field Theory and Magnetism.
- 1969-1971: Research Fellow, Division of Engineering and Applied Science, California Institute of Technology, Pasadena, CA., USA.  
Research in Quantum Electronics: Solid State Lasers (Nd: YAG, Ruby); Non Linear Optics; Parametric Fluorescence and Parametric Oscillators in the Near Infra Red (theoretical and experimental studies).
- 1972-1976: Senior Scientist, Department of Electronics, The Weizmann Institute of Science. Experimental and theoretical investigations in the area of Laser Physics. Development of Tunable Coherent Light Sources and their application to physics research.

- 1972-1976: Consultant, Physics Group, Department of Science Teaching, The Weizmann Institute of Science. Participated in the development of learning materials (textbooks, laboratory experiments) for high school physics courses.
- 1976: Associate Professor, The Weizmann Institute of Science.
- 1976-2001: Head of the Physics group, Department of Science Teaching, The Weizmann Institute of Science. Responsible for the development of physics curricula and learning materials, their implementation and evaluation, in-service training courses for high school teachers. Research in Science Education.
- 1976-1980: Member of the Curriculum Committee in Physics for the Israeli Ministry of Education.
- 1977-1978: Visiting Professor of Physics and Electrical Engineering, University of Southern California, Los Angeles, CA. USA. Taught undergraduate courses in physics. Research in non-linear spectroscopy and laser physics. (Sabbatical)
- 1978-1988: Committee for the matriculation examinations in physics in Israel (scientific supervisor).
- 1978-2001: The Israeli Science Teaching Center: member of the Executive Board.
- 1979: Chairman of the Organizing Committee - International Conference on Physics Education, (5th GIREP Conference. GIREP - International Research Group on Physics Teaching).
- 1981: Appointed to the Rudy Bruner Professorial Chair in Science Teaching, The Weizmann Institute of Science.

- 1981-1987: Member - Committee for Academic Accreditation of Teacher Training Colleges (for the Israeli Council for Higher Education).
- 1981-1982: Visiting Professor - College for Technological Education-Holon, Israel:  
Taught a freshman physics course.
- 1982-1983: Member - American Association of Physics Teachers (AAPT)/National Science Teacher Association (NSTA) - High School Physics Examination Committee.
- July 1982: Visiting Scientist, Physics Department , University of the Witwatersrand, Johannesburg, S. Africa. Delivered a series of invited lectures at the Physics Departments of the Universities of Cape Town, the Natal (Durban), Potchesfroom, and the Orange Free State (Bloemfontein).
- Sept. 1983-  
Dec. 1983: Chief Scientist, Science Project, WICAT Systems, Orem, Utah, USA: Planning, Design and Development of computer-based courses in science. (Sabbatical)
- Jan. 1984-  
July 1984: Visiting Scientist, David O. McKay Institute of Education, Brigham Young University, Provo, Utah, USA. Design and production of an Interactive Videodisc on the Physics of Motion. (Sabbatical)
- 1985-1993: Chairman, Physics Committee for Schools, Israeli Ministry of Education.
- 1986-2001: Chairman, Department of Science Teaching, The Weizmann Institute of Science.
- March 1990: Invited participant, First Planning Workshop, UNESCO University Foundation Course in Physics (Augsburg, Germany).
- 1990-1993: Chairman of the Executive Board and Director, the Israeli Science Teaching Center.

1990-1992: Member - High Commission for Science and Technology, appointed by the Israeli Minister of Education. The report of this commission became known as **“The Tomorrow ’98 Report”**.

April 1991: Invited participant, Second Planning Workshop, UNESCO University Foundation in Physics (Poona, India).

July 1991: Member - International Steering Committee of the UNESCO Project: University Foundation Course in Physics.

Sept. 1993- Visiting Professor, Department of Physics, The Ohio State University, Columbus, Ohio, USA.

Aug. 1994: Taught Physics by Inquiry (two quarters); Research on student concepts in E&M. Participation and Evaluation of Teacher workshops within the Ohio Systemic State Initiative, Project Discovery. (Sabbatical)

1993-1999: Elected Member, IUPAP International Commission on Physics Education (ICPE, Commission C-14), 1993-1996 and 1996-1999 terms.

Aug. 1994: Invited participant, Working Group Meeting, UNESCO University Foundation Course in Physics (Beijing, China).

1995-1998: Member - Steering Committee on Science and Technology Education, appointed by the Israeli Ministry of Education.

1995-1996: Member - Planning Committee, new High School course on "Science and Technology for All", appointed by the Israeli Ministry of Education.

Sept. 1997-

July 1998: Visiting Professor, Department of Physics, The Ohio State University, Columbus, Ohio, USA. Research on student

concepts in E&M. Research on Reform in Education.  
(Sabbatical)

Aug. 1998-

Oct. 1998 Visiting Professor, Science and Mathematics Education Center(SMEC), Curtin University of Technology, Perth, Australia. (Sabbatical)

2000: Member- Commission for Science and Technology Education, appointed by the Israeli Minister of Education.

May 2001-

July 2001: Visiting Professor, Center for Highly Interactive Computing in Education, School of Education, University of Michigan, Ann Arbor, Michigan, USA (Sabbatical)

Oct. 2001-

Sept. 2004 Professor - On Extension of Service Incumbent, the Rudy Bruner Professorial Chair in Science Teaching, Department of Science Teaching, The Weizmann Institute of Science

Jan. 2002-

Aug. 2012: Chairman of the Academic Council, Arab College of Education, Haifa, Israel

January 2002-

Dec.2012: Member of the Academic Council, Achva College of Education, Israel

July 2002-

Dec. 2010: Head, M.Ed. program in Science Education Arab College of Education, Haifa, Israel

Jan. 2003-

June 2003 Visiting Professor, Department of Physics, The Ohio State University, Columbus, Ohio, USA  
Taught a Graduate course on Physics Education Research (Winter quarter)  
Taught a course on “Physics by Inquiry” (Spring quarter)

October 2003: Expert Evaluator for the European Commission (Framework Program 6, European Science Education Initiative)

October 2004- Professor Emeritus  
Department of Science Teaching  
The Weizmann Institute of Science

March 2006: Expert Evaluator for the European Commission  
(Framework Program 6, European Science Education  
Initiative)

Jan. 2015-

Jan. 2018 Committee on *International Physics Education*  
of the *American Association of Physics Teachers*

### **Teaching Activities - Graduate School and In-Service Teacher Training**

1971-1976: Board of Studies - Applied Physics (member: 1971;  
Chairman: 1972-1976). Responsible for planning of courses,  
student admission, programs of studies, theses and  
examinations. Member - Steering Committee of the  
Feinberg Graduate School. Supervised a number of students  
in thesis work for M. Sc. and Ph.D. degrees in Applied  
Physics.

1971-1973: Taught graduate courses in Quantum Electronics.

1977-1996: Chairman, Board of Studies - Science Teaching.

1977- Regularly supervise graduate students in Science Teaching  
in their M.Sc. and Ph.D. projects.

1977- Teach regularly at the in-service courses for teachers, run at  
the Weizmann Institute of Science.

1981: Developed and taught a course of Problem Solving in  
Physics (Youth Activities Section).

1994: Taught “Physics by Inquiry” (two quarters), a physics  
course for pre-service teachers at the Physics Department,  
the Ohio State University, Columbus, Ohio.



2003: Taught a Graduate course on “Physics Education Research” (Winter quarter).  
Taught “Physics by Inquiry” (Spring quarter) - both at the Physics Department, The Ohio State University, Columbus, Ohio

### **Professional Societies and Scientific Service Bodies**

Physics Education (U.K.): International Advisory Panel (1989-1992)

European Physical Society: Action Committee on Physics Education (1989-1992)

American Association of Physics Teachers (USA)

National Association for Research in Science Teaching (NARST-USA)

GIREP - International Research Group on Physics Teaching

International Steering Committee - UNESCO Project: University Foundation Course in Physics.

ICPE - International Commission on Physics Education (IUPAP Commission C-14, '93-'96, '96-'99)

Israel Association for Computers in Education

Israel Physical Society