Uri Ganiel November 2011

List of Publications

A. PAPERS

1. Nuclear Quadrupole Spectra in very Asymmetric Field Gradients.
S. Alexander and U. Ganiel
Journal of Chemical Physics, *43*, 4060 (1965).

2. Sub configuration $f^6(^7F)sp$ in Sm I.
G. Racah and U. Ganiel
Journal of the Optical Society of America, *56*, 893 (1966).

3. Measurement of the Trigonal Field Splitting of Fe^{2+} in $GeFe_2O_4$ by the Mössbauer Effect.
M. Eibschuts, U. Ganiel and S. Shtrikman.
The Physical Review, *151*, 245 (1966).

4. Crystal Field Studies of Fe^{2+} in $FeNb_2O_6$ by the Mössbauer Effect.
M. Eibschuts, U. Ganiel and S. Shtrikman.
The Physical Review, *156*, 259 (1967).

5. Mössbauer Studies of Fe^{2+} in Paramagentic Fayalite (Fe_2SiO_4).
M. Eibschuts and U. Ganiel.
Solid State Communs. *5*, 267 (1967).

6. Comments on the Study of the Zeeman Effect in SmI.
U. Ganiel
Zeitschrift für Physik, *200*, 419 (1967).

7. Magentically Induced Quadrupole Interaction in Octahedral Fe^{2+}: $RbFeF_3$.
U. Ganiel, M. Kestigian and S. Shtrikman
Physics Letters, *24A*, 577 (1967).

8. Magnetically Induced Electric Field Gradients in Octahedral Fe^{2+}: $RbFeF_3$.
U. Ganiel, M. Kestigian and S. Shtrikman
Journal of Applied Physics, *39*, 1254 (1968).

9. Theory of Magnetically Induced Electric Field Gradients in Cubic Fe^{2+}.
U. Ganiel and S. Shtrikman
The Physical Review, *167*, 258 (1968).

10. Mössbauer Studies of Paramgentic $FeSb_2O_4$.
M. Eibschuts and U. Ganiel.
Solid State Communs., *6*, 775 (1968).

11. Crystal Field Studies of Fe^{2+} by the Mössbauer Effect: FeF_2.
U. Ganiel and S. Shtrikman
The Physical Review, *177*, 503 (1969).

12. On the Valence of Iron in Tripuhyite: A Mössbauer Study.
U. Ganiel and M. Malamud
American Mineralogist, *54* 299 (1969).

13. Mössbauer and Magnetic Studies of Dicalcium Ferrite ($Ca_2Fe_2O_5$).
M. Eibschuts, U. Ganiel and S. Shtrikman.
Journal of Materials Science, *4*, 574 (1969).

14. Mössbauer Studies of $KFeF_3$ below the Antiferromagnetic Transition.
U. Ganiel, M. Malamud and S. Shtrikman.
Bull. Am. Physical Soc., *14*, 133 (1969).

15. On the Quadrupole Splitting in Ferrous Compounds.
U. Ganiel
Chemical Physics Letters, *4*, 87 (1969).

16. Equation of Motion for the P-Representation.
B. Crosignani, U. Ganiel, S. Solimeno and P. Di Porto.
The Physical Review A, *4*, 1570 (1971).

17. Some Consequences of Pump Coherence on Energy Exchange in Nonlinear Optical Processes.
B. Crosignani, U. Ganiel, S. Solimeno and A. Yariv.
Physical Review Letters, *27*, 237 (1971).

18. Studies of Magnetic Ordering in Cu_2FeSnS_4 by Mössbauer Spectroscopy.
U. Ganiel, E. Hermon and S. Shtrikamn.
J. Phys. Chem. Solids, *23,* 1873 (1972).

19. Parametric Oscillator Tuning Curve from Observations of Total Parametric Fluorescence.
J.E. Pearson, U. Ganiel and A. Yariv.
IEEE Journal of Quantum electronics *QE-8*, 383 (1972).

20. Rise Time of Pulsed Parametric Oscillators.
J.E. Pearson, U. Ganiel and A. Yariv.
IEEE Journal of Quantum electronics *QE-8*, 433 (1972).

21. The Effect of Pump Coherence on Frequency Conversion and Parametric Amplification.
B. Crosignani, P. Di Porto, U. Ganiel, S. Solimeno and A. Yariv.
IEEE Journal of Quantum electronics *QE-8*,, 731 (1972).

22. Observation of Parametric Fluorescence and Oscillation in the Infrared.
J.E. Pearson, A. Yariv and U. Ganiel.
Appl. Optics, *12*, 1165 (1973).

23. Simultaneous Multiple Wavelength Operation of a Tunable Dye Laser.
A.A. Friesem, U. Ganiel and G. Neumann.
Appl. Phys. Letters, *23,* 249 (1973).

24. A Tunable Dye Laser with a Composite Holographic Wavelength Selector.
A.A. Friesem, U. Ganiel and G. Neumann.
Opt. Commun., *9,* 149 (1973).

25. Early Termination of Flashlamp Pumped Dye Laser Pulses by Shock Wave Formation.
S. Blit, A. Fisher and U. Ganiel
Appl. Optics, *13*, 335 (1974).

26. Power Output Coupling in a Dye Laser Pumped by a Nitrogen Laser.
U. Ganiel and G. Neumann.
Opt. Commun., *12,* 5 (1974).

27. The Stability of Optical Resonators with an Active Medium.
U. Ganiel and Y. Silberberg.
Appl. Optics, *14*,306 (1975).

28. Distribution of Absorbed Pump Power in Flashlamp Pumped Dye Laser.
S. Blit and U. Ganiel.
Optical and Quantum Electronics, *7*, 87 (1975).

29. Stability of Optical Laser Resonators with Mirrors of Gaussian Reflectivity Profiles which Contain an Active Medium.
U. Ganiel, A. Hardy and Y. Silbergerg.
Opt. Commun., *14*, 290 (1975).

30. Amplified Spontaneous Emission and Signal Amplification in Dye Laser Systems.
U. Ganiel, A. Hardy, G. Neumann and D. Treves.
IEEE Journal of Quantum Electronics *QE-11*, 88 (1975).

31. Eigenmodes of Optical Resonators with Mirrors of Gaussian Reflectivity Profiles.
U. Ganiel and A. Hardy.
Appl. Optics, *15*, 2145 (1976).

32. Analysis of Injection Locking in Pulsed Dye Laser Systems.
U. Ganiel, A. Hardy and D. Treves.
IEEE Journal of Quantum Electronics *QE-12*, 704 (1976).

33. Narrowband, Tunable, Subnanosecond Pulse Generation in Injection Locked Dye Laser Systems.
U. Ganiel and A. Hardy.
Opt. Commun., *19*, 14 (1976).

34. A Tunable, Single Mode, Injection-Locked Flashlamp Pumped Dye Laser.
S. Blit, U. Ganiel and D. Treves.
Appl. Physics, *12*, 69 (1977).

35. The Stability of Modes in a Laser Resonator which Contains an Active Medium.
Lee W. Casperson and U. Ganiel
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36. "Physics Teaching - Oscillations and Waves, Current Problems" (Proceedings of the 1979 GIREP Conference).
U. Ganiel, Editor, Balaban International Science Services (Philadelphia - Jerusalem, 1980).

37. Measurement of the Magnetic Flux Density of the Earth with a Bicycle.
R. Cohen, U. Ganiel and D. Singer.
The School Science Review, *63*, no. 222, 184 (1981).

38. Science and Mathematics Education in South Africa (Invited report following a visit to the Republic of South Africa).
U. Ganiel
CHEMSA (S. Africa), May 1981, pp. 107-108.

39. Teaching Nuclear Physics in School in Different Countries.
U. Ganiel
(Invited - Concluding remarks by the Chairman of an International Panel Discussion) in: "Nuclear Physics, Nuclear Power - Teaching Physics in School". (Edited by G. Marx). Eotvos University, Budapest, Hungary, 1981, pp. 234-237.

40. Objective and Continuous Assessment of Student Performance in the Physics Laboratory.
U. Ganiel and A. Hofstein.
Science Education, *66*(4), 581 (1982).

41. Potential Difference and Current in Simple Electric Circuits: A Study of Students' Concepts.
R. Cohen, B. Eylon and U. Ganiel.
American Journal of Physics, *51*, 407 (1983).

42. Letter to the Editor (speed of light measurement)
Uri Ganiel
American Journal of Physics, *51*, 585 (1983)

43. Solar Energy - How much do we receive?
U. Ganiel and O. Kedem.
The Physics Teacher, *21*, 573 (1983).

44. Teacher Training Towards Implementation of New Courses: Inferences from Comparisons Between Teachers' and Students' Judgments.
H.J. Arzi, R. Ben-Zvi and U. Ganiel
In: Preservice and In service Training of Science Teachers, (P. Tamir, A. Hofstein and M. Ben-Peretz, Editors, Balaban International Science Services, Philadelphia, Rehovot 1983), pp. 581-589.

45. Can Teachers Speak for their Students? - A Comparison Between Teachers' and Students' Evaluation of a School Science Course.
H.J. Arzi, R. Ben-Zvi and U. Ganiel.
European Journal of Science Education, *6*, no. 4, 379 (1984).

46. Physics in Medical Diagnosis - an optional unit for high school.
M. Ronen and U. Ganiel
Physics Education, *19*, 288 (1984).

47. Proactive and Retroactive Facilitation of Long Term Retention by Curriculum Continuity.
H.J. Arzi, R. Ben-Zvi and U. Ganiel
American Educational Research Journal, *22*, no. 3, 369 (1985).

48. Learning Difficulties in High School Physics: Development of a Remedial Teaching Method and Assessment of its Impact on Achievement.
J. Idar and U. Ganiel.
Journal of Research in Science Teaching, *22*, no. 2, 127 (1985).

49. Long Term Investments in Science Teaching: A Longitudinal Evaluation Study of Physical Science Learning from Junior to Senior High School. (in Hebrew)
H.J. Arzi, R. Ben-Zvi and U. Ganiel
In: "Science Teaching in Israel" (in Hebrew). P. Tamir and A.M. Meir, editors.
The Israeli Science Teaching Center, Jerusalem, 1985, pp. 272-290.

50. Problem Solving in High School - A Necessary Addition to the Physics Curriculum.
B. Eylon, I. Singer and U. Ganiel
In: "The Many Faces of Teaching and Learning Mechanics"
(Edited by P.L. Lijnse). W.C.C. - Utrecht, The Netherlands, 1985, pp. 312-318.

51. Student Misconceptions in Physics - How can Computers Help?
U. Ganiel and J. Idar
Journal of Computers in Science and Mathematics Teaching, *4*, no. 3, p.14 (1985).

52. Forgetting versus Savings: The Many Facets of Long Term Retention.
H.J. Arzi, R. Ben-Zvi and U. Ganiel
Science Education, *70*(2), 171 (1986).

53. Astrophysics in High School: What and How?
Z. Geller and U. Ganiel
In: "Cosmos - an Educational Challenge" (Edited by J.J. Hunt, ESA Publications Division, ESTEC, Noordwijk, The Netherlands, 1986), pp. 251-253.

54. Electrostatics and Electrodynamics - The Missing Link in Students' Conceptions.
U. Ganiel and B. Eylon
In: Misconceptions and Educational Strategies in Science and Mathematics (Procs. of the Second International Seminar), Cornell University, N.Y. 1987, Vol. III, pp.169-179.

55. Electrostatics and Electrodynamics - A Case of Micro versus Macro.
U. Ganiel
In: Cooperative Networks in Physics Education. A.I.P Conference proceedings, published by the American Institute of Physics, NY 1988 (J. Barojas, ed.) pp. 225-234.

56. High School Optics with Microcomputers.
D. Singer and U. Ganiel
In: Computers in Education (F. Lovis and E.D. Tagg, eds., Elsevier Science Publishers B.V., 1988), pp. 55-60.

57. From Assumption of Knowledge to Knowledgeable Considerations: A class activity introducing the topic of Ionizing Radiation and its Biological Effects.
M. Ronen and U. Ganiel
International Journal of Science Education, *10*, no. 5, pp. 523-529 (1988).

58. Physics in Action: Visiting a Hospital.
M. Ronen and U. Ganiel
Physics Education, *24*, 18 (1989).

59. Physics in Medical Diagnosis - Implementation and Evaluation of an Applied Science Unit for High School.
M. Ronen and U. Ganiel
Research in Science and Technological Education, *7*, no. 1, 93 (1989).

60. Macro-Micro Relationships: The Missing Link Between Electrostatics and Electrodynamics in Students' Reasoning.
B. Eylon and U. Ganiel
International Journal of Science Education, *12*, no. 1, pp. 79-94 (1990).

61. Solar Energy Experiments.
O. Kedem and U. Ganiel
In: "Energy Alternatives and Risk Education" (George Marx, editor.
National Center for Educational Technology, Veszprem, Hungary, 1990) pp.73-80.

62. Medical Diagnosis, Ionizing Radiation and Physics Education.
Uri Ganiel
In: "Energy Alternatives and Risk Education" (George Marx, editor. National Center for Educational Technology, Veszprem, Hungary, 1990) pp.151-169.

63. Elastic and Inelastic Collisions: A Model. (or: What happens to the Kinetic Energy?)
Uri Ganiel
The Physics Teacher, *30*, 18 (1992).

64. Integrating Computer Simulations into High School Physics Teaching.
Miky Ronen, Dorothy Langley and Uri Ganiel
Journal of Computers in Science and Mathematics Teaching, *11*, no. 3/4, p.319 (1992).

65. Designing and Using an Open Graphic Interface for Instruction in Geometrical Optics.
Miky Ronen, Bat-Sheva Eylon, Ofra Rivlin and Uri Ganiel
Computers and Education, *20*, no. 4, pp. 299-309, (1993).

66. Integrating Domains of Physics: Learning Strategies and the Role of Teachers
E. Bagno, B. Eylon and U. Ganiel
in: Proceedings of the *Third International Seminar on Misconceptions and Educational Strategies in Science and Mathematics* Misconceptions Trust: Ithaca, NY (1993).

67. Fostering Change in Science Education: Creation, Implementation, Evaluation and Research-
The Israeli Experience.
Uri Ganiel
In : *Science Education in Developing Countries: From Theory to Practice.* (Selected papers from an international conference, Jerusalem, Israel, Jan. 3-7, 1993. Published by the Department of Science Teaching, The Weizmann Institute of Science, Rehovot, Israel, 1995) pp. 31-39.

68. Computer Simulations as a Tool for Teaching and Learning: Using a Simulation Environment in Optics
B. Eylon, M. Ronen and U. Ganiel
Journal of Science Education and Technology, *5*, no. 2, pp. 93-110 (1996)

69. Science Education Reform: Some Lessons and Perspectives- The Israeli Experience
Uri Ganiel
Proceedings: European Union - Weizmann Institute of Science
Joint Seminar on *New Approaches to Science Education*
Brussels, Belgium, June 2-4, 1998

70. Macroscopic Phenomena and Microscopic Processes: Student Understanding of Transients in DC Electric Circuits
Beth Ann Thacker, Uri Ganiel and Don Boys
Physics Education Research Supplement
American Journal of Physics *67*, (S1), pp. S25-S31 (1999)

71. Linking Electrostatics to Electrodynamics, Macro to Micro:
Student Understanding of Electric Circuits
Uri Ganiel
In: *Proceedings of the1999 International Conference of Physics Teachers&Educators,* pp. 69-76
(Guilin, China, August 19-23, 1999)

72. From Fragmented Knowledge to a Knowledge Structure: Linking the Domains of Mechanics and Electromagnetism
E. Bagno, B. Eylon and U. Ganiel
Physics Education Research Supplement
American Journal of Physics *68,* (S2), pp. S16-S26 (2000)

73. Fostering Change in Science Education: The Israeli Experience
Uri Ganiel
In*: Proceedings of the International Conference on Redesign In Science Education (RISE)*
(Columbus, Ohio, USA, Oct. 20-21, 2000), pp.79-106
(Editors: Michael E. Beeth, Hyeoksoon Kwon, Gyoungho Lee,
The Ohio State University, Columbus, Ohio, USA, 2000)
Electronic version: http://www.coe.ohio-state.edu/rise/

74. Free Fall, Air Resistance, Galileo and Newton: Why are Students Confused?
Uri Ganiel
In: ***Dilemmas of Science Teaching*****:** *Perspectives on problems of practice*
(Wallace, J. and Louden, W.,editors, Routledge Falmer, London and New York, 2002) pp. 224-228.

75. The Solar Constant
Uri Ganiel
Letter to the Editor, The Physics Teacher *42,* 196 (2004)

76. Explanatory Framework for Popular Physics Lectures
Shulamit Kapon, Uri Ganiel, and Bat Sheva Eylon
Procs. of the Physics Education Research Conference (PERC)
(Greensboro, NC, 1-2 August 2007), pp. 124-127
AIP Conference Proceedings, vol. 951 (2007)

77. Fostering Change in Science Education:
Creation, Implementation, Evaluation and Research
Uri Ganiel
In: Jubilee Volume in Honor of Dr. Najib Nabuani:
Studies in Philosophy, Culture & Education
(The Academic Arab College for Education in Israel, 2007.
ISBN 9789655280067), pp.45-83

78. Scientific Argumentation in Public Physics Lectures: Bringing Contemporary Physics into High School Physics Teaching
S. Kapon, U. Ganiel and B. Eylon
Physics Education *44*, pp. 33-38, (2009)

79. Explaining the Unexplainable: Translated Scientific Explanations (TSE) in Public Physics Lectures
S. Kapon, U. Ganiel and B. Eylon
International Journal of Science Education *32*, no.2*,* pp. 245-264, (2010)

80. Goals and design of public physics lectures: perspectives of high school students, physics teachers and lecturers
S. Kapon, U. Ganiel and B. Eylon
Physics Education *44*, pp. 528-535, (2009)

81. Public physics lectures as an instructional resource: Tracing changes in students' knowledge
S. Kapon, U. Ganiel and B. Eylon
Naional Association for Research in Science Teaching (USA) –
Proceedings of the 2010 Conference (March 21-24, 2010, Philadelphia, USA)

82. Utilizing public scientific web lectures to teach contemporary physics at the high school level: A case study of learning
Shulamit Kapon, Uri Ganiel, and Bat Sheva Eylon
Physical Review Special Topics - Physics Education Research 7(2), 2011

B. CURRICULUM MATERIALS (IN HEBREW)

The Physics Group at the Science Teaching Department published many textbooks for high school physics in Hebrew. From 1977 to 2001 I was responsible for all the curriculum materials published by the group: sometimes as co-author, and in all of them as scientific adviser and editor.
Titles marked with (#) have also been translated into Arabic.

Books Published (1978-2001)

1. Introductory Mechanics (grades 10-11; authors: members of the group). (#)

2. Light and Waves (for grades 10-11; authors: members of the group). (#)

3. Light and Waves: a Teacher's Guide, Vols. I, II. (main author: D. Singer).

4. Introductory Electricity and Magnetism (for grades 10-11, intermediate level;
   main author: D. Singer). (#)

5. AC Circuits (elective for grade 12; main author: R. Cohen).

6. Waves and Physical Optics (for grades 11-12; main author: Z. Geller). (#)

7. Electricity and Energy-Feedback;
   Book 1: Questions
   Book 2: Answers and Explanations
   (Remedial teaching materials for grade 9; authors: J. Idar and U. Ganiel).

8. Physics in Medical Diagnosis (elective for grade 12; main author: M. Ronen).
   a. Student text
   b. Teacher guide

9. Atoms and Nuclei (for grades 10-11, non-science majors)
   a. Student text (main author: S. Ozeri)
   b. Teacher guide (S. Ozeri and H. Goldring).

10. Energy (for grades 10-11, non-science majors; main author: H. Goldring).
    a. Student text
    b. Teacher guide

11. Mechanics (a course for self-study, developed for Everyman's University, for students who prepare for the matriculation examinations in physics; main author: D. Singer.)
    Vol. I. published, Vol. II - in press.

12. Topics in Electromagnetism (for grades 11-12; authors: members of the group): Revised and corrected edition of a previous text.

13. Organization of Concepts in Electromagnetism (for grade 12; main authors: E. Bagno and B. Eylon).

14. Matriculation Examinations in Physics: problems and answers.
    a. for 4-5 credit points
    b. for 3 credit points
    c. for 2 credit points

15. Advanced Experiments in Physics (for grades 11-12; main author: H. Brucker).

16. Topics in Astrophysics (elective for grade 12; main author: Z. Geller).

17. Laboratory guide for High School Physics (for grades 10-12; main author: D. Singer).

18. Introduction to Thermodynamics (elective for grade 12; authors: H. Brucker, U. Ganiel, Z. Geller and H. Goldring).

19. Topics in 20th Century Physics (for grade 12; authors: R. Cohen, U. Ganiel and Y. Kirsh). (#)

20. Newtonian Mechanics, vol. 1, (for grades 11-12; main author: A.Rosen). (#)

21. Newtonian Mechanics, vol. 2 (for grades 11-12; main author: A. Rosen). (#)

22. “MAOF” - Fields and Potentials (MAOF - Overview in Hebrew); for grade 12; authors: E. Bagno, B. Eylon and U. Ganiel)

23. Lasers and their Applications (elective for grade 12; main author: R. Arieli).

24. Electromagnetism: a new text for physics majors (for grade 12. Authors: The Physics Team). (#)

    Vol. 1: Topics in Electricity. Vol. 2: Topics in Magnetism

25. Chaos - An Introduction (elective for grade 12; main author: C. Berkovich-Gelman)

Microcomputer Software

Modules 1-5 developed in 2 versions: for Apple II computers and for IBM-PC's (or clones).

Module 6 is available for Macintosh only. Modules 7&8 are available for Windows(MS) only.

Each module includes a diskette and an instruction booklet.

1. Roemer's experiment: simulation and tutorial (main author: D. Singer).

2. Fermat's principle: simulation and tutorial (main author: D. Singer).

3. Hide and Seek in mirrors: simulation game and tutorial (main author: D. Singer).

4. Thin Lenses: tutorial (main author: D. Singer).

5. Investigation of a Water Jet: A simulation and inquiry module (Apple II only,

   main author: D. Singer).

6. RAY: A Geometrical Optics Tutor (for the Macintosh computer. Main author: Miky Ronen).

7. Oscillations: A tutorial and investigation module (U. Ganiel)

8. Forces and Motions in a Plane - a package of computerized materials (main author: S.Rosenfeld)

C. CONFERENCE LECTURES AND ABSTRACTS

1. Magnetically Induced Quadrupole Interaction in Octahedral Fe^{2+}: $RbFeF_3$.
   U. Ganiel and S. Shtrikman
   (International Congress on Magnetism, Aug. 1967, Boston, USA).

2. Crystal-Field Studies of Fe^{2+} Compounds Utilizing Mossbauer Spectroscopy.
   U. Ganiel
   Bull. Israel Phys. Soc. (1968 Annual Meeting, April 1968, Jerusalem, Israel).

3. Studies of Magnetic Ordering in $Cu_2Fe^{57}Sn^{119}S_4$ by Mossbauer Spectroscopy.
   U. Ganiel, E. Hermon and S. Shtrikman.
   (Solid State Confernce, Manchester, Engalnd, January 1971).

4. Coherence and Efficiency in Nonlinear Optical Processes.
   B. Crosignani, P. Di Porto, U. Ganiel, S. Solimeno and A. Yariv.
   IEEE Journal of Quantum Electronics, QE-8, 575 (1972).
   (7th International Quantum Electronics Conference, Montreal, Canada, May 1972).

5. Mossbauer Study of Magnetic Ordering in Cu_2FeSnS_4.
   U. Ganiel, E. Hermon and S. Shtrikman.
   (International Conference on Applications of the Mossbauer Effect, August 1972, Ayeleth Hashahar, Israel).

6. Multiple Wavelength Tunable Dye Laser.
   A.A. Friesem, U. Ganiel and G. Neumann.
   Bull. Israel Phys. Soc. (1973 Annual Meeting, April 1973, Beer Sheva, Israel).

7. Pumping Intensity Inside a Dye Solution Tube.
   S. Blit and U. Ganiel
   Bull. Israel Phys. Soc. (1973 Annual Meeting, April 1973, Beer Sheva, Israel).

8. Shock Wave Disturbances in Flashlamp Pumped Dye Lasers.
   S. Blit, A. Fisher and U. Ganiel
   Bull. Israel Phys. Soc. (1973 Annual Meeting, April 1973, Beer Sheva, Israel).

9. Premature Termination of Flashlamp Pumped Dye Laser Pulses by Shock Wave Formation.
   S. Blit, A. Fisher and U. Ganiel
   IEEE Journal of Quantum Electronics, QE-9, no. 6 (1973).
   (Conference on Laser Engineering and Applications, May 1973, Washington, D.C.).

10. The Stability of Optical Resonators with an Active Medium.
    U. Ganiel and Y. Silberberg
    Bull. Israel Phys. Soc. (1974 Annual Meeting, April 1974, Rehovot, Israel).

11. Design Considerations for a Pulsed Tunable Dye Laser.
    U. Ganiel and G. Neumann.
    Bull. Israel Phys. Soc. (1974 Annual Meeting, April 1974, Rehovot, Israel).

12. Amplified Spontaneous Emission and Signal Amplification in
    Dye Laser Systems I: Theory.
    U. Ganiel, A. Hardy, G. Neumann and D. Treves.
    Bull. Israel Phys. Soc. (1975 Annual Meeting, Feb. 1975, Tel-Aviv, Israel).

13. Amplified Spontaneous Emission and Signal Amplification in
    Dye Laser Systems II: Experiment.
    U. Ganiel, A. Hardy, G. Neumann and D. Treves.
    Bull. Israel Phys. Soc. (1975 Annual Meeting, Feb. 1975, Tel-Aviv, Israel).

14. Simultaneous Two-Wavelength Amplification in Dye Laser Amplifiers.
    U. Ganiel, M. Nagler and D. Treves.
    Bull. Israel Phys. Soc. (1976 Annual Meeting, April 1976, Haifa, Israel).

15. Injection Locking of the Spectrum of Pulsed Dye Lasers. I. Analysis.
U. Ganiel, A. Hardy and D. Treves.
Bull. Israel Phys. Soc. (1976 Annual Meeting, April 1976, Haifa, Israel).

16. Injection Locking of the Spectrum of Pulsed Dye Lasers. II. Experimental.
S. Blit, U. Ganiel and D. Treves.
Bull. Israel Phys. Soc. (1976 Annual Meeting, April 1976, Haifa, Israel).

17. Identification of Learning Difficulties of 9th Grade Students in Physics.
J. Idar and U. Ganiel
(Fourth Convention - Israel Educational Research Association, March 1980, Haifa, Israel).

18. When a students says: "I am interested in Science", What does he mean? Some Characteristics of the Scientific Preference Scale of Junior High School Students.
H.J. Arzi, R. Ben-Zvi and U. Ganiel
(Fourth Convention - Israel Educational Research Association, March 1980, Haifa, Israel).

19. Development of an Instrument for Objective Assessment of Student Performance in the Physics Laboratory.
B. Levi, U. Ganiel and A. Hofstein
(Fourth Convention - Israel Educational Research Association, March 1980, Haifa, Israel).

20. Assessment of Student Performance in the Physics Laboratory.
U. Ganiel and A. Hofstein
(National Association for Research in Science Teaching, 1981 Annual Meeting,
New York, April 1981).

21. Diagnosis of Learning Difficulties in 9th grade Physics and Development of a Remedial Teaching Method.
J. Idar and U. Ganiel
(Sixth Annual Meeting, Israel Educational Research Association, February 1982, Tel-Aviv, Israel).

22. Implications of Integrated Science Teaching upon Students' Perceptions of the Different Disciplines of Science.
H.J. Arzi, R. Ben-Zvi and U. Ganiel
(National Association for Research in Science Teaching, 1982 Annual Meeting, Wisconsin, April 1982).

23. Diagnosis of Learning and Reasoning Difficulties of 9th Grade Physics Students
as a Basis for Developing Remedial Teaching Methods.
J. Idar and U. Ganiel
(National Association for Research in Science Teaching, 1982 Annual Meeting, Wisconsin, April 1982).

24. (*) Teaching Energy.
U. Ganiel
(South African Institute of Physics Annual Meeting, Stellenbosch, July 1982)

25. (*) The Laboratory in Physics Teaching.
U. Ganiel
(South African Institute of Physics Annual Meeting, Stellenbosch, July 1982)

26. (*) The New Physics Curricula in Israeli High Schools -Development and Redevelopment.
U. Ganiel
Invited plenary lecture.
(South African Institute of Physics Annual Meeting, Stellenbosch, July 1982)

27. (*) Practicals - How to Assess Them:
A Workshop for Academic Support Programme Lecturers and Tutors in the Sciences, held at the Academic Staff Development Center, University of the Witwatersrand, Johannesburg, South Africa. (July 1982).
Leader (invited) - U. Ganiel.

28. Do Junior High School Students Realize that Chemistry is a Distinct Discpline among the Natural Sciences?
H.J. Arzi, R. Ben-Zvi and U. Ganiel
(49th Annual Meeting of the Israel Chemical Society, Tel-Aviv, 1982).

(*)-invited

29. Effect of Continuity versus Discontinuity of Physical Science Teaching upon Long Term Retention of Antecedent Learning.
H.J. Arzi, R. Ben-Zvi and U. Ganiel
(National Assocaiton for Research in Science Teaching, 1983 Annual Meeting, Dallas, Texas, 1983).

30. Teacher Training Towards Implementation of New Science Curricula - Inferences from a Comparison between Teachers' and Students' Evaluation of a Junior High School Physical Science Course.
H.J. Arzi, R. Ben-Zvi and U. Ganiel
(Bat-Sheva Seminar on Presevice and Inservice Education of Science Teachers, Rehovot and Jerusalem, Israel, January 1983).

31. The Case for a Continuous Sequence of Physical Science Courses in Junior High School: Inferences from a Longitudinal Study.
H.J. Arzi, R. Ben-Zvi and U. Ganiel
(7th Convention - Israel Educational Research Association, Jerusalem, Israel, 1983).

32. Forgetting versus Savings: The Many Facets of Long-Term Retention.
H.J. Arzi, R. Ben-Zvi and U. Ganiel
(National Associaton for Research in Science Teaching, 1984 Annual Meeting, New Orleans, LA, 1984).

33. Microcomputers in Physics Education - How Can They be Utilized?
U. Ganiel and J. Idar
(1984 GIREP Conference, Utrecht, The Netherlands, August 20-25, 1984).

34. Teaching Problem Solving Skills in Mechanics to High School Students.
B. Eylon, I. Singer and U. Ganiel.
(1984 GIREP Conference, Utrecht, The Netherlands, August 20-25, 1984).

35. (*) Physics in High School: Curriculum Development and Related Research.
U. Ganiel
Invited lecture - 1985 Annual Meeting of the Israel Physical Society (Beer Sheva, Israel).

36. (*) How to Increase Long Term Retention in Introductory Science Courses?
H.J. Arzi, R. Ben-Zvi and U. Ganiel.
Invited paper - 33rd National Meeting of the National Science Teachers Association, Cincinnati, Ohio (1985).

37. High School Optics with Microcomputers.
D. Singer and U. Ganiel
International Conference on Courswave Design and Evaluation, Ramat Gan, Israel (April 1986).

38. Astrophysics in High School: What and How?
Z. Geller and U. Ganiel
1986 GIREP Conference (Elsinore, Denmark, August 18-23, 1986).

39. Electrostatics and Electrodynamics - The Missing Link in Students' Conceptions.
U. Ganiel and B. Eylon
International Conference on Trends in Physics Education (Tokyo, Japan,
August 24-29, 1986).

40. Measurement of the Solar Constant.
U. Ganiel and O. Kedem
International Conference on Trends in Physics Education (Tokyo, Japan,
August 24-29, 1986).

41. (*) Workshop on: Low Cost Experiments in Physics
International Conference on Trends in Physics Education (Tokyo, Japan,
August 24-29, 1986).
Leader - U. Ganiel

(*) - invited

42. (*) Physics Teaching Towards the Year 2000.
U. Ganiel
Invited lecture in a conference on: "Science and Technology in High Schools Towards the Year 2000", The S. Neaman Institute for Advanced Studies in Science and Technology, Technion (Haifa, Nov. 12-13, 1987).

43. (*) Electrostatics and Electrodynamics - A Case of Micro versus Macro.
U. Ganiel
Invited presentation. In: Cooperative Networks in Physics Education. A.I.P Conference proceedings, published by the American Institute of Physics, NY 1988,
J. Barojas, ed., pp. 225-234.

44. Software Packages for High School Optics.
D. Singer and U. Ganiel
Conference on Computers in Physics Instruction
(Raleigh, North Carolina, August 1-5, 1988).

45. (*) Potential Difference, Current, Electrostatics and Electrodynamics: Students' Reasoning about Electric Ciruits.
U. Ganiel
Invited talk. American Association of Physics Teachers, Summer Meeting,
San Luis Obispo, CA, June 26-July 1, 1989.

46. Goals and Limitations of Teaching Modern Physics in High School.
Y. Kirsh, U. Ganiel and R. Cohen
(Conference on: Science and Mathematics Education - Interaction Between Research Practice, Jerusalem, June 11-15, 1989).

47. (*) Medical Diagnosis, Ionizing Radiation and Physics Education.
U. Ganiel
Invited talk. International Conference on Energy Alternatives and Risk Education, Balaton, Hungary, September 7-13, 1989.

48. (*) UNESCO University Foundation Course in Physics, First Planning Workshop.
Invited participant.
Augsburg, W. Germany, March 1990.

49. Some Experiments Demonstrating Physics Concepts.
Uri Ganiel
International Conference on Physics Education Through Experiments
Tianjin, China, April 22-27, 1990.

50. (*) Workshop on : Improving Basic Skills through Experiments.
Leader- U. Ganiel
International Conference on Physics Education Through Experiments (PEE).
Tianjin, China, April 22-27, 1990.

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

52. (*) The Role of the Laboratory in Physics Education: Why and How? - Some Reflections and Queries.
Uri Ganiel
South African Institute of Physics Annual Meeting, Johannesburg, S. Africa, July 1992.

53. (*) Potential Difference, Current, Electrostatics and Electrodynamics:
Students' Reasoning about Electric Circuits.
Uri Ganiel
South African Institute of Physics Annual Meeting, Johannesburg, S. Africa, July 1992

(*) - invited

54. (*) Fostering Change in Science Education: Creation, Implementation, Evaluation and Research - The Israeli Experience.
Uri Ganiel
International Conference on: Science Education in Developing Countries: From Theory to Practice.
Jerusalem, Israel, January 3-7, 1993.

55. Designing Simulations for the Science Classroom: A Model for Commercial—Academic Cooperation.
Uri Ganiel and Yoel Givol
International Conference on: Science Education in Developing Countries: From Theory to Practice.
Jerusalem, Israel, January 3-7, 1993.

56. Physics Teachers' Representation of Knowledge - Deficiencies and Remedies.
Esther Bagno, Bat-Sheva Eylon and Uri Ganiel
International Conference on: Science Education in Developing Countries: From Theory to Practice.
Jerusalem, Israel, January 3-7, 1993.

57. Physics Teachers' Representation of Knowledge — Deficiencies and Remedies.
Esther Bagno, Bat-Sheva Eylon and Uri Ganiel
American Association of Physics Teachers, Summer Meeting,
Boise, ID, USA, August 1993.

58. Integrating Domains of Physics: Learning Strategies and the Role of Teachers.
E. Bagno, B. Eylon and U. Ganiel
Third International Seminar on Misconceptions and Educational Strategies
in Science and Mathematics
Cornel University, Ithaca, NY, August 1993.

59. (*) High School Physics in Israel
U. Ganiel
Invited talk. American Association of Physics Teachers, Winter Meeting.
San Diego, CA, Jan. 3-8, 1994.

60. Students' Models of Transients in DC Electric Circuits
Beth Thacker and Uri Ganiel
American Association of Physics Teachers, Summer Meeting,
Notre Dame, IN, USA, August 1994.

61. (*) UNESCO University Foundation Course in Physics, Working Group Meeting.
Invited participant.
Beijing, China, August 1994.

62. Conservative and Non-Conservative Fields: Integration between Mechanics and Electromagnetism
E. Bagno, B. Eylon, U. Ganiel and Z. Geller
American Association of Physics Teachers, Winter Meeting,
Orlando, FL, USA, January 1995

63. (*) Can we TEACH Science? - some Heresies, Controversies and Different Thoughts
U. Ganiel
Annual Meeting - Israel Association for Computers in Education ,
Tel Aviv, Israel, April 1995.

64. Students' Models of Transients in DC Electric Circuits
Beth Thacker, Uri Ganiel and Don Boys
American Physical Society/American Association of Physics Teachers Joint Meeting
Indianapolis, IN, USA, May 1996

65. A Leadership Program for Physics Teachers
E. Bagno, B. Eylon and U. Ganiel
American Association of Physics Teachers, Winter Meeting,
Reno, Nevada, USA, January 1996

(*) - invited

66 (*)From Fragmented Knowledge to a Knowledge Structure:
Linking the Domains of Mechanics and Electromagnetism
U. Ganiel
American Physical Society/American Association of Physics Teachers Joint Meeting.
Columbus, Ohio, USA, April 18-21,1998

67. (*)Science Education Reform: Some Lessons and Perspectives- The Israeli Experience
Uri Ganiel
European Union - Weizmann Institute of Science
Joint Seminar on New Approaches to Science Education
Brussels, Belgium, June 2-4, 1998

68. "Chaos" for High School: A Research and Development Project
Clarisa Bercovich and Uri Ganiel
American Association of Physics Teachers, Summer Meeting
San Antonio, Texas, USA, August 3-7, 1999

69. (*)Linking Electrostatics to Electrodynamics, Macro to Micro:
Student Understanding of Electric Circuits
Uri Ganiel
1999 International Conference of Physics Teachers&Educators
Guilin, China, August 19-23, 1999

70. (*)European Physical Society Seminar: Securing the Future of Physics
Invited Participant
Malvern College, UK, 2-5 September 1999

71. (*)Science Education Reform: Thirty years Later - Some Lessons and Perspectives
Uri Ganiel
Meeting in Memory of Amos de-Shalit, Rehovot, October 26, 1999

72. Professional Development of Physics teachers in Israel: Models and Approaches
Uri Ganiel
GIREP Conference on Physics Teacher Education beyond 2000
Barcelona, Spain, Aug. 27-Sept. 1, 2000

74. (*)Fostering Change in Science Education: The Israeli Experience
Uri Ganiel
International Conference on Redesign In Science Education (RISE)
The Ohio State University, Columbus, Ohio, USA, Oct. 20-21, 2000

75. Integrating the Principle of Equivalence in the Teaching of Mechanics
Adi Rosen and Uri Ganiel
American Association of Physics Teachers, Winter Meeting,
San Diego,, California, USA, January 2001

76. In-Service training Programs in Science and Technology: What changes do teachers undergo?
E. Kapulnik, N. Orion and U. Ganiel
National Assocaiton for Research in Science Teaching Annual Meeting, Vancouver, Canada 2004

77. (*)Fostering Change in Science Education: Creation, Implementation, Evaluation and Research
Uri Ganiel
American Association of Physics Teachers, Winter Meeting,
Albuquerque, New Mexico, USA, January 2005

78. Utilizing Popular Scientific Lectures For Teaching Contemporary Physics
S. Kapon, U. Ganiel and B. Eylon
American Association of Physics Teachers, Summer Meeting,
Greensboro, North Carolina, USA, July 2007

(*) - invited

79. Explanatory Framework for Popular Physics Lectures
Shulamit Kapon, Uri Ganiel, and Bat Sheva Eylon
American Association of Physics Teachers, Summer Meeting,
Greensboro, North Carolina, USA, July 2007

80. Learning physics from public physics lectures: a learning experiment
Shulamit Kapon, Uri Ganiel, and Bat Sheva Eylon
American Association of Physics Teachers, Summer Meeting,
Ann Arbor, Michigan, USA July 2009

81. Public physics lectures as an instructional resource: Tracing changes in students' knowledge
Shulamit Kapon, Uri Ganiel, and Bat Sheva Eylon
(National Associaton for Research in Science Teaching, 2010 Annual Meeting, Philadelphia, Pensylvania, USA, March 2010)

82. (*)Public Physics Web Lectures as an Instructional resource
Shulamit Kapon, Uri Ganiel, and Bat Sheva Eylon
National Science Teacher Association National Conference, NARST Session
San Francisco, CA, USA, March 2011

(*) - invited

D. MISCELLANEOUS (mainly in Hebrew).

1. Physics in High School: The activities of the Physics Group (1965-1984); The new Physics Curriculum; Future Plans.
   U. Ganiel
   Technical Report P85/3 (Department of Science Teaching, Jan. 1985).

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2. A Survey of Physics Teaching in Grade 9.
   Y. Berstel, B. Eylon, U. Ganiel
   Technical Report P86/1 (Department of Science Teaching, Aug. 1986).

3. "And Yet it Moves..." - A Different Solution of a Well Known Problem.
   U. Ganiel
   Tehuda (Resonance), The Israeli Physics Teachers' Journal, Vol. 12, No. 3, Sept. 1987, pp. 39-41.

4. Physics Teaching in ORT Schools: A Survey and Needs Assessment.
   M. Ben Zuk, Y. Brestel, M. Carmeli and U. Ganiel
   Department of Science Teaching Report, Submitted to ORT, Israel, June 1989.

5. A Curriculum in Science and Mathematics for the School of Art and Sciences.
   U. Ganiel and team
   Department of Science Teaching Report, Submitted to the Society for Excellence in Education, Jerusalem, Israel, September 1989.

6. "MAOF" in Physics: A Learning Unit for Developing an Overview
   E. Bagno, B. Eylon and U. Ganiel
   Tehuda (Resonance), The Israeli Physics Teachers' Journal, Vol. 17, No. 2, 1995, pp. 47-57.

7. Work, Energy, the “Work-Energy” theorem - When and How?.
   A. Rosen and U. Ganiel
   Tehuda (Resonance), The Israeli Physics Teachers' Journal, Vol. 18, No. 1, 1996, pp. 24-32.

8. Elastic and Inelastic Collisions: A Model. (or: What happens to the Kinetic Energy?)
   Uri Ganiel
   Tehuda (Resonance), The Israeli Physics Teachers' Journal, Vol. 18, No. 3, 1997, pp. 17-18.

9. In Memory of Amos de-Shalit, Thirty Years after his Death
   Uri Ganiel
   Tehuda (Resonance), The Israeli Physics Teachers' Journal, Vol. 20, No. 2, 1999, pp. 4-5

10. Difficulties in Extending the Bohr Model for an Electron in a Magnetic Field
    A. Marchewka and Uri Ganiel
    Tehuda (Resonance), The Israeli Physics Teachers' Journal, Vol. 21, No. 2, 2000, pp. 76-78

11. Measuring “Voltage” and Current in a Rotational Electric Field
    Zvi Geller and Uri Ganiel
    Tehuda (Resonance), The Israeli Physics Teachers’ Journal, Vol. 22, No. 1, 2001,
    pp. 14-21