CURRICULUM VITAE AND LIST OF PUBLICATIONS

Personal Details

Name	Yossef, Hodara Hatzor
Date and place of birth	September 17, 1959, Tel-Aviv, Israel
Regular military service	November 1977 - November 1980
University Address	Department of Earth and Environmental Sciences, Ben-Gurion University of the Negev, P.O. Box 653, Beer-Sheva, 84105, ISRAEL. Joint appointment with the Dept. of Civil and Environmental Engineering, BGU. Tel: 972-8- 6461288/9, Direct line: ++6472621, FAX: ++6472997, Direct FAX: ++6428717 Cell: ++528-018071
E-mail	hatzor@bgu.ac.il
Homepage	http://in.bgu.ac.il/teva/geological/eng/hatzor/Pages/Personal%20Details.aspx
Google Scholar	https://scholar.google.co.il/citations?hl=en&user=T3sAMB4AAAAJ&view_op=list_works

Education

Ph. D.	1990 - 1992	Dept. of Civil Engineering, University of California, Berkeley
Advisor		Prof. R. E. Goodman
Thesis		Validation of Block Theory using Field Case Histories
M. S.	1988 - 1990	Dept. of Civil Engineering, University of California, Berkeley
Advisor		Prof. R. E. Goodman
Thesis		The Influence of Geological Structure on the Engineering of Underground Openings in Discontinuous Rock Masses
M. Sc. (Cum Laude)	1985-1988	Dept. of Geology, Hebrew University of Jerusalem
Advisors		Prof. A. Starinski; Prof. Z. Reches; Dr. Y. Mimran
Thesis		The Geology of the Gilboa' Region
B. Sc.	1982-1985	Dept. of Geology, Hebrew University of Jerusalem

Employment History

10/10 - Present	Professor, BGU, Beer-Sheva, Israel
01/12 – 12/17	Visiting Professor, Institute of Rock and Soil Mechanics, Chinese Academy of Sciences, Wuhan, China
11/09	Visiting Professor, School of Civil and Environmental Engineering, Nanyang Technical University, Singapore
12/08 – Present	Joint appointment with the Dept. of Civil and Environmental Engineering, BGU.
2/08	Visiting Professor, Department of Geological Engineering, Montana Tech., The University of Montana, Butte, Montana, USA
10/04	Associate Professor, BGU

7/00 – 3/01	Visiting Associate Professor, Department of Civil and Environmental Engineering, University of California, Berkeley, CA., USA
11/98	Tenure, BGU
4/98	Senior Lecturer, BGU
9/92	Lecturer, BGU, Beer-Sheva, Israel
7/92 - 8/92	Visiting Scientist, TerraTek Research Lab, Salt Lake City, Utah, USA
5/89 - 6/92	Teaching and Research Assistant, Department of Civil Engineering, Geotechnical Engineering, University of California, Berkeley, CA., USA
10/85 - 7/88	Research Fellow, Mapping Division, Geological Survey of Israel, Jerusalem, Israel
10/85 - 6/87	Teaching Assistant, Department of Geology, Hebrew University, Jerusalem, Israel

Professional Activities

(a) Academic and administrative positions held at BGU

2025 – Present, Member, Promotions committee of Faculty of Natural Sciences
2021 – 2023, member of the scientific committee, School of Sustainability and Climate Change
2018 – 2023, Member, Promotions committee of Structural Engineering Dept.
2018 – 2023, Member, Promotions committee of Faculty of Natural Sciences
2013 – 2017, Chair, Dept. of Geological and Environmental Sciences
1995 – Present, Director, Deichmann Rock Mechanics Laboratory
1993 – Present, Director, Academic Program in Engineering Geology

(b) Professional functions outside the University

International Committees, Boards, and Commissions

2022	Chair of publication committee and member of organizing committee	2022 International Geomechanics Symposium. 1-3 Nov. UAE.
2022	International Advisory Committee	The 4th international Conference on Rock Dynamics and Applications. 17-19 August 2022 Xuzhou, China
2021-22	Member	ISRM Suggested Method Commission for Dynamic Shear Testing of Rock Discontinuities and Interfaces
2022	Scientific Committee	IX Latin America Rock Mechanics Symposium, an ISRM 2022 International Symposium, Asuncion – Paraguay, October 16-19, 2022.
2021	Scientific Committee	EUROCK 2021, ISRM International Symposium, Turin, Italy, 21 – 25 June, 2021.
2019	Scientific Committee	"PATA 2019" International Conference on Paleo-seismicity. 19-27 September, 2019. Caesarea, Israel.
2018	Intl. Scientific Committee	The 10th Asian Rock Mechanics Symposium- ARMS 10 October 2018, Singapore.
2018	Organizing Committee	52nd US Rock Mechanics / Geomechanics Symposium: Seattle, USA, June 24-27, 2018.

2017	Intl. Scientific Committee	13th International Conference on Analysis of Discontinuous Deformation, Tianjin, China, 8-10 December 2017.
2017	Local Organizing Committee	12th EURO-conference on Rock Physics and Geomechanics Ma'ale HaHamisha, Israel, 5–10 November 2017.
2017	Intl. Scientific Committee	15th International Conference of the International Association for Computer Methods and Advances in Geomechanics (15th IACMAG), October 19-23, 2017, Wuhan, China.
2016	Intl. Scientific Committee	EUROCK2016, Cappadocia (Ürgüp), Turkey, August 29 - 31, 2016.
2016	Advisory and Organizing Committee	The 1st International Symposium on Reducing Risks in Site Investigation, Modelling and Construction for Rock Engineering (GEOSAFE2016). Xi'an, China 25-27 May, 2016.
2015	Intl. Scientific Committee	12th International Conference on Analysis of Discontinuous Deformation (ICADD-11), Wuhan, China, October 16 - 19, 2015.
2015	Session Developer	49th U. S. Rock Mechanics Symposium, San Francisco, CA. June 28 – July 1, 2015.
2013	Intl. Scientific Committee	11th International Conference on Analysis of Discontinuous Deformation (ICADD-11), Fukuoka, Japan, August 27 - 29, 2013.
2011 - 2019	Co-President	ISRM Commission on Discontinuous Deformation Analysis
2012 – 2015	Member	ISRM Commission on Preservation of Ancient Sites
2011	Intl. Scientific Committee	12th Congress of the International Society for Rock Mechanics (ISRM), Beijing, China, October 2011.
2010	Intl. Advisory Board	6th Asian Rock Mechanics Symposium, New Delhi, India, October 2010.
2009	International Advisory Committee	9th International Conference on Analysis of Discontinuous Deformation (ICADD-9), Singapore, November 25 - 27, 2009.
2009	International Advisory Committee	3rd US-Canada Rock Mechanics Symposium, Toronto, Canada, May 9 – 14, 2009.
2009	Chair	Batsheva Seminar on Shear Physics at the Meso-Scale in Earthquake and Landslide Mechanics. Ein-Gedi, Israel. January 26 – 30, 2009. Sponsored by Israel Academy of Sciences and Humanities.
2008	Intl. Scientific Committee	International Symposium on Conservation of Ancient Sites, Dunhuang, China, October 8-12, 2008.
2008	Session Developer	42nd U.S. Rock Mechanics Symposium and 2nd U.S.-Canada Rock Mechanics Symposium, San Francisco, CA. June 29 - July 2, 2008.
2008	Paper Review Committee	6th International Conference on Case histories in Geotechnical Engineering. Arlington, VA. August 11-16, 2008.

2007	Intl. Advisory Board	1st Sri Lankan Geotechnical Society International Conference on Soil and Rock Engineering, Colombo, Sri Lanka, August 7-11, 2007.
2007	Intl. Scientific Committee	11th Congress of the International Society for Rock Mechanics (ISRM): International Workshop on Preservation of Natural Stone Monuments and Rock Weathering, Madrid, Spain, July 12 – 15, 2007.
2006	Intl. Advisory Board	4th Asian Rock Mechanics Symposium (ARMS 2006), Singapore, November 8 – 10, 2006
2005	Intl. Organizing Committee	7th International Conference on Analysis of Discontinuous Deformation (ICADD-7), Honolulu, Hawaii, December 10-12, 2005.
2005	Intl. Scientific Committee	International Symposium on Advances in Mining Technology and Management, Indian Institute of Technology, Kharagpur, India.
2004	Intl. Advisory Committee	3rd Asian Rock Mechanics Symposium (ARMS2004) Kyoto, Japan, Nov. 30 – Dec. 2, 2004.
2004	Intl. Scientific Committee	6th International Symposium on the Conservation of Monuments in the Mediterranean Basin. Lisbon, Portugal.
2003	Intl. Advisory Panel	6th International Conference on Analysis of Discontinuous Deformation (ICADD-6), Trondheim, Norway, October 5 – 8, 2003.
2002	Chair	5th International Conference on Analysis of Discontinuous Deformation (ICADD-5), Wuhan, China, October 6 – 10, 2002.
2000-6	Member	International Society for Rock Mechanics (ISRM) Commission on Preservation of Natural Stone Monuments.
1999	Int. Advisory Committee	3rd International Conference on Analysis of Discontinuous Deformation (ICADD-3), Vail, Colorado, June 3-4, 1999.
1996	Int. Technical Committee	1st International Forum on Discontinuous Deformation Analysis, Berkeley, California, June 12-14, 1996.

National Committees and Roles

2024	Professional sub-committee - Head	Israel Science Foundation (ISF) – Geology and Geophysics
2024	International Quality Assessment Committee	Hebrew University of Jerusalem
2022	Professional sub-committee	Israel Science Foundation (ISF) – Geology and Geophysics
2021	Professional sub-committee	Israel Science Foundation (ISF) and the National Natural Science Foundation of China (NSFC) joint competitive grant program.
2019	Evaluator and jury member	The French Ministry for Europe and Foreign Affairs awards Chateaubriand fellowships

2019	Professional sub-committee	Israel Science Foundation (ISF) and the National Natural Science Foundation of China (NSFC) joint competitive grant program.
2012	Professional committee	Israel Prize in Earth and Atmospheric Sciences
2011 - 2015	Professional sub-committee	National Higher Education Committee (MALAG): Evaluation of B.A. program in Conservation Studies, West Galilee College.
2011	Professional committee	Prof. Rahamimoff Travel Grants Program, US- Israel Binational Science Foundation.
2007 – 2010	Professional sub-committee	The Standards Institution of Israel (SII): SI-1665 Part 2 - Anchorages for soil and rock.
2005 – 2007	Professional sub-committee	The Standards Institution of Israel (SII): SI-5620 - Geological Mapping for Underground Openings.
2005 - 2006	Professional sub-committee	Israel Science Foundation (ISF): Earth and Environmental Sciences.
2005- 2009	Professional sub-committee	National Higher Education Committee (MALAG): Evaluation of proposed B.Sc. program in restoration and planning of historical sites – West Galilee College.
2004 – 2005	President	Israel Geological Society (IGS)
2002 - 2003	Professional sub-committee	National Higher Education Committee (MALAG): Evaluation of suggested B.Sc. program in civil engineering - Ariel College.
2001 - 2014	Founding President	Israel Rock Mechanics Association (IRMA), an ISRM National Group.
1999 - 2000	Professional sub-committee	Israel Science Foundation (ISF): Earth and Environmental Sciences.
1996 - 1997	Coordinator of activities	Israel Geological Society (IGS).

(c) Significant Professional Consulting

2023	Electra Infrastructures	Rock mechanics consulting in context of the Manara Pumped Storage Plant.
2022	Kokhav Pumped Storage	Rock mechanics consulting in context of the Kokhav Hayarden Pumped Storage Plant.
2017	Israel Land Authority	Engineering geology consulting on slope stability issues near lake Kineret (Sea of Galilee).
2016	Oron Pamco-Shura Pumped Storage	Rock mechanics consulting in context of the Gilboa Pumped Storage Plant.
2015 - 2017	Jordan river rehabilitation Administration	Engineering geology consulting for slope stability problems along the Jordan river
2011-2017	PSP Investments Ltd.	Geological engineering consulting for the pumped storage plants in Gilboa and Manara, Israel.
2010-2012	Israel Authority of Antiquities	Reinforcement design for the open rock slope at the Open Kardo, Old City of Jerusalem.

2010-2012	Israel Energy Industries (IEI)	Assessing expected surface settlement due to deep in-situ production of oil shale using the numerical manifold method.
2009 - 1010	Israel Authority of Antiquities	Reinforcement design for the rock slope foundations of the historic walls at Damascus Gate, Old City of Jerusalem.
2008 - 2009	Israel Nature and Parks Authority	Reinforcement design for the rock slopes of the hanging bridge at Banias National Park.
2005 - 2009	Israel Cement Enterprises Ltd.	Stability of open pit mine slopes excavated above large span karstic caverns.
2003 - 2004	National Quarries Rehabilitation Fund	Stability of Zedekiah cavern below the old city of Jerusalem.
2002 - 2005	Israel Ministry of Defense	Blast induced liquefaction potential in loess.
1997 - 2000	Israel Nature and Parks Authority	Dynamic rock slope stability at Masada World Heritage site.
1996 - 1998	Israel Nature and Parks Authority	Stability of the bell-shaped caverns at Bet Guvrin.
1995	Rotem Amfart Fertilizers Ltd.	Rock slope stability at Arad open pit mine.
1992	L. A. County Dept. of Public Works	Evaluation of dam abutments stability under high cleft water pressures, *Pacoima dam*, California. (With R. E. Goodman).
1991	Kiewit Pacific Co.	Evaluation of rock slope stability, open cut excavation, Mojave siphon power plant, California. (With R. E. Goodman).
1991	United States Bureau of Reclamation	Dam abutments stability during over topping, *Seminoe dam*, Wyoming (With R. E. Goodman).
1990	Emcon Associates	Rock slope stability under water pressures and earthquake loading, *Ox mountain sanitary landfill*, California (With R. E. Goodman).

(d) Editor or member of editorial board of a scientific or professional journal

2020 – 2024	Associate Editor	*Rock Mechanics and Rock Engineering*
2009 – Present	Editorial Board Member	*Rock Mechanics and Rock Engineering*
2005 – 2025	Editorial Board Member	*International Journal of Rock Mechanics and Mining Sciences*
2000	Guest Editor	Israel Journal of Earth Sciences Special issue: Geological and Geotechnical Engineering in Israel, 2000

(e) Membership in professional societies

2019 – Present	Member	American Geophysical Union (AGU)
2001 – Present	Member	Israel Rock Mechanics Association (IRMA)
1993 – 2024	Member	American Society of Civil Engineers (ASCE)
1993 – Present	Member	International Society of Rock Mechanics (ISRM)
1993 – 2003	Member	Association of Engineering Geologists (AEG)
1987 – Present	Member	Geological Society of Israel (IGS)

(f) Professional registration

1993 – present Certified for engineering practice in Geological Engineering, State of Israel

(g) Professional review work

Scientific Journals

International Journal of Rock Mechanics and Mining Sciences; Rock Mechanics and Rock Engineering; International Journal for Numerical and Analytical Methods in Geomechanics; Computers and Geotechnics; Geotechnique; Tunneling and Underground Space Technology; Engineering Geology; Geological and Geotechnical Engineering; ASTM Geotechnical Testing Journal; Engineering and Environmental Geology, Israel Journal of Earth Sciences; Tectonophysics.

Research Organizations

Israel Science Foundation (ISF); US – Israel Bi-national Science Foundation (BSF); German-Israel Foundation (GIF); National Ministry of Infrastructure.

Educational Activities

(a) Academic courses taught at BGU and other institutions (Course Name/Level/Dept.)

Engineering Geology of Tunnels and Slopes	Graduate	Northeastern University, Shenyang, China.
Rock Slope Stability	Upper Division/Graduate	BGU: Earth & Envir. Sci. + Civil & Environmental Engineering.
Reservoir Rock Mechanics	Upper Division/Graduate	BGU: Earth & Envir. Sci. + Civil & Environmental Engineering
Rock Tunneling	Upper Division/Graduate	BGU: Earth & Envir. Sci. + Civil & Environmental Engineering
Geomechanics in the field	Undergraduate	BGU: Earth & Envir. Sci. + Civil & Environmental Engineering

(b) M. Sc. and Ph. D. theses advisor

Ehud Gavish	M. Sc.	1996	Evaluation of empirical classification methods (Q, RMR) for tunneling in bedded rock: lessons from the Giloh tunnels, Jerusalem .(Jointly with Dr. Y. Arkin, Geological Survey of Israel)
Ron Benari	M. Sc.	1996	Stability of underground openings in jointed chalky rock: a case study from Tel Beer-Sheva national park
Moshe Levine	M. Sc.	1996	Slope stability analysis and back calculation of plane failure in Arad open pit mine
Alon Zur	M. Sc.	1997	Influence of grain size and texture on ultimate strength of dolomites
Eli P. Heyman	M. Sc.	1997	Mechanical behaviour of Mt. Sedom rock salt. Recipient of the 1998 Israel Mineral Science and Engineering Association award for outstanding MSc. Thesis. → Ph.D: BGU.
Michael Tsesarsky	M. Sc.	1999	Stability of underground openings in jointed chalks: a case study from the bell-shaped caverns, Bet-Guvrin national park. **Recipient of**

			the 2000 Geological Society of Israel award for outstanding MSc. Thesis. → Ph.D: BGU.
Boaz Saltzman	M. Sc.	2001	Possible correlation between mechanical layer's joint spacing and its rock mechanical properties. (Jointly with Prof. Y. Eyal, BGU)
Michael Tsesarsky	Ph. D.	2004	Stability of underground openings in stratified and jointed rock. → Postdoc → Technion. Faculty position → BGU.
Ilia Wainshtein	M. Sc.	2004	Liquefaction potential of the Southern coastal plain, Israel. → PhD: BGU
Carola Eimermacher	M. Sc.	2005	Stability of high span openings in discontinuous rock: case history – Zedekiah's cave, Jerusalem
Dikla Hadad	M. Sc.	2005	Comparison between lattice-preferred orientation of calcite (LPO) and mechanical anisotropy in chalks. (Jointly with Prof. H. Kish, BGU)
Shlomi Manor	M. Sc.	2005	The influence of grain contact geometry on the mechanical behavior of sedimentary rocks. (Jointly with Dr. V. Palchik, BGU)
Itai Orian	M. Sc.	2006	Mechanical properties of loess soils from the southern coastal plain, Israel
Ronnie Kamai	M. Sc.	2006	Estimation of historical seismic ground-motions of structural failures in archeological sites. (Jointly with Dr. S. Marco, Tel Aviv University). **Recipient of the 2005 Geological Society of Israel award for outstanding MSc. thesis. Recipient of the 2011 American Rock Mechanics Association (ARMA) Applied Rock Mechanics Research Award (jointly with Y. Hatzor and G. Yagoda Brian).** → Ph.D.: UC Davis. Postdoc → UC Berkeley. Faculty position: BGU.
Gony Yagoda–Biran	M. Sc.	2008	Seismic hazard estimation along eastern margins of sea of Galilee by back analysis of seismically induced natural and structural failures. (Jointly with Drs. R. Amit and O. Katz, Geological Survey of Israel). **Recipient of the 2008 Geological Society of Israel award for outstanding MSc. Thesis.** → PhD: BGU.
Dagan Bakun-Mazor	M. Sc.	2008	Modeling mechanical layering in discontinuous rock masses for deformation analysis. **Recipient of the 2008 Asaf Gur Memorial award for outstanding MSc. Thesis.** → PhD: BGU.
Gabriele Monacis	M. Sc.	2008	Discrete element modeling of jointed beams (Jointly with Professor Giovanni Barla, Politecnico di Torino). Thesis submitted to Dept. of Structural and Geotechnical Engineering, Politecnico di Torino.
Ilia Wainshtein	Ph. D.	2009	A model for bearing capacity of pile/rock interfaces based on direct shear tests, in situ load tests, and numerical analyses. → Senior Geotechnical Engineer: Wood Corporation, Canada.
Omer Biran	M. Sc.	2011	Rate and State friction experiments in direct shear. (Jointly with Dr. Alon Ziv, BGU, now at TAU)
Dagan Bakun-Mazor	Ph. D.	2011	Environmentally controlled, multi scale, dynamic behavior of rock masses. (Jointly with Prof. Steven Glaser, UC Berkeley). → Faculty position: SCE.

Elchannan Livne	M. Sc.	2012	Evaluation of the liquefaction potential along the Dead-Sea western shores – Regional screening and geotechnical analysis of two boreholes (Jointly with Dr. Amos Salomon, GSI).
Yuval Tal	M. Sc.	2012	Modeling the excavation sequence with the numerical Manifold Method (NMM). → PhD: MIT. Postdoc: Caltech. Faculty position: BGU.
Yael Rosenthal	M. Sc.	2013	Deducing seismic risk from structural failures in masonry arches below the old city of Jerusalem
Ksenia Bisnovat	M. Sc.	2013	Mechanical and petrophysical behavior of oil shale formations from the Judean Plains, Israel (Jointly with Prof. Shimon Feinstein, BGU)
Guy Davidesko	M. Sc.	2013	Evolution of surface roughness through shear (jointly with Dr. Amir Sagy, Geological Survey of Israel).
Gony Yagoda-Biran	Ph. D.	2013	Seismic Hazard Analysis using the Numerical DDA Method. Recipient of the 2013 Asaf Gur Memorial award for outstanding PhD thesis. Recipient of the 2011 American Rock Mechanics Association (ARMA) Applied Rock Mechanics Research Award (jointly with Y. Hatzor and R. Kamai). → Postdoc: University of Nevada. Research Scientist: GSI.
Nir Badt	M. Sc.	2015	Role of normal stress constraints on roughness evolution through shear (jointly with Dr. Amir Sagy, Geological Survey of Israel). → PhD: Brown University.
Ravit Zelig	M. Sc.	2015	Numerical modeling of wave propagation through discontinuous media with implications to rock bursts.
Aviran Feldheim	M. Sc.	2016	Physical modeling of the wedging-ratcheting mechanics. (Jointly with Dr. Dagan Bakun-Mazor, Sami Shamoon College of Engineering).
Nahum Kazaz	M. Sc.	2018	Modeling rockbolt response to rockbursts with DDA.
Yuval Keissar	M. Sc.	2018	Numerical study of the thermally-induced wedging ratcheting mechanism with 3DEC. (Jointly with Dr. Dagan Bakun-Mazor, Sami Shamoon College of Engineering). → PhD: UC Berkeley.
Omri Shitrit	Ph. D.	2019	Poroelasticity of organic rich chalks. (Jointly with Prof. Shimon Feinstein and Prof. Harold Vinegar, BGU). **Recipient of the 2016 Asaf Gur Memorial award for outstanding PhD thesis.** Selected as author of one of the "best papers" by the 50th US Rock Mechanics conference scientific committee - ARMA. → Scientist: Delek NG.
Dekel Levi	M. Sc.	2019	Creep potential of Clay soil in coastal plain of southern Israel. (Jointly with Dr. Ronnie Kamai, Dept. of Structural Engineering, BGU)
Yair Gordin	Ph. D.	2021	Remote Detection of Thermal Maturation in Source-Rocks Using Seismic Anisotropy. (Jointly with Prof. Harold Vinegar, BGU and Dr. Anat Canning, Emerson – Paradigm Geophysical).
Tom Gabrieli	M. Sc.	2021	Architectural and Geometrical Properties of Faults: Case Studies in the Dead Sea Basin (Jointly with Dr. Amir Sagy, Geological Survey of Israel). → PhD: BGU.

Aram Yakoby	M. Sc.	2021	Analytical and numerical investigation of deep underground openings for geological radioactive waste disposal in Yamin Plane. (Jointly with Dr. Shmulik Pinkert, Dept. of Civil & Environmental Engineering, BGU). → PhD: BGU.
Doron Morad	Ph. D.	2022	Influence of shear rate on roughness evolution in rock joints. (Jointly with Dr. Amir Sagy, Geological Survey of Israel). Recipient of the 2021 Asaf Gur Memorial award for outstanding PhD thesis. 2025 Recipient of the Ber-Tor award for outstanding paper resulting from PhD. → Post doc U. C. Santa Cruz → Faculty position BGU.
Eli Heyman	Ph. D.	2025	Laboratory investigations of geological materials subjected to high impact loads (Tentative title) (Jointly with Prof. Oren Sadot, Dept. of Mechanical Engineering, BGU).
Eliaz Ishay	M. Sc.	2024	Sliding instabilities in rock interfaces
Aviv Arieli	M. Sc.	2024	Fault roughness and induced seismicity
Michal Haziz	M. Sc.	2024	Geomechanical characterization of the Hazeva Fm. (Jointly with Dr. Shmulik Pinkert, Dept. of Civil & Environmental Engineering, BGU)
Aram Yakoby	Ph. D.	2026	Geological storage of H2. Analytical and numerical solutions based on experimental work. (Jointly with Dr. Shmulik Pinkert, Dept. of Civil & Environmental Engineering, BGU)
Avishai Bronner	MSc	2025	Modeling sequence excavation and rock load on tunnel support using hybrid DDA-FEM approach.

(c) <u>M. Sc. and Ph. D. committees (participation in qualifying exams and/or reviewing theses)</u>

Amir Eidelman	Ph. D.	1994	Earth Science Institute, Hebrew University
Marsello Brafman	M. Sc.	1995	Dept. of Civil Engineering, Technion
Galit Cadan	M. Sc.	1996	Dept. of Geol. and Envirn. Sc., BGU
Yoav Zur	M. Sc.	1997	Dept. of Geol. and Envirn. Sc., BGU
Ram Weinberger	Ph. D.	1998	Earth Science Institute, Hebrew University
Joel Roskin	M. Sc.	1999	Dept. of Geol. and Envirn. Sc., BGU
Amir Sagi	Ph. D.	1999	Earth Science Institute, Hebrew University
Oded Katz	Ph. D.	2002	Earth Science Institute, Hebrew University
Itai Einav	Ph. D.	2002	Dept. of Civil Engineering, Technion
Ran Frank	M. Sc.	2003	Dept. of Geol. and Envirn. Sc., BGU
Dheeraj Kumar	Ph.D.	2003	Dept. of Mining Engineering, Indian Institute of Mining Engineering, India
Menahem Weiss	Ph. D.	2003	Dept. of Geol. and Envirn. Sc., BGU
Maya Elimelech	M. Sc.	2004	Dept. of Geol. and Envirn. Sc., BGU
Relli Wald	M. Sc.	2004	Dept. of Geol. and Envirn. Sc., BGU
Carmi Zion	M. Sc.	2004	Dept. of Geophysics, Tel Aviv University
Sharbel Shehada	M. Sc.	2005	Faculty of Civil Engineering, Technion
Limor Levy	M. Sc.	2005	Dept. of Mechanical Eng., BGU
Ran Frank	Ph. D.	2006	Dept. of Geol. and Envirn. Sc., BGU
Arilon Meir	Ph. D.	2006	Faculty of Civil Engineering, Technion
Tamir Kamai	M. Sc.	2006	Dept. of Geol. and Envirn. Sc., BGU

T. Meyrova	Ph. D.	2007	Dept. of Geophysics, Tel Aviv University
Ran Nof - Nowitsky	Ph. D.	2008	Dept. of Geol. and Envirn. Sc., BGU
Ran Frank	Ph. D.	2009	Dept. of Geol. and Envirn. Sc., BGU
Huirong Bao	Ph. D.	2010	School of Civil and Envirn. Eng. Nanyang Technological University, Singapore
Alon Bril	Ph. D.	2014	Dept. of Mechanical Eng., BGU
Asaf Inbal	Ph. D.	2010	Dept. of Geol. and Envirn. Sc., BGU
Xinmei An	Ph. D.	2010	School of Civil and Envirn. Eng. Nanyang Technological University, Singapore
Arilon Maher	Ph. D.	2013	Faculty of Civil Engineering, Technion.
Eli Mahleb	M. Sc.	2011	Dept. of Geol. and Envirn. Sc., BGU
Shahar Kadmiel	Ph. D	2011	Dept. of Geol. and Envirn. Sc., BGU
Noam Yossef Hai	Ph. D.	2012	Dept. of Geol. and Envirn. Sc., BGU
Amir Wannon	M. Sc.	2013	Dept. of Geol. and Envirn. Sc., BGU
Moria Hazan	M. Sc.	2013	Dept. of Geol. and Envirn. Sc., BGU
Alon Brill	Ph. D.	2013	Dept. of Mechanical Engineering, BGU
Xiaolei Qu	Ph. D.	2013	School of Civil and Resource Engineering, The University of Western Australia.
Huimei Chen	Ph. D.	2014	School of Civil and Envirn. Eng. Nanyang Technological University, Singapore
Guoyang Fu	Ph. D.	2014	School of Civil, Environmental and Mining Engineering, The University of Western Australia.
Rachel Avraham Katriel	Ph.D.	2015	Faculty of Civil Engineering, Technion.
Shalev Siman-Tov	Ph. D.	2015	Institute of Earth Sciences, Hebrew University of Jerusalem
Tal Feinstein	M. Sc.	2016	Dept. of Structural Engineering, BGU
Shahar Ben-Zeev	M. Sc.	2016	Institute of Earth Sciences, Hebrew University of Jerusalem
Noam Loyd	M. Sc.	2017	Faculty of Civil Engineering, Technion.
Gilboa Pe'er	M. Sc.	2017	Dept. of Geol. and Envirn. Sc., BGU
Xiao-Ying Liu	Ph. D.	2017	School of Civil and Envirn. Eng. Nanyang Technological University, Singapore
Hannan Alexander	M. Sc.	2018	Faculty of Civil Engineering, Technion.
Matan Avital	M. Sc.	2018	Dept. of Geol. and Envirn. Sc., BGU.
Noam Ganz	M. Sc.	2019	Dept. of Geol. and Envirn. Sc., BGU.
Yuval Larom	M. Sc.	2019	Faculty of Civil Engineering, Technion.
Etna Shoham	M. Sc.	2019	Faculty of Civil Engineering, Technion.
Amichai Mitelman	Ph. D.	2020	Dept. of Mining Engineering, The University of British Columbia, Canada.
Shahar Ben-Zeev	Ph. D.	2020	Hebrew University of Jerusalem.
Rebeca Wilson	Ph. D.	2020	Dept. of Civil and Environmental Engineering, BGU
Etna Shoham	PhD	2021	Faculty of Civil Engineering, Technion.
Lior Rak	Ph. D.	2021	Dept. of Civil and Environmental Engineering, BGU
Matan Levi Zedek	M. Sc.	2021	Dept. of Civil and Environmental Engineering, BGU
Miriam Gindis	M. Sc.	2022	Dept. of Civil and Environmental Engineering, BGU
Almog Baram	PhD	2022	Dept. of Earth and Environmental Sciences, BGU
Guy Ben-Dor	PhD	2022	Dept. of Earth and Environmental Sciences, BGU

Angelika Klammer	PhD	2022	Graz University of Technology, Department of Civil Engineering, Institute of Rock Mechanics and Tunnelling
Nadav Kashtan	MSc	2023	Dept. of Earth and Environmental Sciences, BGU.
Lin Asali	MSc	2024	Faculty of Civil and Environmental Engineering, Technion

(d) Visiting international students, post docs, and scholars at lab

Hugo Gonzales	B. Sc.	2003	Chile
Gabriele Monacis	M. Sc.	2008	Politecnico di Torino, Italy
Emannuel Cohen	B. Sc.	2009	CERMES - Institut Navier. Ecole Nationale des Ponts et Chaussées, France
Dr. Huirong Bao	Post Doc	2011-12	Nanyang Technological University (NTU), Singapore
Dr. Benguo He	Post Doc	2014-17	Southwest Jiaotong University, Chengdu, Sichuan Province, China. Recipient of PBC Program for Fellowships for Outstanding Post-doctoral Researchers from China and India
Dr. Juan Pablo Ibanez	Sabbatical	2017	Universidad Nacional de Cuyo, Mendoza, Argentina.

Awards, Citations, Honors, Fellowships

(a) Honors and Awards

2019	International Association of Advanced Materials Award Lecture (Declined)
2016	BGU Rector Award for Excellence in Teaching
2011	BGU Dean of Natural Sciences Award for Excellence in Research
2011	BGU Rector Award for Excellence in Teaching
2011	2011 American Rock Mechanics Association (ARMA) Applied Rock Mechanics Research Award
2010	BGU Dean of Natural Sciences Award for Excellence in Teaching
2007	Elected for incumbent of the Dr. Sam and Edna Lemkin Chair in Rock Mechanics by BGU Senate
2006	BGU Dean of Natural Sciences Award for Excellence in Teaching
2003	Shamshar Prakash Foundation Award (USA) for excellence in the practice of and significant contribution to Geotechnical Engineering
2000	Israel Mineral Science and Engineering Association award for establishing a state of the art rock mechanics laboratory at BGU and for innovative research in geological engineering

1989	Association of Engineering Geologists - San Francisco Section, Student Speaker on behalf of U.C. Berkeley Geotechnical Engineering Group, CA. USA

(b) Fellowships and special grants

2012 – 2017	Visiting Professorship awarded to leading international scientists by the *Chinese Academy of Sciences.*
2009	*Israel Academy of Sciences, European Office of Aerospace Research and Development,* and *U.S. Air Force Research Laboratory* grants in support of the Batsheva de Rothschild seminar on "Shear physics and the mesoscale in landslide and earthquake mechanics".
1996	*Maria Zoltan Toman Fund* for academic excellence, BGU
1991	*Jane Lewis* competitive fellowship, U. C. Berkeley, USA
1991	The Geological Engineering Foundation Grant, Berkeley, USA
1990	Mineral Institute competitive fellowship, U. C. Berkeley, USA
1989	*Jane Lewis* competitive fellowship, U. C. Berkeley, USA
1988	Hebrew U. - U. of California competitive reciprocity scholarship

Scientific Publications

(a) Books

1. Yossef H. Hatzor (Editor), 2002. *Stability of Rock Structures*. Proceedings of the 5th International Conference on Analysis of Discontinuous Deformation. Balkema Publishers , Lisse, The Netherlands, 239p.

2. Yossef H. Hatzor, Jean Sulem, Ioannis Vardoulakis (Editors), 2009. *Shear Physics at the Meso-Scale in Earthquake and Landslide Mechanics*. Proceedings of Israel Academy of Science Bat Sheva de Rothschild Seminar. CRC Press / Balkema, Leiden, The Netherlands, 285p.

3. Yossef H. Hatzor, Gouwei Ma, Gen-hua Shi, 2017. *Discontinuous Deformation Analysis in Rock Mechanics Practice*. ISRM Book Series, Vol. 5. CRC Press / Balkema. Leiden, The Netherlands, 390 p.

(b) Refereed articles in scientific journals

1. Hatzor Y., and Z. Reches, 1990. Structure and paleostresses in the Gilboa' region, western margins of the central Dead Sea rift. *Tectonophysics*, Vol. 180, pp. 87-100.

2. Shaliv G., Y. Mimran and Y. Hatzor, 1992. The sedimentary and structural history of the Bet She'an area and its regional implications. *Isr. J. Earth Sci*., Vol. 40, pp. 161-179.

3. Reches Z., G. Baer and Y. Hatzor, 1992. Constraints on the strength of the upper crust from stress inversion of fault slip data. *J. Geophys. Res*., Vol. 97, No. B9, pp. 12,481-12,493.

4. Hatzor Y., 1993. The block failure likelihood: A contribution to rock engineering in blocky rock masses. *International Journal of Rock Mechanics and Mining Sciences,* Vol. 30, No.7, pp. 1591-1597.

5. Hatzor Y., Benjamini C., Mimran Y. and L. P. Grossowicz, 1994. The Eocene stratigraphy of Mt. Gilboa and Northern Samaria, *Israel. Isr. J. Earth Sci*., Vol. 43, No. 1, pp.1-20.

6. Eyal Y., Y**.** Hatzor, and A. Eyal, 1995. On the formation of a recent small fracture in a phosphorous mine, Nahal Zin, Israel. Technical Note. *Isr. J. Earth Sci*., Vol. 44, No.2 pp. 111-114.

7. Hatzor Y. H. and R. E. Goodman, 1997. Three dimensional back analysis of saturated rock slopes in discontinuous rock - a case study. *Geotechnique*, Vol. 47, No. 4, 817-839.

8. Hatzor, Y. H. and V. Palchik, 1997. The influence of grain size and porosity on crack initiation stress and critical flaw length in dolomites. *International Journal of Rock Mechanics and Mining Sciences,* Vol. 34, No. 5, pp. 805-816.

9. Hatzor, Y. H. and E. P. Heyman, 1997. Dilation of anisotropic rock salt: evidence from Mount Sedom diapir. *J. Geophys. Res*., Vol. 102, No. B7, pp. 14,853-14,868.

10. Hatzor, Y. H., A. Zur, and Y. Mimran, 1997. Microstructure effects on microcracking and brittle failure of dolomites. *Tectonophysics*, Vol. 281, No. 3-4, pp. 141-161.

11. Hatzor, Y. H. and M. Levin, 1997. The shear strength of clay filled bedding planes in limestones - back analysis of a slope failure in a phosphate mine, Israel. *Geotechnical and Geological Engineering*, Vol. 15, pp. 263-282.

12. Hatzor, Y. H. and R. Benary, 1998. Stability of a laminated Voussoir beam: back analysis of a historic roof collapse using DDA. *International Journal of Rock Mechanics and Mining Sciences,* Vol. 35, No. 2, pp. 165-181.

13. Hatzor, Y. H. and V. Palchik, 1998. A microstructure-based failure criterion for Aminadav dolomites - Technical Note. *International Journal of Rock Mechanics and Mining Sciences*, Vol. 35, No. 6, pp. 797-805.

14. Hatzor, Y. H., and E. P. Heyman 1998. The influence of bedding plane orientation on the compression-dilation boundary in anisotropic rock salt. *International Journal of Rock Mechanics and Mining Sciences,* Vol. 35, No. 4/5, CD-ROM Paper ISR-324-1.

15. Tsesarsky, M., Y. H. Hatzor, and M. L. Talesnick, 2000. The stability of Bet Guvrin caverns – integrated analysis in weak, anisotropic, and discontinuous chalk *Isr. J. Earth Sci.,* Vol. 49, No. 2, pp. 81-102.

16. Palchik V. and Y. H. Hatzor, 2000. Correlation between mechanical strength and microstructural parameters of Dolomites and Limestones in the Judea Group, Israel. *Isr. J. Earth Sci.,* Vol. 49, No. 2, pp. 65-80.

17. Talesnick, M. L., Y. H. Hatzor, and M. Tsesarsky, 2001. The elastic deformability and strength of a high porosity, anisotropic, chalk. *International Journal of Rock Mechanics and Mining Sciences,* Vol. 38, No. 4, pp. 543-555.

18. Hatzor, Y. H. and A. Feintuch, 2001. The validity of dynamic displacement prediction using DDA. *International Journal of Rock Mechanics and Mining Sciences,* Vol. 38, No. 4, pp. 599-606.

19. Palchik, V., and Y. H. Hatzor, 2002. Crack damage stress as a composite function of porosity and elastic matrix stiffness in dolomites and limestones. *Engineering Geology*. Vol. 63, pp. 233 – 245.

20. Hatzor, Y. H., Talesnick, M. L., and M. Tsesarsky, 2002. Continuous and discontinuous stability analysis of the bell-shaped caverns at Bet Guvrin, Israel. *International Journal of Rock Mechanics and Mining Sciences,* Vol. 39, No. 7, pp. 867-886.

21. Hatzor, Y. H. 2003. Keyblock stability in seismically active rock slopes – the Snake Path cliff – Masada. *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, Vol. 129, No. 8, pp. 697 - 710.

22. Hatzor, Y. H., Y. Zaslavsky, A. A. Arzi, and A. Shapira. 2004. Dynamic stability analysis of jointed rock slopes using the DDA method: King Herod's palace, Masada. *International Journal of Rock Mechanics and Mining Sciences,* Vol. 41, No. 5, pp. 813 – 832.

23. Palchik, V. and Y. H. Hatzor, 2004. The influence of porosity on tensile and compressive strength of chalks. *Rock Mechanics and Rock Engineering,* Vol. 37, No. 4, pp. 331-341.

24. Tsesarsky, M., Hatzor, Y. H., and N. Sitar, 2005. Dynamic displacement of a block on an inclined plane: analytical, experimental, and DDA results. *Rock Mechanics and Rock Engineering,* Vol. 38, No. 2. pp. 153 – 167.

25. Hatzor, Y. H. and A. Feintuch, 2005. The joint intersection probability. *International Journal of Rock Mechanics and Mining Sciences*, Vol. 42, pp. 531-541.

26. Tsesarsky, M. and Y. H. Hatzor, 2006. Tunnel roof deflection as a function of joint spacing and friction in blocky rock masses – a parametric study using Discontinuous Deformation Analysis (DDA). *Tunneling and Underground Space Technology*, Vol. 21, No. 1, pp. 29-45.

27. Kamai, R., and Y. H. Hatzor, 2008. Numerical analysis of block stone displacements in ancient masonry structures: a new method to estimate historic ground motions. *International Journal for Numerical and Analytical Methods in Geomechanics*, Vol. 32, pp. 1321-1340.

28. Gvirzman, H., E. Shalev, O. Dahan, and Y. H. Hatzor, 2008. Large-scale infiltration experiments into unsaturated stratified loess sediments: monitoring and modeling. *Journal of Hydrology*, Vol. 349, No. 1-2, pp. 214-229.

29. Hatzor, Y. H. 2008. Review of "Fundamentals of Discrete Element Methods for Rock Engineering: Theory and Applications", by Lanru Jing and Ove Stephansson. (Developments in Geotechnical Engineering, vol. 85). Elsevier, Amsterdam (2007). *International Journal of Rock Mechanics and Mining Sciences*, V. 45, No. 8, pp. 1536-1537.

30. Bakun-Mazor, D., Hatzor, Y. H. and W. S. Dershowitz, 2009. Modeling mechanical-layering effects on stability of underground openings in jointed sedimentary rocks. *International Journal of Rock Mechanics and Mining Sciences*, Vol. 46, No. 2, pp: 262-271.

31. Tsesarsky, M. and Y. H. Hatzor, 2009. Kinematics of overhanging slopes in discontinuous rock. *Journal of Geotechnical and Geoenvironmental Engineering, ASCE*, Vol. 135, No. 8, pp. 1122-1129.

32. Hatzor, Y. H., Gvirzman, H., Wainshtein, I. and I. Orian, 2009. Induced liquefaction experiment in relatively dense, clay-rich, sand deposits. *J. Geophys. Res.*, 114, B02311.

33. Hatzor, Y. H. 2009. Constraining paleoseismic PGA using numerical analysis of structural failures in historic masonry structures. *ISRM News Journal*, Vol. 12, pp. 84 - 87.

34. Katz, O., Amit, R., Yagoda- Biran, G., Hatzor, Y. H., Porat, N. and Medvedev, B. 2009. Quaternary earthquakes and landslides in the sea of Galilee area, the Dead Sea transform: seismic analysis and evaluation of current hazard. *Isr. J. Earth Sci.,* Vol. 58, No. 3-4, pp. 275-294.

35. Yagoda-Biran, G. and Y. H. Hatzor. 2010. Constraining paleo PGA values by numerical analysis of overturned columns. *Earthquake Engineering and Structural Dynamics,* V. 39, No. 4, pp. 463-472.

36. Yagoda-Birana, G., Hatzor, Y. H., Amit, R. and O. Katz, 2010. Constraining regional paleo peak ground acceleration from back analysis of prehistoric landslides: example from Sea of Galilee, Dead Sea Rift Valley. *Tectonophysics.* Vol. 490, No. 1-2, pp. 81-92.

37. Barla, G., Monacis, G., Perino, A., and Y. H. Hatzor, 2010. Distinct Element Modeling in Static and Dynamic Conditions with Application to an Underground Archaeological Site. *Rock Mechanics and Rock Engineering*, Vol. 43, No. 6, pp. 877-890.

38. Hatzor, Y. H., I. Wainshtein, and D. Bakun Mazor, 2010. Stability of shallow karstic caverns in blocky rock masses. *International Journal of Rock Mechanics and Mining Sciences*, Vol. 47, pp. 1289 – 1303.

39. Hatzor, Y. H. and Bakun-Mazor D. 2011. Modelling dynamic deformation in natural rock slopes and underground openings with DDA: review of recent results. *Geomechanics and Geoengineering*, Vol. 6, No. 4, pp. 283-292.

40. Bakun-Mazor D., Hatzor Y. H., and S. D. Glaser, 2012. Dynamic Sliding of Tetrahedral Wedge: the Role of Interface Friction. *International Journal for Numerical and Analytical Methods in Geomechanics*, Vol. 36, pp. 327 – 343.

41. Bao, H. Hatzor, Y. H. and Huang, X. 2012. A new viscous boundary condition in the two-dimensional discontinuous deformation analysis for wave propagation problems. *Rock Mechanics and Rock Engineering*, Vol. 45, No. 5, pp. 919 – 928.

42. Bakun-Mazor, D., Hatzor, Y.H., Glaser, S.D. and Santamarina, J.C. 2013. Thermally vs. Seismically Induced Block Displacements in Masada Rock Slopes. *International Journal of Rock Mechanics and Mining Sciences,* Vol. 61, pp. 196-211.

43. Yagoda Biran, G. and Y. H. Hatzor, 2013. A new failure mode chart for toppling and sliding with consideration of earthquake inertia force. *International Journal of Rock Mechanics and Mining Sciences,* Vol. 64, pp. 122–131.

44. Bao, H., Yagoda-Biran, G., and Y. H. Hatzor, 2014. Site response analysis with two-dimensional numerical discontinuous deformation analysis. *Earthquake Engineering and Structural Dynamics*, 43(2), p 225-246.

45. Tal, Y., Hatzor, Y. H. and X-T. Feng, 2014. An improved numerical manifold method for simulation of sequential excavation in fractured rocks. *International Journal of Rock Mechanics and Mining Sciences*, Vol. 64, pp. 116 – 128.

46. Davidesko, G., Sagy, A. and Y. H. Hatzor, 2014. Evolution of slip surface roughness through shear, *Geophys. Res. Lett*., Vol. 41, No. 5, pp. 1492-1498.

47. Jiang Quan, Feng X Ting, Hatzor H Yossef; Li S J, and X. J. Hao, 2014. Mechanical anisotropy of columnar jointed basalts: Example from the Baihetan hydropower station, China. *Engineering Geology*, Vol. 175, pp. 35–45.

48. Yossef H. Hatzor, Xia-Ting Feng, Shaojun Li, Gony Yagoda-Biran, Quan Jiang, Liangxing Hu, 2015. Tunnel reinforcement in columnar jointed basalt: the role of rock mass anisotropy. *Tunneling and Underground Space Technology*, Vol. 46, pp. 1 – 11.

49. Ksenia Bisnovat, Yossef H. Hatzor, Harold Vinegar, Scott Neguyen, Vyacheslav Palchik, and Shimon Feinstein, 2015. Mechanical and petrophysical behavior of organic-rich chalk from the Judea Plains, Israel. *Marine and Petroleum Geology*, Vol. 64, pp. 152 – 164.

50. He, Ben-Guo and Y. H. Hatzor, 2015. An analytical solution for recovering the complete in-situ stress tensor from Flat Jack tests. *International Journal of Rock Mechanics and Mining Sciences*, Vol. 78, pp. 118 – 126.

51. Yagoda Biran G. and Y. H. Hatzor, 2016. Benchmarking the numerical discontinuous deformation analysis method. *Computers and Geotechnics*, Vol. 71, pp. 30 – 46.

52. Shitrit, O. Hatzor, Y. H., Feinstein, S., Palchik, V. and H. J. Vinegar, 2016. Effect of kerogen on rock physics of immature organic-rich chalks. *Marine and Petroleum Geology,* Vol. 73. pp. 392-404.

53. He, B. G., Zelig, R., Hatzor, Y. H. and X. T. Feng, 2016. Rockburst Generation in Discontinuous Rock Masses. *Rock Mechanics and Rock Engineering*, Vol. 49, No.10, pp. 4103-4124.

54. Badt, N., Hatzor, Y. H., Toussaint, R., and A. Sagy, 2016. Geometrical evolution of interlocked rough slip surfaces: The role of normal stress. *Earth and Planetary Sciences Letters*, Vol. 443, pp. 153-161.

55. Hatzor, Y. H., He, B. G. and X. T. Feng, 2017. Scaling rockburst hazard with the DDA and GSI methods. *Tunneling and Underground Space Technology*, Vol. 70, pp. 343 – 362.

56. Shitrit, O., Hatzor, Y. H., Feinstein, S. and H. J. Vinegar, 2017. Acoustic and petrophysical evolution of organic-rich chalk following maturation induced by unconfined pyrolysis. *Rock Mechanics and Rock Engineering*, Vol. 50, pp. 3273–3291.

57. Ibanez, J. P. and Y. H. Hatzor, 2018. Rapid sliding and friction degradation: lessons from the catastrophic Vajont landslide. *Engineering Geology*, Vol. 244, pp. 96–106.

58. Morad, D., Hatzor, Y. H. and A. Sagy, 2019. Rate effects on shear deformation of rough limestone discontinuities. *Rock Mechanics and Rock Engineering.* Vol. 52, No. 6, pp. 1613 – 1622.

59. Shitrit, O., Hatzor, Y. H., Feinstein, S., Palchik, V. and H. J. Vinegar, 2019. Static and dynamic elastic moduli of organic-rich chalk. *Geophysical Prospecting*. Vol. 67, No. 3, pp. 624 - 650.

60. Gordin, Y., Hatzor, Y. H. and H. J. Vinegar, 2020. Anisotropy evolution during early maturation of organic-rich carbonates. *Journal of Petroleum Science and Engineering*. Vol. 188, Article Number 106946.

61. Bakun-Mazor, D., Keissar, Y., Feldheim, A., Detournay, C., and Y. H. Hatzor, 2020. Thermally-induced wedging-ratcheting failure mechanism in rock slopes. *Rock Mechanics and Rock Engineering*. Vol. 53, Issue 6, pp. 2521-1538.

62. Morad, D., Sagy, A. & Hatzor, Y. H. 2020. The significance of displacement control mode in direct shear tests of rock joints. *International Journal of Rock Mechanics and Mining Sciences.* Vol. 132. Article number 104444.

63. Morad, D., Sagy, A., Tal. Y., & Hatzor, Y. H., 2022. Fault Roughness Controls Sliding Instability. *Earth and Planetary Sciences Letters*. Vol. 579. Article Number117365. DOI10.1016/j.epsl.2022.117365

64. Morad, D., Lyakhovsky, V., Hatzor, Y. H. & Sagy, A. 2022. Stress Heterogeneity and the Onset of Faulting Along Geometrically Irregular Faults. *Geophys. Res. Lett*., Vol. 49, Issue 17. Article Number 2021GL097591 DOI10.1029/2021GL097591.

65. Yakoby A., Hatzor, Y. H. and Pinkert S. 2023. Enhanced Borehole Stability Analysis for Geological Waste Disposal Under Conditions of In-Situ Stress Uncertainty: the Case of Yamin Plain, Israel. *Engineering Geology*, 321, 107137. https://doi.org/10.1016/j.enggeo.2023.107137 .

66. Gabrieli T., Hatzor, Y. H., and Sagy A., 2024. Kinematics and geometry of normal faults at the margins of pull-apart basins: An example from the Dead Sea Basin. *Tectonophysics*. Article no. TECTO_230156.

67. Morad, D., Reches, Z., Sagy, A. and Y. H. Hatzor, 2024. Energy Dissipation During Shear Along Experimental Rough Faults. *Journal of Geophysical Research: Solid Earth.* DOI: http://dx.doi.org/10.1029/2023JB028605 .

68. Sagy, A., Lyakhovsky, V., Morad, D., Hatzor, Y. H. and I. Kurzon, 2025. Impact of Fault Heterogeneity on Fracture Energy. *Geophys. Res. Lett*. DOI: 10.1029/2025GL117272.

69. Ishay, E., Morad, D. and Y. H. Hatzor, 2025. Micromechanics of stick-slip deformation across rough faults. *International Journal of Rock Mechanics and Mining Sciences*. DOI: https://authors.elsevier.com/sd/article/S1365-1609(25)00268-0.

70. Arieli, A. and Y. H. Hatzor, 2025. Fault roughness and induced seismicity: hydro-shearing of laboratory faults. *Pure and Applied Geophysics*. Manuscript no. ec93846d-af8c-4d10-a2c3-d0bcb603a293.

71. Shupeng, C., Zou, Y., Wu, H., Akbariforouz, M., Su, B., Grasselli, G., Elsworth, D., Hatzor, Y. H. and Zhao, Q. 2026. Influence of Stress Heterogeneity on Shear Behavior of Rock Discontinuities in Laboratory Experiments: New Insights from Numerical Simulations. *International Journal of Rock Mechanics and Mining Sciences.* 197 (2026) 106358. https://doi.org/10.1016/j.ijrmms.2025.106358

Submitted:

1. Yakoby, A. Hatzor, Y. H. and S. Pinkert (submitted). A Novel Direct-Parameter Framework for Nonlinear–Viscoelastic Modeling of Sandstone Under Cyclic Loading. *International Journal for Numerical and Analytical Methods in Geomechanics*.
2. Heyman, E., Sadot, O. and Y. H. Hatzor (submitted). Energy partitioning controls unconfined compressive strength of anisotropic chalks. *Bulletin of Engineering Geology and the Environment*.

(c) Peer-reviewed chapters/articles in collective volumes/conference proceedings

1. Goodman R. E. and Y. Hatzor, 1990. The influence of geological structure on the engineering of underground openings in discontinuous rock masses. Key note paper In: *Proceedings of 6th international IAEG congress* (ed. D. G. Price), Balkema, Rotterdam, Vol. 4, pp. 2431-2446.

2. Hatzor, Y., and R. E. Goodman, 1992. Application of block theory and the critical key block concept to tunneling: two case histories. In: *Proceedings of ISRM conference on fractured and jointed rock masses* (eds. L. R. Myer, N. G. W. Cook, R. E. Goodman, and C.-Tsang), Balkema, Rotterdam, pp. 663-670.

3. Hatzor, Y., and R. E. Goodman, 1993. Determination of the design block for tunnel supports in highly jointed rock. In: *Comprehensive Rock Engineering* (ed. J. A. Hudson), Vol. 2: Analysis and design methods (ed. C. Fairhurst), Pergamon Press, Oxford, pp. 263-292.

4. Goodman, R. E., M. Karaca and Y. Hatzor, 1993. Rock structure in relation to concrete dams on granite. In: *Proceedings of Geotechnical Practice in Dam Rehabilitation*. *Geotechnical Special Publication n. 35*, ASCE, New York, NY, pp. 56-68.

5. Hatzor, Y., 1995. Application of block theory to rock slope stability studies. In: *Proceedings of the 35th US Rock Mechanics Symposium* (eds. J. J. K. Daemen and R. A. Schultz), Balkema, Rotterdam, pp.71-77.

6. Hatzor, Y, H., 1999. The Vousoir beam reaction curve. In: *ICADD-3, Proceedings of the 3rd Intl. Con. on Analysis of Discontinuous Deformation* (ed. B. Amadei) ARMA, Alexandria, pp. 117-126.

7. Hatzor, Y. H., 1999. Dynamic rock slope stability analysis at Masada national monument using Block Theory and DDA. In: *Rock Mechanics for Industry, Proceedings of the 37th U.S. Rock Mechanics Symposium* (eds. B. Amadei, R. Kranz, G. A. Scott, P. H. Smeallie), Balkema, Rotterdam, pp. 63-70.

8. Hatzor, Y. H., 1999. Natural rock-slope stability issues at Masada national monument: A case study. In: *Proceedings of the 9th ISRM Congress* (eds. G. Vouille and P. Berest). Balkema, Lisse, Vol. 3, pp. 1621 – 1628.

9. Tsesarsky. M. and Y. H. Hatzor, 2000. Stability of large span, shallow openings in soft and discontinuous chalk. In: *Proceedings of EUROCK 20000 Symposium* (ed. DGGT). VGE, Essen, pp. 427 – 432.

10. Tsesarsky, M., Hatzor, Y. H. and Sitar, N. 2002. Dynamic block displacement prediction – validation of DDA using analytical solutions and shaking table experiments. In: *Stability of Rock Structures: ICADD - 5, Proceedings of the*

5th International Conference on Analysis of Discontinuous Deformation (ed. Y. H. Hatzor), Balkema Publishers, Lisse, pp. 195 – 203.

11. Hatzor, Y. H., Arzi, A. A. and Tsesarsky, M. 2002. Realistic dynamic analysis of jointed rock slopes using DDA. In: *Stability of Rock Structures: ICADD –5, Proceedings of the 5th International Conference on Analysis of Discontinuous Deformation* (ed. Y. H. Hatzor), Balkema Publishers, Lisse, pp. 47 – 56.

12. Tsesarsky, M. and Hatzor, Y. H. 2003. Deformation and kinematics of vertically jointed rock layers in underground openings. In: *Development and Application of Discontinuous Modelling for Rock Engineering: ICADD – 6, Proceedings of the 6th International Conference on Analysis of Discontinuous Deformation* (ed. M. Lu), Balkema Publishers, Lisse, pp. 93-101.

13. Hatzor, Y. H. 2003. Fully dynamic stability analysis of jointed rock slopes. In: *ISRM 2003 – Technology roadmap for rock mechanics, Proceedings of the 10th ISRM Congress* (eds. M. Handley and D. Stacey). South African Institute of Mining and Metallurgy. September 8 – 12, Johannesburg, South Africa, pp. 503-514.

14. Tsesarsky, M. Hatzor, Y. H., Leviathan, Saltzman, U., Sokolowsky, M. 2005. Structural control on the stability of overhanging, discontinuous rock slopes. In: *40th U.S. Symposium on Rock Mechanics (USRMS): Rock Mechanics for Energy, Mineral and Infrastructure Development in the Northern Regions* (eds. G. Cheng, S. Huang, W. Zhou, and J. Tinucci). June 25-29, Anchorage, Alaska: CD-ROM paper ARMA/USRMS 05-771.

15. Kamai, R. and Hatzor, Y. H. 2005. Dynamic back analysis of structural failures in archeological sites to obtain paleo-seismic parameters using DDA. In: *Proceedings of ICADD-7, the 7th International Conference on the Analysis of Discontinuous Deformation* (eds. M. MacLaughlin and N. Sitar). Dec. 10-12, Honolulu, Hawaii, pp. 121-136.

16. Hatzor, Y. H., Tsesarsky, M. And Eimermacher, R. C. 2006. Structural stability of historic underground openings in rocks: two case studies from Israel. In: *Fracture and Failure of Natural Building Stones - Applications in the Restoration of Ancient Monuments*, (ed. S. K. Kourkoulis), Springer, Dordrecht, The Netherlands, Chapter 4.3, pp. 215-237.

17. Kamai R. and Hatzor, Y. H. 2006. Dynamic back analysis of structural failures in archeological sites to obtain paleo-seismic parameters using DDA. In: *Proceedings of the 4th Asian Rock Mechanics Symposium*, (eds. C. F. Leung and Y. X. Zhou), November 8 – 10, Singapore.

18. Tsesarsky, M. and Hatzor, Y. H. 2007. Kinematics of overhanging cliffs. In: *Proceedings of 11th Congress of the International Society of Rock Mechanics*, (eds. Ribeiro e Sousa, L., Ollala, C. and Grossman, N. F.), July 9 – 13, Lisbon, Portugal, Vol. 1, pp. 609-613.

19. Hatzor, Y. H. 2007. Validation and Application of discontinuous deformation analysis (DDA). In: *Proceedings of the 1st Sri Lankan Geotechnical Society International Conference on Soil and Rock Engineering*, (ed. P.H.S.W. Kulatilake), August 7-11, Colombo, Sri Lanka.

20. Yagoda, G. and Hatzor, Y. H. 2007. Seismic risk estimation from overturning analysis of Hellenistic columns using DDA. In: *Proceedings of ICADD-8, the 8th International Conference on the Analysis of Discontinuous Deformation* (eds. Y. Ju, X. Fang, H. Bian). August 14-19, Beijing, China, pp. 123-128.

21. Hatzor, Y. H., Kamai, R., Yagoda-Biran, G. 2008. A new method to estimate paleoseismic PGA using dynamic numerical back-analysis of keystone displacements in historic masonry structures. In: *Proceedings CD of San Francisco 2008, the 42nd US Rock Mechanics Symposium and 2nd U.S. - Canada Rock Mechanics Symposium*, San Francisco, June 29-July 2. ***Recipient of the 2011 ARMA Applied Rock Mechanics Award.***

22. Bakun-Mazor, D., Hatzor, Y. H. and Dershowitz, W. S. 2008. Numerical simulation of mechanical layering in sedimentary rock masses: a new hybrid geoDFN-DDA approach. In: *Proceedings CD of San Francisco 2008, the 42nd US Rock Mechanics Symposium and 2nd U.S.-Canada Rock Mechanics Symposium*, San Francisco, June 29-July 2.

23. Wainshtein, I., Hatzor, Y. H. and Doktofsky, M. 2008. Does shaft resistance of piles in rock scale with RQD? In: *Proceedings CD of San Francisco 2008, the 42nd US Rock Mechanics Symposium and 2nd U.S.-Canada Rock Mechanics Symposium*, San Francisco, June 29-July 2.

24. Hatzor, Y. H. 2008. Dynamic numerical analysis of stone displacements in ancient masonry structures using DDA: a new method to estimate historic ground motions. In: *Proceedings of the 12 MIR Conference on Geotechnical Engineering in Seismic Conditions* (eds. G. Barla and M. Barla) December 2 – 3, Turin, Italy. Patron editore – Bologna, pp. 179 - 206.

25. Biran, O., Y. H. Hatzor, and A. Ziv. 2009. Micro-scale roughness effects on the friction coefficient of granite surfaces under varying levels of normal stress. In: *Shear physics at the meso-scale in earthquake and landslide mechanics.* (eds. Y. Hatzor, J. Sulem, and I. Vardoulakis). CRC Press/Balkema, pp. 145 - 158.

26. Hatzor Y. H. Modelling dynamic deformation in natural rock slopes and underground openings with DDA. In: *Proceedings of the 9th International Conference on Analysis of Discontinuous Deformation* (eds. MA G., Zhou Y.) Nanyang Technological University, Singapore: Research Publishing Services; 2009. pp. 13-26.

27. Bakun-Mazor D., Hatzor Y. H., Glaser S. D. 3D DDA vs. analytical solutions for dynamic sliding of a tetrahedral wedge In: *Proceedings of the 9th International Conference on Analysis of Discontinuous Deformation* (eds. MA G., Zhou Y.) Nanyang Technological University, Singapore: Research Publishing Services; 2009. pp. 193-200.

28. Hatzor, Y. H. Modelling dynamic deformation in natural rock slopes and underground openings with the numerical DDA method. In: *Proceedings of the 6th Asian Rock Mechanics Symposium* (eds. K. G. Sharma, T. Ramamurthy, V. K. Kanjlia, A.C. Gupta). 23 – 27 October, 2010, New Delhi, India. pp. 73 – 83.

29. Hatzor, Y. H., I. Wainshtein, and D. Bakun Mazor, 2011. Stability of shallow karstic caverns in blocky rock masses. In: *Proceedings CD of the 45th US Rock Mechanics Symposium,* San Francisco, 26-29 June, 2011, CD ROM paper 11-465.

30. Bakun-Mazor, D., Hatzor, Y.H. Glaser, S.D., and Santamarina, J.C., 2011. Climatic effects on key-block motion: evidence from the rock slopes of Masada world heritage site. In: *Proceedings CD of the 45th US Rock Mechanics Symposium, San Francisco*, 26-29 June, 2011, CD ROM paper 11-487.

31. Wainshtein, I. and Hatzor, Y. H., 2011. Large-scale two-dimensional laboratory load tests of rock-socketed piles in synthetic rock-masses. In: *Proceedings CD of the 45th US Rock Mechanics Symposium, San Francisco*, 26-29 June, 2011, CD ROM paper 11-293.

32. Hatzor Y.H., and Yagoda-Biran, G., 2011. Constraining paleoseismic PGA using numerical analysis of structural failures in historic masonry structures: review of recent results. In: *Advances in Rock Dynamics and Applications*. Ed: Yingxin Zhou, Jian Zhao. Chap. 16, p. 423-455. CRC Press.

33. Tal, Y. and Hatzor, Y. H. 2011. Surface settlement due to deep mining with the Numerical Manifold Method. In: *The 12th congress of the international society for rock mechanics* (eds. Q. Qian and J. Zhao). October 16-21, 2011. Beijing, China.

34. Hatzor Y. H. and Bao H. 2012. Accuracy of Wave Propagation Modeling with 2D-DDA. In: *Proceedings of the 1st Workshop in DDA*. ISRM DDA Commission. 14 October 2012, COEX Seoul Korea. pp. 18 – 30.

35. Yagoda-Biran G. and Hatzor Y.H., 2013. A new failure mode chart for toppling and sliding with consideration of earthquake inertia force. In: *Proceedings of the 47th US Rock Mechanics Symposium*, San Francisco, June 2013.

36. Yagoda-Biran G. and Hatzor Y.H., 2013. Response spectra of slender columns as obtained with 2D-DDA and geophysical site response tests. In *Proceedings of the 42ndUS Rock Mechanics Symposium*, San Francisco, June 2013.

37. Bakun-Mazor, D. and Y. H. Hatzor, 2013. Thermally vs. seismically induced block displacements in rock slopes. In: *Proceedings of the 11th International Conference on Analysis of Discontinuous Deformation*. (eds. G. Chen, Y. Ohnishi, L. Zheng, and T. Sasaki). 27-29 August, Fukuoka, Japan. CRC Press. pp. 177-184.

38. Hatzor, Y. H., Bao. H. and G. Yagoda Biran, 2013. Site Response Analysis with Two-Dimensional DDA. In: *Proceedings of the 11th International Conference on Analysis of Discontinuous Deformation*. (eds. G. Chen, Y. Ohnishi, L. Zheng, and T. Sasaki). 27-29 August, Fukuoka, Japan. CRC Press. pp. 43-50.

39. Hatzor, Y. H. and D. Bakun Mazor, 2013. Thermally vs. seismically induced block displacements in jointed rock slopes. In: Proceedings of the International Conference on Vajont - 1963-2013 - Thoughts and analyses after 50 years since the catastrophic landslide Padua, Italy - 8-10 October 2013. Published by: Italian Journal of Engineering Geology and Environment - Book Series (6): 41 – 49. DOI: 10.4408/IJEGE.2013-06. B-03.

40. Bakun-Mazor, D. and Hatzor, Y. H., 2015. Measuring thermally induced rock block displacement inside a controlled climate laboratory. In: Innovations in applied and theoretical rock mechanics. In: *Proceedings of the 13th ISRM Congress*. May 10 – 13, Montreal, Canada.

41. Hatzor, Y. H., Tal, Y., Yagoda-Biran, G. and X. T. Feng, 2015. The significance of modeling the excavation sequence in numerical analysis of underground opening. In: Innovations in applied and theoretical rock mechanics. *Proceedings of the 13th ISRM Congress*. May 10 – 13, Montreal, Canada.

42. Shitrit, O., Y. O. Rosenberg, Y. H. Hatzor, I. Reznik, S. Nguyen, S. Feinstein, and H. J. Vinegar, 2015. Constitutive model for mechanical properties of highly porous organic-rich chalks from central Israel. In: Innovations in applied and theoretical rock mechanics. *Proceedings of the 13th ISRM Congress*. May 10 – 13, Montreal, Canada.

43. Zelig, Ravit, Yossef H. Hatzor, and Xia-Ting Feng, 2015. Rock burst simulations with 2D-DDA. In: *Proceedings of the 49th U.S. Rock Mechanics Symposium*. June 28 – July 1 2015. San Francisco.

44. He, B. G., Y. H. Hatzor, and X. T. Feng, 2015. Rock bursts simulation with DDA: preliminary results. *Proceedings of the 12th International Conference on Analysis of Discontinuous Deformation*. (eds. C. A. Tang and Y. Y. Young). 16 – 19 October, Wuhan, China, pp. 15-23.

45. Hatzor, Y. H. 2015. Lessons from old underground openings in rocks: The wisdom of ancient engineers. *Proceedings the International Symposium on Scientific Problems and Long-term Preservation of Large-scale*. Longyou County, Zhejiang Province, China, 23–26 October, 2015. In: Z. Yang and C. Tanimoto (Eds.) *Ancient Underground Engineering of Ancient Underground Opening and Preservation*. Taylor & Francis Group, London, ISBN 978-1-138-02899-9, pp. 323 – 326.

46. He, Ben-Guo, Yossef H. Hatzor, and Xia-Ting Feng, 2016. Energy considerations of strain rock bursts in jointed rock masses. In: *Proceedings of the 1st International Symposium on Reducing Risks in Site Investigation, Modelling and Construction for Rock Engineering (GEOSAFE2016)*. Xi'an, China 25-27 May, 2016.

47. Shitrit O., Hatzor Y.H., Feinstein S., Vinegar H.J., 2016. Influence of Laboratory-Induced Maturation on Rock-Physics of Organic-Rich Chalks In: *Proceedings of the 50th U.S. Rock Mechanics Symposium,* June 26 – 29, Huston, Texas. **Selected as one of the "best papers" by the conference scientific committee**.

48. Gordin Y., Hatzor Y.H. and Vinegar H.J., 2016. Ultrasonic velocity and anisotropy of organic-rich chalks. In: *Proceedings of the 50th U.S. Rock Mechanics Symposium*, June 26 – 29, Huston, Texas.

49. Hatzor, Yossef H. 2016. Seismic vulnerability of historic monuments: a rock mechanics perspective. In: *Rock Mechanics and Rock Engineering: From the Past to the Future – Ulusay et al., (Eds.)*. Proceedings of EUROCK 2016.Taylor and Francis Group, London, pp. 75 – 84.

50. Yagoda-Biran, Gony, and Yossef H. Hatzor, 2017. The numerical discontinuous deformation analysis (DDA) method: benchmark tests. In: *Rock Mechanics and Engineering Volume 3: Analysis, Modeling & Design*. (ed. X-T Feng), CRC Press.

51. He, Ben-Guo, Yossef H. Hatzor, and Xia-Ting Feng, 2017. Ch. 4.5: DDA. In: *Rockburst: Mechanisms, Monitoring, Warning, and Mitigation*. (ed. X-T Feng), Elsevier.

52. He, Ben-Guo, Yossef H. Hatzor, and Xia-Ting Feng, 2017. DDA for scaling rockburst hazard in blocky rock masses. In: *Proceedings of the 13th International Conference on Analysis of Discontinuous Deformation*, Tianjin, China, 8-10 December.

53. Ibañez, J. P. & Hatzor, Y. H., 2018. Friction degradation in rapid sliding: Back analysis of the catastrophic Vajont landslide using DDA. In: *Proceedings of the 52nd U.S. Rock Mechanics Symposium*, Seattle, USA, 18–684.

54. Ibanez, Juan Pablo and Yossef H. Hatzor, 2019. From creep to rapid sliding: back analysis of the Vajont landslide with the numerical DDA method. In: *Proceedings of the 14th Congress of the International Society for Rock Mechanics*. September 13 – 18, 2019. Foz do Iguassu, Brazil.

55. Eva G Vinegar, Yoav O Rosenberg, Itay Reznick, Yair Gordin, Philip M Singer, Xinglin Wang, Zeliang Chen, Scott V Nguyen, Weidong Li, Tom Bradley, George J Hirasaki, Larry W Lake, Shimon Feinstein, Yossef H Hatzor, Harold J Vinegar. 2020. What Happens to the Petrophysical Properties of a Dual-Porosity Organic-Rich Chalk During Early-Stage Organic Maturation? *SPWLA 61st Annual Logging Symposium.* Published by OnePetro.

56.

(d) Special Publications

1. Hatzor Y., 2000. Geological Map of Israel, 1:50,000, Sheet 6-I,II: Bet She'an. State of Israel, Ministry of National Infrastructure, The Geological Survey of Israel.

Lectures and Presentations at Meetings and Seminars

(a) Invited lectures

1. Natural rock slope stability issues at Masada national monument. 9th ISRM Congress. Paris, France, 1999. Plenary Lecture.

2. Preservation of historic rock and stone monuments in Israel. Workshop of ISRM commission on preservation of historical monuments, 2nd Asian Rock Mechanics Symposium, ISRM. Beijing, China, 2001. Special Lecture.

3. Stability of monuments in rock. The Earth Sciences Day – Sponsored by Israel Geological Society, Tel Aviv, Israel, 2001. Plenary Lecture.

4. Realistic Dynamic Analysis of Jointed Rock Slopes using DDA. 5th International Conference on Analysis of Discontinuous Deformation. Wuhan, China, 2002. Plenary Lecture.

5. Fully dynamic stability analysis of jointed rock slopes. International Conference on probability and mathematics. Co-sponsored by Hebrew U. and BGU. Beer – Sheva, Israel, 2003. Plenary Lecture.

6. Stability of historical monuments in rock. Special conference on preservation of historical sites and cites. Western Galilee College, Akko, Israel, 2004. Plenary Lecture.

7. Mechanical behavior of sedimentary rocks in Israel – keynote address. Israel Geological Society Annual Meeting, Mashabim. 2005. Plenary Lecture.

8. Dynamic back analysis of structural failures in archeological sites to obtain paleo-seismic parameters using DDA. 7th International Conference on the Analysis if Discontinuous Deformation. Honolulu, Hawaii, Dec. 10-12, 2005. Plenary Lecture.

9. Structural stability of historic underground openings in rocks: two case studies from Israel. Professional symposium on Fracture and Failure of Natural Building Stones, 16th European Conference on Fracture, Alexandropolis, Hellas, July, 3-4, 2006. Plenary Lecture.

10. Validation and application of discontinuous deformation analysis. 1st Sri Lankan Geotechnical Society International Conference on Soil and Rock Engineering ,Colombo, Sri Lanka, August 7-11, 2007. Special Lecture.

11. Seismic risk estimates from back analysis of structural failures and landslides in Israel. Special conference on new developments in seismic engineering design. Organized by the Association for Structural Engineering and Infrastructure in Israel. Tel Aviv, Israel, March 12, 2008. Plenary Lecture.

12. DDA analysis of structural failures in masonry monuments and natural rock slopes: a new method to estimate historic ground motions. MIR Workshop on Rock Mechanics and Geotechnical Engineering. Politecnico di Torino, Italy. Dec. 2-3, 2008. Plenary Lecture.

13. Constraining paleoseismic PGA using numerical analysis of structural failures in historic masonry structures. INQUA International Work Shop. Zefat, Israel, Feb. 16, 2009. Plenary Lecture.

14. Constraining paleoseismic PGA using numerical analysis of structural failures in historic masonry structures. ISRM Workshop on Rock Dynamics. EPFL, Lausanne, June 17-18, 2009. Plenary Lecture.

15. Preservation of Rock and Stone Monuments in Seismic Zones. Second UNESCO World Heritage workshop on "Disaster Risk Reduction to Cultural Heritage". November 14 – 17, 2009. Acre, Israel. Plenary Lecture.

16. Stability of shallow caverns below cities and mines in blocky rock masses: limiting relationship between cavern span and minimum cover height required for stability. Workshop on Underground Technology and Rock Engineering (UTRE) research, Nanyang Technological University, Singapore, November 23 – 24, 2009. Plenary Lecture.

17. Stability of Shallow Karstic Caverns Below Open Pit Mines: Limiting Relationships Between Cavern Span and Cover Thickness. 9th International Conference on Analysis of Discontinuous Deformation (ICADD-9), Singapore, November 25 - 27, 2009. Keynote address.

18. Modeling Dynamic Deformation in Natural Rock Slopes and Underground Openings with DDA. 40th Japanese Society of Discontinuous Analysis Meeting. Kyoto University Tokyo Office, Oct. 20, 2010, Tokyo, Japan. Plenary Lecture.

19. Modeling Dynamic Deformation in Natural Rock Slopes and Underground Openings with DDA. 6th Asian Rock Mechanics Symposium, New Delhi, India, October 24 – 27, 2010. Keynote address.

20. Risk assessment of collapse in shallow caverns using numerical modeling of block interactions with DDA: Suggested approach and case studies. International Top-level Forum on Engineering Science and Technology Development Strategy — Safe Construction and Risk Management of Major Underground Engineering. May 17 – 19, 2012. Wuhan, China. Keynote address.

21. Conservation of Cultural Heritage Monuments in Rock Sites: Case Studies from Israel. The Conservation Institute of Dunhuang Academy of China. April 26, 2013. Special Invited Lecture.

22. Site response analysis with 2D-DDA. 11th International Conference on Analysis of Discontinuous Deformation (ICADD-11), August 27-29, 2013, Fukuoka, Japan. Keynote address.

23. Quantitative assessment of archeo-earthquakes from back analysis of historic masonry structures. Pre-instrumental earthquakes: Italy – Israel Binational Symposium. 16 September, 2013. Ma'agan Eden, Lake Kinneret (Sea of Galilee), Israel. Plenary Lecture.

24. Seismic vs. thermal triggering of large landslides. Vajont 2013 Conference. Padua, Italy Oct. 8 – 10, 2013. Keynote Address.

25. Discontinuous Deformation Analysis in Rock Mechanics Practice. 13th ISRM Congress. Montreal, Canada May 10 – 13, 2015. Keynote address.

26. Modeling Very Deep Underground Excavations Inspired by Dick Goodman's Philosophy (DDA/NMM). Richard E. Goodman Geological Engineering Symposium. Jenner, California USA, July 2, 2015. Plenary lecture.

27. Modeling rock bursts in discontinuous rock masses with DDA. The 12th International Conference on Analysis of Discontinuous Deformation (ICADD-12). Wuhan, China, October 16 to 19, 2015. Keynote address.

28. Seismic effects on historic monuments: some examples from Israel. The International Symposium on Scientific Problems and Long-term Preservation of Large-scale Ancient Underground Engineering. Zhejiang Province, China, October 23-26, 2015. Keynote address.

29. Seismic vulnerability of historic monuments: a rock mechanics perspective The 2016 ISRM International Symposium (EUROCK2016), Cappadocia (Ürgüp), Turkey, 29 - 31 August, 2016. Keynote address.

30. Rockburst simulations with DDA. 15th International Conference of the International Association for Computer Methods and Advances in Geomechanics (15th IACMAG), October 19-23, 2017, Wuhan, China. Keynote address.

31. Roughness evolution through shear in rock interfaces: lab results and lessons from the catastrophic Vajont landslide. 27th Assembly of the Advanced Materials Congress. 11 – 14 August, 2019. Stockholm, Sweden. IAAM Award Lecture (Declined).

32. Geological engineering of underground openings for hazardous waste disposal. NNSA-IAEC workshop on nuclear waste management and subsurface science. 11-12 November 2019, Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Sede Boqer Campus, Israel. Invited Talk.

33. Discontinuity roughness and sliding instability. The 11th Asian Rock Mechanics Symposium. October 21 – 25, 2021. Beijing, China. Online Keynote Address.

34. Investigation of underground openings in the unsaturated zone of the Yamin plain - support alternatives. NNSA-IAEC Workshop on Nuclear Waste Management and Subsurface Science (Virtual). 9 – 10 November, 2021.

35. Discontinuity roughness and sliding instability: field and laboratory observations. 2022 International Geomechanics Symposium. 1-3 Nov. Abu Dhabi. UAE.

36. Different approaches for tunnelling: empirical, observational, modelling. 3RD ISRM EUROPEAN ROCK MECHANICS DEBATE (Eurock Debate 3). Nick Barton vs. Yossef H. Hatzor. January 25th, 2023 (Online).

(b) Invited seminars at universities and institutions

1. Short course on Block Theory. TerraTek Research. Salt Lake City, Utah, 1992.
2. Alternative methods for tunnel design in jointed rock masses. Geological Survey of Israel, Jerusalem, 1992.
3. New developments in tunneling through discontinuous rock. Dept. of Geology and Mineralogy, BGU, 1992.
4. Relationship between grain size and mechanical strength of Dolomites. Geological Survey of Israel, Jerusalem, 1994.
5. Application of Block Theory to engineering of underground space in jointed rock. Dept. of Geotechnical Engineering Faculty of Civil Engineering, The Technion, 1994. .
6. Three Dimensional stability of rock blocks in saturated slopes. Earth Science Institute, Hebrew University of Jerusalem, 1995.
7. Stability issues in bedded and jointed chalk - Case studies from the Northern Negev. Department f Geology and Mineralogy, BGU, 1995.
8. Back analysis of three large rock failures around the world. Special seminar in Geotechnical Engineering, Department of Civil Engineering, University of California, Berkeley, 1995.
9. Stability of underground openings in bedded and jointed chalks: case studies from Tel Beer-Sheva and Beit Gubrin. Department of Physical Geography, The Hebrew University of Jerusalem, 1996.
10. Relationship between engineering geology and civil engineering. The Engineers Club, Beer-Sheva, 1996.
11. Application of basic and advanced rock mechanics principles to the solution of engineering problems. A special conference. Earth Science Institute - Hebrew University, 1998.
12. Dilation of anisotropic rock salt - TerraTek Research, USA, 1998.
13. The engineering of underground opening in soft chalks - new solutions to old problems. Earth Science Institute - Hebrew University, 1998.
14. Geological Engineering in Israel towards the year 2,000. A special conference on science and technology at Nevatim Air Force Base, 1998.
15. Rock slope stability analysis at Masada national park. Dept. of Geotechnical Eng. - The Technion, 1998.
16. Rock slope stability analysis at Masada national park. Earth Science Institute - Hebrew University, 1999.
17. Rock slope stability analysis at Masada national park. The Dean of the Natural Science Faculty Forum – BGU, 1999.
18. Rock slope stability analysis at Masada national park. The Engineergs Club – Beer Sheva, 2000.
19. Rock slope stability analysis at Masada national park. Dept. of Civil and Environmental Engineering, University of California, Berkeley, 2001.
20. Dynamic rock slope stability analysis. Geophysical Institute of Israel, Lod, 2001.
21. Rock Slope Stability at Masada. Geological Survey of Israel, Jerusalem, 2001.
22. Fully dynamic analysis of jointed rock slopes using DDA. Dept. of Environmental Sciences and Energy Research. The Weizmann Institute of Science, 2002.

23. Realistic dynamic analysis of jointed rock slopes. Dept. of Mechanical Engineering, BGU, 2004.
24. The effect of pre-consolidation on frictional strength of clay filled discontinuities Weizmann Institute of Sciences. Special Geodynamics workshop, 2004
25. Theory and application of discontinuous deformation analysis. Geological Survey of Israel, Jerusalem, 2005.
26. Mechanical behaviour of typical rock formations in Israel. Nuclear Research Center, Dimona, 2006
27. Theory and application of discontinuous deformation analysis. Hebrew University, Jerusalem, 2007.
28. The numerical discontinuous deformation analysis: theory, validation, and applications. Montana Tech of the University of Montana, Bute, Montana, 2008.
29. Dynamic analysis of rock slope stability. Tel Aviv University, Tel Aviv, 2010.
30. Preservation of underground openings: examples from Ayalon cave, Zedekyah cave, and Tel Beer - Sheva. Ben-Gurion University, Beer-Sheva, 2010.
31. Seismic vulnerability of historic sites, Graduate School of Engineering, Kyoto University, Kyoto, Japan, 2010.
32. Modelling Dynamic Deformation in Natural Rock Slopes and Underground Openings with DDA. Institute of Rock and Soil Mechanics, Chinese Academy of Sciences, August 30, 2011, Wuhan, China .
33. Rock Mechanics and Rock Engineering Research by BGU: Few Examples. Institute for Disaster Management and Reconstruction, Sichuan University, September 5, 2011 , Chengdu, China.
34. Modelling Rock Mass Deformation with DDA and NMM: Applications to Underground Openings. Institute of Tunnel and Metro Engineering, Hohai University, September 12, 2011, Nanjing, China.
35. Geotechnical Earthquake Engineering with the numerical DDA method. Yangtze River Scientific Research Institute, Wuhan, China, February 23, 2012.
36. Underground Engineering with DDA. State Key Laboratory for Geomechanics and Deep Underground Engineering, Beijing, China. March 15, 2012 , Beijing, China.
37. DDA Seminar, Beijing University of Technology, Beijing, China, August 19 – 24, 2012. Jointly with Dr. Gen-hua Shi and Professor Guowei Ma.
38. Accuracy of Wave Propagation Modeling with 2D-DDA. 1st DDA Workshop. Seoul, South Korea, October 14, 2012.
39. Engineering challenges in very shallow and very deep underground mining: the case of the very shallow Ayalon cave and the very deep Jinping tunnels. Geological Survey of Israel, January 13, 2013.
40. Conservation of Cultural Heritage Monuments in Rock Sites: Case Studies from Israel. School of Cultural Heritage, North West University, Xian, China. April 22, 2013.
41. Conservation of Cultural Heritage Monuments in Rock Sites: Case Studies from Israel. School of civil Engineering and Mechanics, Gansu, Lanzhou, China. April 28, 2013.
42. Geological Engineering Challenges in very shallow and very deep underground openings. Dept. of Geophysics and Planetary Sciences. Tel Aviv University. June 3, 2013.
43. Modeling dynamic deformation with DDA. Department of Civil Engineering, College of Resource and Civil Engineering, Northeastern University, Shenyang, China. August 20, 2013.
44. DDA Seminar, Beijing University of Technology, Beijing, China, August 21 – 25, 2013. Jointly with Dr. Gen-hua Shi and Professor Guowei Ma.
45. Modeling deformation of old masonry structures with the numerical DDA method: examples from historic monuments in Israel. Technical University of Athens (NTUA), School of applied mathematical and physical science, Dept. of Mechanics, Athens, Greece, February 10, 2015.
46. Rockbursts in discontinuous rock masses: theoretical analysis and field results from the Jinping hydroelectric project in China. Israel Geological Society Annual Meeting, Eilat, January 20, 2016 (invited talk).
47. Seismic vulnerability of monuments in Israel. Italian-Israeli cooperation on seismic hazard, geodynamics of the Mediterranean and geo-resources. Tel Aviv University, June 4, 2017 (invited talk).

48. Scaling rockburst hazard in deep tunnels using the numerical DDA and empirical GSI methods. Hebrew University of Jerusalem, November 15, 2017.
49. Introduction to Block Theory and Discontinuous Deformation Analysis (DDA). Rock Mechanics Short Course for Association of Environmental & Engineering Geologists - San Francisco Bay Area Chapter. University of California, Berkeley. June 7, 2019.
50. Dynamic deformation in discontinuous rock masses: rockbursts in deep tunnels and rapid catastrophic rock slides. Geological Survey of Israel, June 30, 2019.
51. Rockbursting in deep tunnels and landslide runout: The role of interface roughness. GeoSystems Engineering Group, U. C. Berkeley, April 21, 2021.
52. Friction, roughness, and sliding instability. Dept. of Geophysics seminar. Tel Aviv University. Dec. 12, 2022.

Research Grants

(a) Competitive Grants

1993 - 1995	Ministry of National Infrastructure	The complete stress strain curve and failure criteria of Judea Group Dolomites.	Y. Hatzor Y. Mimran	$33,000
1994 - 1997	Ministry of Science	Investigation of the mechanical behavior of Mount Sedom Rock Salt in order to evaluate the feasibility of underground hazardous waste storage plants.	Y. Hatzor V. Palchik	$37,000
1999 - 2003	US-Israel Bi-national Science Foundation (BSF)	Stability of underground openings in jointed and laminated rock.	Y. Hatzor N. Sitar Gen-hua Shi	$150,000
1999 - 2000	Ministry of National Infrastructure	Relationship between mechanical behavior and jointing patterns in rock	Y. Hatzor Y. Eyal	$13,000
2002 - 2003	Ministry of Defense	Stability of underground openings in saturated sands.	Y. Hatzor H. Gvirzman	$13,000
2003 - 2005	Ministry of Defense	Potential for blast induced liquefaction in silty sands	Y. Hatzor H. Gvirzman	$35,000
2004	Ministry of Housing and Construction	Shear resistance of pile – rock interfaces	Y. Hatzor	$22,381
2005 - 2009	US-Israel Bi-national Science Foundation (BSF)	Environmentally controlled, multi scale, dynamic behavior of rock masses	Y. Hatzor S. Glaser	$200,000
2007	National Steering Committee for earthquake readiness	Seismic hazard assessment along the eastern margins of lake Kineret	Y. Hatzor R. Amit O. Katz	$20,000
2007 - 2008	Ministry of National Infrastructure	Laboratory friction experiments with implications for seismic risk analysis	Y. Hatzor A. Ziv	$20,000
2008 - 2012	Israel Science Foundation (ISF)	Determination of Paleoseismic Ground Motions from Inversion of Block Failures in Masonry Structures	Y. Hatzor	$200,000
2008 - 2010	Ministry of National Infrastructure	Liquefaction potential of sediments along the shores of the Dead Sea	Y. Hatzor A. Salamon	$ 25,000

2013-2017	Israel Science Foundation (ISF)	Thermally-induced irreversible displacements in discontinuous rock slopes	D. Bakun-Mazor Y. H. Hatzor	$ 200,000
2014 – 2018	Ministry of National Infrastructure	Relationship between degree of maturation and petrophysical properties of carbon rich chalks. Graduate student funding.	Y. H. Hatzor	$ 75,000
2017 - 2021	Ministry of National Infrastructure	Remote detection of level of maturity of source rocks. Graduate student funding	Y. H. Hatzor	$ 75,000
2016-2017	Ministry of Defense	Geomechanical properties of soils	Y. Hatzor R. Kamai	$ 100,000
2017-2021	Israel Science Foundation (ISF)	Roughness evolution through shear	Y. Hatzor A. Sagy	$ 200,000
2021- 2025	Israel Science Foundation (ISF)	Fault roughness and induced seismicity	Y. Hatzor	$ 200,000
2022 - 2023	Ministry of National Infrastructure	Experimental detection of dilation through shear of rough discontinuities in relation to induced seismicity. Graduate student funding	Y. H. Hatzor	$32,000
2022 – 2023	Ministry of National Infrastructure	Experimental induced seismicity. Graduate student funding	Y. H. Hatzor	$ 32,000
2023 – 2024	Ministry of Innovation, Science and Technology	Time dependent geological H2 storage capacity. Joint project Israel – France within the framework of the Maimonides research program.	Y. H. Hatzor S. Pinkert J. Sulem	$ 87,000 (Israel side)
2023 - 2025	Ministry of National Infrastructure	Geological H2 storage. Start-up project.	Y. H. Hatzor S. Pinkert	$ 187,640

(b) Industry Grants

1994	Moriah - Authority for the development of Jerusalem	Mechanical behaviour of Beit-Meir dolomites and their adaptability for tunneling	Y. Hatzor	$2,800
1995	Moriah - Authority for the development of Jerusalem	Mechanical behavior of Menuha chalks and their adaptability for tunneling	Y. Hatzor	$6,500
1995	National Park Authority	Underground opening stability in highly jointed chalk - Tel Beer-Sheva	Y. Hatzor	$13,000
1995	Rotem Fertilizers Ltd.	Rock slope stability analysis in Arad open pit mine	Y. Hatzor	$12,000
1996	Moriah - Authority for the development of Jerusalem	Mechanical behaviour of Aminadav Fm. dolomites and their adaptability for tunneling	Y. Hatzor	$13,000
1997	Ministry of Defense	Mechanical behavior of carbonates from the Galilee for underground storage plants	Y. Hatzor	$10,000
1996 – 1997	National Park Authority	Stability of the bell-shaped caverns at Bet Guvrin	Y. Hatzor M. Talesnick	$21,600

1997 - 1998	Oil and Energy Infrastructures Ltd.	Mechanical behaviour of Mt. Carmel lithologies for tunneling feasibility studies	Y. Hatzor	$19,000
1997 - 2000	National Park Authority	Dynamic rock slope stability analysis and monitoring in Masada	Y. Hatzor	$80,650
2002	Ministry of Housing and Construction	Mechanical strength of limestones for bridge footing design in Modeen.	Y. Hatzor	$5,000
2002	Yefe Nof Inc.	Mechanical strength of dolomites for the Carmel tunnel project	Y. Hatzor	$2,500
2003	National Quarries Rehabilitation Fund.	Stability analysis of the ancient Zidekiahu cavern, Jerusalem	Y. Hatzor	$25,000
2004	Ministry of Defense	Mechanical behavior of basaltic rock specimens	Y. Hatzor	$7,500
2004	Ministry of Housing and Construction	Stability and reinforcement analysis for the "Gibborim" overhang in Haifa	Y. Hatzor	$8,100
2006 - 2008	Israel Cement Enterprises Ltd.	Numerical stability analysis of underground cavern roof thickness vs. roof span + conservation strategies for Ayalon cave	Y. Hatzor	$50,000
2010 - 2014	Israel Energy Initiatives IEI	Mechanical and petrophysical behaviour of oil shale from the Judean Plains region, Israel.	Y. Hatzor	$137,000
2015 - 2016	AFEK Oil and Gas Ltd.	Mechanical and petrophysical behaviour of carbon rich chalk from Ness boreholes, Golan.	Y. Hatzor	$ 49,000
2019 – 2021	NNRC	Stability examination of underground openings in the unsaturated soil sections of Mishor Yamin	Y. Hatzor S. Pinkert	$ 60,000
2022 – 2024	NNRC	Geomechanical characterization of Hazeva Fm. sediments in Yamin Plain, Southern Israel	Y. Hatzor S. Pinkert	$ 60,000
2023 - 2024	NNRC	Geomechaincal characterization of Mt. Scopus group formation in Mishor Yamin	Y. Hatzor	$ 55,000