

Monday, April 17, 2006

Resume

Mark Lloyd Talesnick

Born: Toronto, Canada, August 1959

Academic Degrees

Bachelor of Applied Science and Engineering - 1982.
Faculty of Geological Engineering.
University of Toronto, Toronto, Ontario, Canada.

Master of Science - Civil Engineering 1985.
Doctor of Science - Civil Engineering 1990.
Technion - Israel Institute of Technology, Haifa, Israel.

Academic Appointments

September 2000 – September 2001: Visiting Professor (on sabbatical leave)
University of Toronto, Toronto, Canada.

March 1997 - present: Senior Lecturer - Civil Engineering.
Technion - Israel Institute of Technology.

October 1993 - March 1997: Lecturer - Civil Engineering.
Technion - Israel Institute of Technology.

1992/1993 Post doctoral fellow - University of Wisconsin, Madison.
Work in the field of rock mechanics.

1991/1992 Post doctoral fellow - Technion - Israel Institute of Technology.
Work on BSF research.

Professional Experience

March 2001 – July 2001: Geotechnical engineer
Golder Associates Ltd., Toronto, Ontario, Canada.

Dec. 1987 - Feb. 1989 : Head, Soils and Roads Laboratory
Israel Standards Institute, Ramat Aviv, Israel.

May 1982 - Oct. 1982 : Drill rig engineer/geologist
Tahal Consulting Engineers, Tel Aviv, Israel

May 1981 - Sept. 1981 : Research assistant
University of Toronto, Toronto, Ontario, Canada.

May 1980 - Sept. 1980 : Drill rig engineer/geologist
Asarco Mineral Exploration Ltd., Toronto, Ontario, Canada.

Research Interests

Stress-strain behaviour of geomaterials.
Anisotropy of rock strength and deformability
Cyclic loading of geomaterials
Experimental methods and testing techniques

Teaching Experience

Engineering Geology, Undergraduate
Engineering Laboratory, Undergraduate
Introduction to Rock Mechanics, Undergraduate/Graduate
GeoMechanics, Undergraduate
Advanced Soil Mechanics, Graduate
Soil Mechanics Laboratory, Undergraduate
Field investigations in Geotechnical Engineering, Graduate

Faculty/Department Activities

Responsible for the design, construction, equipping and development of the Rock Mechanics teaching and research laboratory.

Responsible for the design, construction, equipping and development of the Soil Mechanics teaching laboratory.

Both the above labs were rebuilt and modern equipment constructed and/or purchased.

Responsible for the development of the laboratory portions of the two courses Geomechanics and Introduction to Rock Mechanics.

Member of the department undergraduate teaching committee.

Member of the department library committee.

Former member of the department development committee.

Public Professional Activities

2002 – present: Member of the governmental engineering committee for the study of land development in sinkhole affected areas along the Dead Sea coast, (by appointment of the minister of infrastructure).

1997 - present: Member of the editorial board, Geotechnical Testing Journal, ASTM - American Society for Testing and Materials

1990 - 1993: Member of the committee for the development of an Israeli standard for the Classification of soils for civil engineering purposes: Laboratory classification and visual classification. The Standards Institute of Israel, Standard number 253.

Honors

2002 – Special services award, American Society for Testing and Materials (ASTM).

2002 – Outstanding lecturer award, Technion – Israel institute of Technology.

2002 – Hogentogler Award, Awarded by the American Society for Testing and Materials (ASTM), paper of outstanding merit 2000-2001.

Talesnick, M.L., Katz, A. and Ringel, M. Describing the elastic stress-strain behaviour of a banded sandstone and sandstone like material.

2000, 2004 - Engineer Aaronson Award for Excellence in Teaching Technion - Israel Institute of Technology, Haifa, Israel.

1994/1995 - Engineer Aaronson Award for Excellence in Teaching Technion - Israel Institute of Technology, Haifa, Israel.

1987 - Research Award from the Shirion Foundation.
Technion - Israel Institute of Technology, Haifa, Israel.

1984 - Excellence Scholarship from the Gutwirth Foundation.
Technion - Israel Institute of Technology, Haifa, Israel.

1981 - The J. Edgar McAllister Summer Research Undergraduate Studentship.
University of Toronto.

Graduate Students

Completed Theses

<u>Year</u>	<u>Student</u>	<u>Prog.</u>	<u>Primary Supervisor</u>	<u>Additional Supervisor</u>
1993	Franko, O.	MSc.	Frydman, S.	Talesnick, M.
	Response of Israeli soils to earthquake loading.			
1995	Shvarzman, A.	MSc.	Frydman, S.	Talesnick, M.
	Residual strength of cohesive soils in Israel.			
1995	Brafman, M.	MSc.	Talesnick, M.	
	Determination of elastic parameters of transversely isotropic rocks.			
1995	Abalev, A.	MSc.	Talesnick, M.	Frydman, S.
	Stress-strain strength behaviour of clayey sand under general loading conditions.			
1996	Puzrin, A.	DSc.	Frydman, S.	Talesnick, M.
	The behaviour of soft clay under irregular cyclic loading.			
2000	Bloch, E.	MSc.	Talesnick, M.	
	Determination of mechanical properties for anisotropic rocks by comparing different testing methods.			
2002	Schwartz, K.	MSc.	Talesnick, M.	Frydman, S.
	The behaviour of undisturbed, saturated sand during undrained shear.			
2003	Hawatna, H.	MSc.	Talesnick, M.	Frydman, S.
	A study of the behaviour and strength of undisturbed sand samples in drained triaxial tests.			
2004	Shehadeh, S.	MSc.	Talesnick, M.	
	Determination of mechanical parameters of an anisotropic chalk as a function of degree of saturation.			
2005	Khoury, A.	MSc.	Talesnick, M. (replacement for Baker, R.).	
	Computation of sheet pile walls based on the subgrade reaction method.			

Theses in Progress

Horani, H.	MSc.	Talesnick, M.	Dancygier, A.
Bar Ya'akov, N.	MSc.	Talesnick, M.	Dancygier, A.
Levenberg, E.	DSc.	Talesnick, M. (2003 - 2004)	
Mehr, A.	DSc.	Frydman, S.	Talesnick, M.

Research Grants

1993-1994 - Israel Power Company Stability of salt caverns for compressed air storage power generation.	\$21,000 ---- Talesnick, M.
1995-1996 - Israel National Parks Authority Stability of the Beit Guvrin bell caves.	\$32,000 ---- Hatzor, Y., Talesnick, M.
1997-1999 - Ministry of Infrastructure Properties of joint interfaces in a soft chalk.	\$27,000 ---- Talesnick, M., Hatzor, Y.
1999-2002 - BSF (BSF) Sitar, N. and Shi, G.W. Centrifuge modeling of a multiply jointed Voussoir beam.	\$150,000--- Hatzor, Y., Talesnick, M.,
2002-2004- Ministry of Housing and Talesnick, M. Stresses on buried structures.	\$60,000 – Dancygier, A, Karinzky, Y.
2005-2006- Ministry of Housing and Karinzky, Stresses on buried structures.	\$50,000 – Dancygier, A, Talesnick, M
2005-2006- Ministry of Housing Stiffness and damping of Israeli sands under conditions of cyclic loading.	\$60,000 – Talesnick, M. and Frydman, S.

Publications

Theses

MSc. - Stability of the Israeli Continental Slope Under Earthquake Conditions.
1985, in English.

DSc. - The Cyclic and Monotonic Shear Behaviour of a Marine Clay.
1990, in English.

Refereed papers in professional journals

1. Talesnick, M. and Baker, R.
Comparison of observed and predicated slip surfaces.
Canadian Geotechnical Journal, Vol. 21, No. 4, pp. 713-719, 1984.
2. Frydman, S. and Talesnick, M.
Analysis of seismically triggered slides off Israel.
Environmental Geology and Water Sciences, Vol. 11, No. 1, pp. 21-26, 1987.

3. Frydman, S., Talesnick, M., Almagor, G. and Wiseman, G.
Simple shear testing for the earthquake response of clay from the Israeli continental slope. *Marine Geotechnology*, Vol. 7, No. 3, pp. 143-171, 1987.4.
4. Talesnick, M. and Frydman, S.,
On the preparation of hollow cylinder specimens from undisturbed tube samples of soft marine clay. *ASTM Journal of Geotechnical Testing*, Vol. 12, No. 3, pp. 243-249, 1990.
5. Frydman, S. and Talesnick, M.
Simple shear of isotropic elasto-plastic soil. *International Journal for Numerical Methods in Geomechanics*. Vol. 15, pp. 251-270, 1991.
6. Talesnick, M. and Frydman, S.
Simple shear of an undisturbed, soft, marine clay in N.G.I. and torsional shear equipment. *ASTM Journal of Geotechnical Testing*. Vol. 14, No. 2, pp. 180-194, 1991.
7. Frydman, S. and Talesnick, M.
Development of strain during monotonic shear of soft clay. *Journal of Geotechnical Engineering Division, ASCE*, Vol. 118, No. 5, pp. 704-726, 1992.
8. Talesnick, M. and Frydman, S.
Irrecoverable and overall strains in cyclic shear of soft clay. *Soils and Foundations, JSSMFE*, Vol. 32., No. 3, pp. 47-60, 1992.
9. Baker, R., Frydman, S., and Talesnick, M.
Slope stability analysis for undrained loading conditions. *International Journal for Numerical and Analytical Methods in Geomechanics*. Vol. 17, No. 1, pp. 15-44, 1993.
10. Talesnick, M., Lee, M., and Haimson, B.
On the determination of elastic material parameters for transverse isotropic rocks from a single test specimen. *Rock Engineering and Rock Mechanics*. Vol. 21, No. 1, pp. 17-36, 1995.
11. Frydman, S. and Talesnick, M., and Puzrin, A.
Co-linearity of stresses, strains, and strain increments during shearing of soft clay. *Journal of Geotechnical Engineering, ASCE*, Vol. 121, No. 2, pp. 174-184, 1995.
12. Puzrin, A., Frydman, S. and Talesnick, M.
Kinematic hardening of soft clay in simple shear. *International Journal for Numerical and Analytical Methods in Geomechanics*. Vol. 19, pp. 769-791, 1995.

13. Puzrin, A., Frydman, S. and Talesnick, M.
Normalized non-degrading behaviour of soft clay under cyclic simple shear behaviour. *Journal of Geotechnical Engineering, ASCE*. Vol. 121, No. 12, pp. 836-843, 1995.
14. Talesnick, M.
Reliability of thin walled cylinder tests for elastic properties of anisotropic rocks. *Canadian Geotechnical Journal*, Vol. 33, pp. 1008-1014, 1996.
15. Puzrin, A., Frydman, S. and Talesnick, M.
Effect of degradation of soil properties on seismic response of soft clay strata. *Journal of Geotechnical and Geoenvironmental Engineering, ASCE*, Vol. 123, No. 2, pp. 85-93, 1996.
16. Talesnick, M., Haimson, B., and Lee, M.
On the development of radial strains in relatively thin walled hollow cylinders of rock under radial compression. *International Journal for Rock Mechanics and Mining Sciences*. Vol. 34, No. 8, pp. 1229-1236, 1997.
17. Talesnick, M.L. and Brafman, M.
Small strain deformation characteristics of two chalks subjected to varying stress conditions. *Quarterly Journal of Engineering Geology*, Vol. 31, pp. 161-174, 1998.
18. Talesnick, M. and Baker, R.
Failure of a flexible pipe with a concrete liner. *Engineering Failure Analysis*, Vol. 5, No. 3, pp. 247-259, Elsevier Science Ltd, 1998.
19. Talesnick, M. and Baker, R.
Investigation of the failure of a concrete-lined steel pipe. *Geotechnical and Geological Engineering*, Vol. 17, pp. 99-121, 1999.
20. Talesnick, M.L. and Ringel, M. Completing the hollow cylinder methodology for testing of transversely isotropic rocks; Torsion Testing. *International Journal for Rock Mechanics and Mining Sciences*. Vol. 36, No. 5, pp. 627-639, 1999.
21. Talesnick, M.L. and Bloch-Friedman, E.A. Compatibility of different methodologies for the determination of elastic parameters of intact anisotropic rocks. *International Journal for Rock Mechanics and Mining Sciences*. Vol. 36, No. 7, pp. 919-940, 1999.
22. Talesnick, M.L., Katz, A. and Ringel, M. Describing the elastic stress-strain behaviour of a banded sandstone and sandstone like material. *ASTM Journal of Geotechnical Testing*. Vol. 23, No. 3, pp. 257-273, 2000.
This paper was awarded the Hogentogler Award by the American Society for Testing and Materials (ASTM), paper of outstanding merit 2000-2001.
23. Tsesarsky, M, Hatzor, Y.H. and Talesnick, M. The stability of Beit Guvrin – Integrated analysis in weak, anisotropic, and discontinuous chalk. *Israel Journal of Earth Sciences*. Vol. 49, pp 81-102, 2000.

24. Talesnick, M.L., Hatzor, Y.H. and Tsesarsky, M. The elastic deformability and strength of a high porosity, anisotropic, chalk. *International Journal for Rock Mechanics and Mining Sciences*. Vol. 38, pp. 543-555, 2001.
25. Hatzor, Y.H., Talesnick, M.L. and Tsesarsky, M. Continuum and discontinuum stability analysis of the bell shaped caverns at Bet Guvrin, Israel. *International Journal for Rock Mechanics and Mining Sciences*, Vol. 39, pp. 867-886, 2002.
26. Talesnick, M. Measuring Soil Contact Pressure on a Solid Boundary and Quantifying Soil Arching. *ASTM, Journal of Geotechnical Testing*, Vol. 28, No. 2, pp.171-179, 2005.

Papers submitted to refereed professional journals

1. Frydman, S., Talesnick, M., Nawatha, H. and Schwartz, K. Stress-Dilation of Undisturbed Sand Samples in Drained and Undrained Triaxial Shear. Submitted for publication to *Soils and Foundations*.
2. Talesnick, M., Bar Ya'akov, N. and Cuitoro, A. Centrifuge modeling of a multiply jointed Voussoir beam. Submitted for publication to *Rock Mechanics and Rock Engineering*.
3. Talesnick, M. Determination of shear interface parameters between rock blocks for centrifuge modeling. Submitted for publication to *Rock Mechanics and Rock Engineering*.

Research Reports

Kirzhner, F. and Talesnick, M.L. 1993, Compressed air storage scheme- Shiqma site, Final report, Study of chamber stability. Report to Israel Power Company.

Hatzor, Y. and Talesnick, M. 1995, Stability of the Beit Guvrin caves, Interim report. Israel national parks authority.

Hatzor, Y and Talesnick, M. 1997, Stability of the Beit Guvrin caves, Final report. Israel national parks authority.

Hatzor, Y., Talesnick, M., Sitar, N. and Shi, G. 2003, Stability of underground opening in bedded and jointed rock: An integrated analysis using numerical methods, experimental procedures and documented case histories. Final report to the BiNational (US-Israel) Science Foundation.

Dancygier, A, Talesnick, M. and Karinsky, Y. 2004, Soil contact pressures on buried structure subjected to surface loads. Final report to the Ministry of Housing, Israel.

Refereed Papers in Conference Proceedings

1. Talesnick, M., Lee, M., and Haimson, B.
On the determination of elastic material parameters for transverse isotropic rocks from a single test specimen. The 34th U.S. symposium on Rock Mechanics, June 1993, Madison WI., 1993.
2. Frydman, S., Schvarzman, A. and Talesnick, M.
Residual strength of Israeli cohesive soils. Proceedings of the 7th International Symposium on Landslides, Trondheim, Norway, 1996.
3. Glaser, S., Moore, J., Kim, H and Talesnick, M.
Large-scale microseismic/ERT laboratory experiments to determine EGS response to water injection. Proceedings, 27th Workshop on Geothermal Reservoir Engineering, Stanford University, Stanford California, January 2002.
4. Talesnick, M., Bar Ya'akov, N. and Cuiroto, A.
Centrifuge modeling of a multiple jointed Voussoir beam. U.S. Symposium on Rock Mechanics and Rock Engineering, 2005, Anchorage, Alaska.
5. Talesnick, M., Horany, H., Dancygier, A. and Karinsky, Y.
Measuring soil pressure on buried structures. GeoCongress 2006, Atlanta, Georgia

Papers in Conference Proceedings

1. Frydman, S. and Talesnick, M.
Response of the Israeli continental slope to earthquake loading. Proceedings of the Fifth Annual Conference of Civil Engineering, Technion, Haifa, February 23-24, 1988, Vol. 1 pp. 206, 1988.

Participation in International conferences in which lectures were presented.

The 34th U.S. symposium on Rock Mechanics, 1993, Madison WI. On the determination of elastic material parameters for transverse isotropic rocks from a single test specimen.

The 3rd International conference on Soil Dynamics, 1997, Tiberias, Israel. Bridging the gap between constitutive modeling and soil testing.

The 37th US Rock Mechanics Symposium, Vail Rocks 1999, Torsion testing - Completion of the hollow cylinder methodology for determining the elastic behaviour of intact anisotropic rocks.

Alaska Rocks, US Rock Mechanics Symposium 2005, Centrifuge modeling of a multiple jointed Voussoir beam.