

RESUME

Name	FREDDY ALDERSONS
Professional Status	Scientific Consultant
Place and date of birth	Brussels (Belgium) on April 5th, 1958
Citizenship	Belgium
Marital status	Married to Marilena VIVIANI, Deputy Regional Director of UNICEF, Amman, Jordan
Children	Two: 12- and 7-years old
Address	Amman - Jordan
Telephone	
Email	fred@faldersons.net

EDUCATION

High school

1971 - 1976	<i>Humanités modernes, Scientifique A</i> Athénée Royal de Woluwe-Saint-Pierre (Brussels)
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University

1977 - 1981	(<i>Licence</i>) Master's degree in Geology with <i>distinction</i> , option Mineralogy-Geochemistry-Petrology from Université Libre de Bruxelles (U.L.B.)
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Thesis	Sedimentology and Geochemistry of the Fromelennes Formation (Givetian) at Nismes and Dourbes, Belgium
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Advisor	Prof. Alain Herbosch
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1983 - 1985 (Troisième cycle) Geophysical Engineering at Institut Français du Pétrole et des Moteurs (IFP) Paris, France

1998 – 2004 Ph.D. in Geophysics at Tel Aviv University, Tel Aviv, Israel

Thesis Toward a Three-Dimensional Crustal Structure of the Dead Sea region from Local Earthquake Tomography

Advisors Prof. Zvi Ben-Avraham (Tel Aviv University)
Prof. Eduard Kissling (ETH, Zürich)

LANGUAGES

French	Mother tongue
English	Spoken, written
Flemish (Dutch)	Spoken, written
Italian	Spoken

PROFESSIONAL RECORD

12/1981 - 07/1982 Study of Fortran and Pascal, and application to a problem of analytical chemistry for A. Herbosch, Professor of sedimentary geology at U.L.B., Brussels

07/1982 - 08/1982 Field geologist for B.P. Minerals International: detailed logging and geological mapping in Belgium

09/1982 - 04/1983 Military service

06/1983 - 12/1989 Geophysical engineer for Pétrofina (Belgian oil company)

06/83 - 08/83 Seismic and drilling geology trainee in Zaire

(Democratic Republic of Congo)

09/83 - 02/85 Geophysical Engineering studies at Institut Français du Pétrole et des Moteurs (IFP) Paris, France

07/85 - 05/86 Chief geophysicist in Muanda, Zaire
In charge for Zairep (Pétrofina's subsidiary) of the interpretation of seismic data, Western margin of Africa, Zaire

06/86 - 05/88 Geophysicist in Brussels.
In charge of geophysical studies (Zaire, France and The Netherlands).

- Zaire - Supervision of seismic reflection data reprocessing and detailed seismic reinterpretation of a producing trend, work done in relation with the reservoir engineering department. Reinterpretation of pre-salt reflection seismic data with detailed gravimetric modeling.
- France - Geophysicist during the two permit biddings of the Paris Basin in 1987.
- Netherlands - Evaluated numerous farmout proposals onshore and offshore.

06/88 - 12/89 Chief geophysicist in Amman, Jordan.
In charge of a combined vibroseis and gravimetric survey.

- Participation to parameter tuning in a thick basaltic area.
- Field supervision.
- Processing supervision.
- Interpretation of the data and mapping on a workstation.
- Drilling proposal.

12/1989	Resigned from Pétrofina
09/1990 - 03/1991	Physics teacher in high schools (Belgium)
04/1991 - 05/1991	Geophysical consultant for Pétrofina in Zaire. Supervised the start of a difficult 3D seismic-gravimetric survey close to the Cabinda border. Special problem related to the presence of land mines
12/1991 - 03/1992	Computer programming (Turbo Pascal 6) in refraction seismics. Work done for the University of Burundi, Faculty of Applied Sciences
11/1992 - 03/1995	Researcher and Assistant at the University of Burundi, Faculty of Sciences, Department of Physics. Became deputy Head of Department. In charge of exercises and labs of fundamental Physics, and exercises of seismology. In charge of a short-period seismological station and interpretation of the data (Scientific collaboration with the Observatoire Royal de Belgique, Uccle, Belgium)
04/1995 - 12/1997	<ul style="list-style-type: none"> • Ported seismological VMS and UNIX Fortran code to PC. Produced the first PC DOS version of Fred Klein (USGS) Hypoinverse program, VMS 1993. The executable (hypo486.exe) is currently available from the IASPEI PC shareware library at ORFEUS • Wrote Flat1D, a PC Win32 program to perform ray-tracing in 1D • Wrote Query, a PC Win32 relational database program for storing and selecting earthquake data according to sophisticated SQL commands

01/1998 – 09/2004		Ph.D. in Geophysics at Tel Aviv University, Tel Aviv, Israel
09/2004 – 08/2005		Finalized several seismological software applications and built the website http://faldersons.net/
09/2005 – 09/2008		Consultancy for E.T.H. (Zürich, Switzerland) and the Swiss Seismological Service (SED). Application of F.Aldersons software MPX in a Ph.D. project of Local Earthquake Tomography of the Greater Alpine Region (see publication 2008)
03/2006 – Present	Ongoing	Consultancies for I.N.G.V. (Rome, Italy). Integration of F. Aldersons software MPX into the routine seismic monitoring procedures of the Local Emergency Network (Rete Mobile) for P- and S- waves automatic picking from 3C stations.

PUBLICATIONS

Diehl, T., Kissling, E., Husen, S., and Aldersons, F. (2009) Consistent Phase Picking for Regional Tomography Models: Application to the Greater Alpine Region. *Geophysical Journal International*, 176, 542-554.

Di Stefano, R., Aldersons, F., Kissling, E., Chiarabba, C., and Giardini, D. (2004) Automatic seismic phase picking and consistent observation error assessment: Application to the Italian seismicity. *Geophysical Journal International*, 165, 121-134.

Aldersons, F., Ben-Avraham, Z., Hofstetter, A., Kissling, E., and Al-Yazjeen, T. (2003) Lower-crustal strength under the Dead Sea basin from local earthquake data and rheological modeling. *Earth and Planetary Science Letters*, 214, 129-142.

SOFTWARE CONTRIBUTIONS

<i>Program</i>	<i>Author</i>	<i>Description</i>
MANNEKENPIX	F.A.	High-quality picking and weighting system of Local-Regional (Teleseismic) first arrival P-waves (part of Ph.D.). Available from faldersons.net
VISUAL PICKER	F.A.	For manual picking and weighting of seismograms in binary SAC format. Includes the Wiener filter and automatic picking routines of MPX. Available from faldersons.net
TWINS MERGE	F.A.	Detects and corrects synchronization problems from common station seismograms recorded by different networks. Available from faldersons.net
HYPOINVERSE	Fred Klein (USGS)	Ported for the first time to PC. Available in the IASPEI shareware library at Orfeus. Available from faldersons.net
VELEST	Edi Kissling et al. (ETH)	Ported to PC, included in Seisan from Version 7.2. Available from faldersons.net
SIMULPS	Thurber et al.	Ported to PC. Available from faldersons.net

SPECIAL TRAINING

3 days in 06/1985	Pétrofina	Oral communication
5 days in 01/1986	B. Matthews	Stratigraphic interpretation of seismic data
5 days in 06/1986	M. Barbier	Vibroseis
3 days in 05/1987	G. Gardner	3D-Seismic
10 days in 07/1987	J. Davidson	Structural Geology

INTERESTS

Nature

Chairperson of Burundi Nature (1994-1995)

Music

Plays the transverse flute in chamber music

Photography

Animals - mainly birds - and landscapes.

Color and B&W lab

Multimedia

Multimedia presentations (Authorware Professional)
and computer-based training