

## DR. IOANNIS K. KAPAGERIDIS

Associate Professor in Mining Informatics PhD CEng CSci MIMMM

#### PERSONAL DATA

PERSONAL DATA	
	<ul> <li>Date and place of birth: 7th July 1972, Thessaloniki, Greece</li> </ul>
	• Father's first name: Konstantinos
	<ul> <li>Marital Status: Married, two children</li> </ul>
EDUCATION	
Feb. 1992 – Sep. 1995	Technological Educational Institute of W. Macedonia
	Mining Technology
	<ul> <li>Mining Technology Engineer</li> <li>Grade 7.8/10 Final Year Project 'Computer Aided Deposit Modelling'.</li> </ul>
Mar. 1994 – Jun. 1994	Doncaster College, United Kingdom
	Erasmus Student Exchange Programme
	<ul> <li>Mining Engineering         With scholarship from the State Scholarships Foundation of Greece     </li> </ul>
Oct. 1995 – Sep. 1996	University of Nottingham, United Kingdom
	Mineral Resources Engineering & Management
	<ul> <li>Master of Science in Mineral Resources Engineering &amp; Management</li> </ul>
Oct. 1996 – Sep. 1999	University of Nottingham, United Kingdom
	Mineral Resources Engineering
	■ Doctor of Philosophy in Mining Engineering:  Application of Artificial Neural Network Systems to Grade Estimation from Exploration Data  With scholarship from the State Scholarships Foundation of Greece
Nov. 2002 – Oct. 2003	Technological Educational Institute of W. Macedonia
	Economic Geology - Mineralogy  • Post Doctorate:  Investigation of Dimensionality Effects to the Performance of Artificial Neural Networks in Grade Estimation from Exploration Data  With scholarship from the State Scholarships Foundation of Greece

11/5/1998 – 18/2/2000 Maptek/KRJA Systems Ltd.

### Mining Engineer - Technical Services

Mining engineer in technical support and customer training for the VULCAN 3D Software and Chronos. Software demonstrations to mining companies and educational institutes. Resource/reserve estimation studies using VULCAN for company clients. Software quality assurance.

Clients training: engineers and geologists from the following companies:

- Anglo-American Plc (Lisheen mine in Ireland)
- UK Coal (Great Britain)
- Celtic Energy (Great Britain)
- Carmeuse (Belgium)
- CiRN (Spain)

**Studies:** reserves estimation, pit design and scheduling for the following companies:

- Anglo-American Plc (Lisheen mine in Ireland)
- Carmeuse (Belgium)
- OCP (Morocco)
- RMC Aggregates (Great Britain)

Other activities: Maptek booth organisation and support during Mining 98 exhibition in London. Organisation of the VULCAN 3D Software Users Conference in Nice, France. Conference proceedings publication: 2<sup>nd</sup> VULCAN Regional Conference.

9/2000 - 8/2001

Technological Educational Institute of W. Macedonia

## Department of Geotechnology and Environmental Engineering - Research Associate

Theory and lab lectures in Computer Applications in Geotechnical and Mining Projects.

9/2001 - 8/2002

Technological Educational Institute of W. Macedonia

## Department of Geotechnology and Environmental Engineering - Research Associate

Lecturing of theory and labs in Computer Applications in Geotechnical and Mining Projects. Lecturing of theory in Geostatistics.

9/2002 - 8/2003

Technological Educational Institute of W. Macedonia

## Department of Geotechnology and Environmental Engineering - Research Associate

Lecturing of theory and labs in Computer Applications in Geotechnical and Mining Projects. Lecturing of theory in Geostatistics.

8/4/2002 - 31/3/2003

Maptek/KRJA Systems Ltd.

## Mining Engineer - Technical Services based in Kastoria

Mining engineer in technical support and customer training for the VULCAN 3D Software and Chronos. Software demonstrations to mining companies and educational institutes. Resource/reserve estimation studies using VULCAN for company clients. Software quality assurance.

Client's training: engineers and geologists from the following companies:

- ONA Managem Group (Morocco)
- Western Areas South Deep Mine (South Africa)
- Rotem Amfert Negev Ltd (Israel)

**Studies:** reserves estimation, pit design and scheduling for the following companies:

- Geohellas SA (Greece)
- TITAN AE (Greece)
- ONA Managem Group (Morocco)

**Other Activities:** training Maptek staff in VULCAN and Chronos in the Johannesburg office (S. Africa). Organisation and support of Maptek's booth at Electra Mining 2002 exhibition in S. Africa.

1/4/2003 - 30/9/2004

Maptek/KRJA Systems Ltd.

# Mining Engineer - Technical Services based in Nottingham, UK

Mining engineer in technical support and customer training for the VULCAN 3D Software and Chronos. Software demonstrations to mining companies and educational institutes. Resource/reserve estimation studies using VULCAN for company clients. Software quality assurance.

**Client's training:** engineers and geologists from the following companies:

- Cleveland Potash Boulby Mine (G. Britain)
- Anglo-American Plc (Lisheen mine Ireland)
- UK Coal (G. Britain)

**Studies:** reserves estimation, pit design and scheduling for the following companies:

- QGX Gold Ltd. (Mongolia)
- Barrick Gold Russia (Russia)
- Cleveland Potash Boulby Mine (G. Britain)

Other Activities: training Maptek staff in the Denver office (USA). Writing training manuals for VULCAN in the following subjects: Scheduling Open Pit and Underground Mines, Introduction to VULCAN, Groundwater Modelling with MODFLOW, Geotechnics,

Underground Mine Design and Reserving. Design and administration of local area network in the Nottingham office (G. Britain).

1/10/2004 - 9/01/2006	Technological Educational Institute of W. Macedonia
	Department of Geotechnology and Environmental Engineering - Research Associate
	Lecturing of theory and labs in Computer Applications in Geotechnical and Mining Projects. Lecturing of theory in Geostatistics. Supervision of final year projects.
10/01/2006 - 4/2019	Technological Educational Institute of W. Macedonia
	Department of Geotechnology and Environmental Engineering - Associate Professor
	Lecturing of theory and labs in Computer Applications in Geotechnical and Mining Projects, Geostatistics, Remote Sensing and Geographical Information Systems, Information Systems in Geotechnical Projects, and Operational Research. Director of Mining Information Technology and GIS Applications Laboratory. Supervision of final year projects. Director of the Departments' Environmental and Information Systems Sector.
09/2008 - 02/2017	TetraTech - Wardrop Engineering, Inc.
	Independent Contractor
	Resource/reserves estimation studies, geostatistics, pit optimisation and design, and mine scheduling for Wardrop's and TetraTech worldwide clients.
2/2012 – 2/2018	Technological Research Center of Western Macedonia
	Head of Lignite Technology Sector
	The Lignite Technology Sector is active in the area of lignite mining as an energy source, focusing on the development of mainly surface mines, lignite processing and use as a fuel for the production of electrical energy. The Lignite Technology Sector is also active in the general mining sector, offering services to metals and minerals mining companies.
8/2012 – 4/2019	Maptek/KRJA Systems Ltd.
	Technical Services Associate  Internal support and training to Company staff in Edinburgh and South Africa, technical support, consulting, and training programmes to clients in Europe and Africa. Competent/Qualified Person for several studies of projects in Europe and Africa.
5/2019 - today	University of Western Macedonia
	Department of Mineral Resources Engineering
	Associate Professor in Mining Informatics and Head of the Department of Mineral Resources Engineering. Director of the Mining Informatics and Machine Learning Applications Lab.

### ADDITIONAL PROFESSIONAL EXPERIENCE - CONSULTANCY

3/1995 – 8/1995	Technological Educational Institute of W. Macedonia
	Internship — Environmental Physics Laboratory
	Atmospheric pollution data acquisition, recording, storage, and pre- processing.
10/1996 – 2/1997	University of Nottingham
	Department of Mineral Resources Engineering
	Tutorials in mine planning software in the first semester of the Master of Science course.
1/1998 – 3/1998	Cleanaway Limited - Wastewise
	Department of Mineral Resources Engineering, University of Nottingham
	Visual impact assessment study of a waste disposal site in Kent, United Kingdom on behalf of Cleanaway and Wastewise.
10/1998 – 2/1999	University of Nottingham
	Department of Mineral Resources Engineering
	Lecturing Artificial Neural Networks in the fifth semester of the Bachelor of Mining Engineering course.
27/3/2000 – 27/8/2001	Hellenic Army
	Sergeant (Army) – Intelligence Officer
	Military service - 18 months.
7/2000	Maptek/KRJA Systems Ltd.
	ONA Managem Group, Morocco
	Geological modelling and reserve estimation for Managem on behalf of Maptek/KRJA Systems Ltd.
2/2001	Technological Educational Institute of W. Macedonia, Greece
	Marmin 2001 Marble Exhibition
	Organisation and support of the Department of Geotechnology and Environment booth.
2/2002	Technological Educational Institute of W. Macedonia, Greece
	Marmin 2002 marble exhibition
	Organisation and support of the Department of Geotechnology and Environment booth.
4/2001	TITAN CEMENT SA
	USJE Mine, FYROM
	Geological modelling, reserve estimation and mine modelling of a marl

	deposit in Skopje on behalf of TITAN. The study supported the decision making and the final purchase of the mine by TITAN.
4/2001	Maptek/KRJA Systems Ltd., UK
	Geohellas S.A.
	Geological modelling, reserve estimation and mine modelling of an Atapulgite deposit using VULCAN for demonstration on behalf of Maptek/KRJA Systems Ltd.
7/2001	Geohellas S.A., Greece
	Dump Design and Modelling
	Design and volumetric calculation of a dump area using VULCAN.
19/11/2004 –	Anatolia Minerals Development Corp., Turkey
24/1/2005	Pit Design Optimisation & Scheduling Study of a Gold Deposit
	Open pit design and optimisation, ore reserves estimation, NPV scheduling optimisation of the Copler deposit in Turkey.
9/2005	LAVA Mining and Quarrying SA, Greece
	Visual Impact Assessment Study of Pozolane Quarry in Milos
	3D modelling of pozolane quarry in Milos Island and visual impact assessment of the proposed quarry extension and restoration plan.
4/2006	GEOHELLAS SA, Greece
	VULCAN Software Application Study
	Drillhole database generation, stratigraphic modelling, open pit design, reserve estimation.
5/2006	Carmeuse SA, Belgium
	VULCAN Software Training in Greece
	Three-day introductory training of a geologist and a mining engineer. Introduction to VULCAN, drillhole database generation, triangulation modelling and CAD.
10/2006	Carmeuse SA, Belgium
	VULCAN Software Training in Belgium
	Three-day training of a geologist and a mining engineer. Block modelling, reserves estimation, open pit design.
11/2006	Public Power Corporation SA, Greece
	VULCAN 3D Software Application Study in Drillhole Compositing
	Drillhole compositing case study using PPC data and VULCAN 3D Software in order to assess the capabilities of the system according to PPC standards.
5/2007	LARCO SA, Greece
	VULCAN 3D Software Application Study

	VULCAN 3D Software application study using LARCO data to assess the capabilities of the software in geological modelling, Fe-Ni grade / reserves estimation, open pit optimisation and open pit design.
5/2007-6/2007	Public Power Corporation SA, Greece
	Re-estimation of Lignite Reserves in the Area of Western Macedonia
	Drillhole, topographical and technical data entry. Pit design based on technical and economical parameters. Reserves estimation of all PPC lignite deposits in Western Macedonia.
1/10/2007-16/11/2007	LARCO GMMSA
	VULCAN 3D Software Training
	18 days of training in VULCAN 3D Software at LARCO's premises in Athens. 22 persons attended the training including geologists and engineers. The training topics were the following:
	1. Introduction to VULCAN
	2. Drillhole Databases
	3. Geological Modelling
	4. Block Modelling – Grade / Resource Estimation
	5. Pit Optimisation
	6. Pit Design and Modelling
	7. Road Design and Modelling
	8. Geostatistics
6/2008	Lappland Goldminers SA, Sweden
	Resource Estimation Review
	Reviewing of resource model and results from the Haveri gold mine project in Finland as Qualified Person according to NI 43-101.
15/9/2008- 24/10/2008	Interbalkan Institute of Public Administration  Educational Programme «ORGANISATION AND EXECUTION OF CIVIL PROTECTION ACTIONS» - ADEDY
	New technologies in civil protection seminar (Remote sensing, GIS, Positioning Systems), Kozani.
9/2008-10/2008	Wardrop Engineering Inc. Resource Estimation Study, Sangdong, Oriental Minerals
	Geological modelling, geostatistical analysis of Wolfram, Molybdenum, and Bismuth, grade and resource estimation, open pit optimisation, pit design and scheduling on behalf of Wardrop Engineering for the Sangdong deposit in South Korea (Oriental Minerals).

10/2008	Wardrop Engineering Inc. Geostatistical Analysis of Emba Derho, Sunridge Gold
	Geostatistical analysis of Au, Cu, Ag, Zn, Fe, Pb of the Emba Derho gold deposit for Sunridge Gold in Ethiopia, on behalf of Wardrop Engineering.
2/2008-2/2009	Public Power Corporation of Greece  Mine Planning of the Southwestern Lignite Field.  Geological modeling, lignite resources estimation, mine design and scheduling.
12/2008	Wardrop Engineering Inc.  Statistical Analysis of the Bugdainskoe deposit, Norilsk Nickel  Statistical analysis of Mo samples of the Bugdainskoe deposit from different labs for Norilsk, on behalf of Wardrop Engineering.
3/2009	Technological Educational Institute of Epirous, Department of Aquaculture and Fisheries, Postgraduate Studies Course: Lecturing of Geographical Information Systems (GIS).
8-10/2009	Interbalkan Institute of Public Administration Educational Programme Information Systems in Civil Protection' Structuring the programme, writing of lecturing notes, lecturing the programme (50 hours in Kozani and 25 hours in Thessaloniki).
1/2011	Wardrop Engineering Inc., UK Introduction to VULCAN 3D software training in Swindon, UK (5 days).
1-2/2011	ArcelorMittal, Liberia  VULCAN 3D software training in Yekepa, Liberia. Training included introduction to Vulcan, geological modeling, grade estimation, pit optimization and design (10 days).
4/2011	Public Power Corporation, Greece Reserves estimation of the Achlada lignite deposit.
7/2011	Woulfe Mining Corporation, South Korea Introduction to VULCAN 3D software training in Sangdong, South Korea (4 days).
7/2011	LARCO GMMSA  Vulcan software implementation study and training for the company's mine planning team.
8/2011	Lumwana Mining (Barrick Zambia)  Vulcan geostatistics and scripting training for geologists and mining engineers (10 days).
9/2011	Core Mining Preliminary technical study of the iron ore Avima deposit in Congo
10/2011	Canadian Royalties/TetraTech Variography and grade estimation of a nickel deposit

11/2011	Noble Mineral Resources/TetraTech
	Variography and grade estimation of the Bibiani gold deposit in Ghana
3/2012	Lumwana Mining (Barrick Zambia)
	Vulcan geostatistics and Chronos open pit scheduling training and implementation.
. /	Canadian Royalties/TetraTech
3/2012	Variography and grade estimation of the Allammaq nickel deposit.
	LARCO GMMSA
4/2012	Development of a Perl script to calculate technical and financial parameters of open pit nickel projects for pit optimisation.
	North Rim Exploration/TetraTech
5/2012	Resource estimation of the American West Potash deposit.
- /	Woulfe Mining, South Korea
5/2012	Vulcan geostatistics training for geologists at the Sangdong tungsten project.
- /	Cobre Las Cruces, Spain
9/2012	Vulcan geostatistics training at the CLC open pit in Seville, Spain.
	Anagold, Turkey
2/2013	Vulcan geostatistics training at the Copler mine, Turkey.
	Euromax Resources/TetraTech
7/2013	Preliminary technical report on open pit design and optimisation of the Ilovica gold project in FYROM.
0.10010	Carmeuse, Belgium
8/2013	Specialised Vulcan training.
10/0013	Euromax Resources/TetraTech
12/2013	Open pit optimisation and design of the Ilovica project for prefeasibility study.
2/2011	Anagold, Turkey
2/2014	Chronos open pit scheduling training at Copler.
F /2014	Lumwana Mining (Barrick)
5/2014	Chronos and scripting training in Zambia.
0 / 201 4	Rizzo Associates
9/2014	Open pit optimisation and reserves estimation of the Busitema gold deposit in Uganda.
0 /2014	Managem/SMI, Morocco
9/2014	Vulcan geostatistics training and implementation for narrow silver vein deposits of the SMI.
2 / 2 0 4 5	Aldridge Minerals/Turkey
3/2015	Mine design, planning and scheduling of the Yenipazar deposit.
	Grand Thornton / Iktinos Hellas SA/ Maptek-KRJA Systems Ltd
9/2015	Reserves estimation study and technical report of Iktinos Hellas SA working marble quarries.

2/2016	Lignite Mines of Achlada SA
	Reserves estimation and mine design of Achlada lignite mines in NW Greece.
11/2016	LARCO GMMSA
	Mine scheduling and underground mine design training in Kastoria, Greece
11/2016	Lignite Mines of Achlada SA
	Reserves estimation update of Achlada lignite mines in NW Greece.
	LARCO GMMSA
2/2017	Introduction to Vulcan for mining engineers training at Agios Ioannis mine site, Greece
	VALE Mozambique SA/Bluekudu
11-12/2017	Mine planning training of the company's geologists and mining engineers in Tete, Mozambique.
	Stibium/Bluekudu
2017-2018	Optimisation and design of a surface gold mine in South Africa.
2017	Vale Mozambique/Bluekudu
2017	Estimation and plotting of geotechnical parameters from a surface coal
	mine at Tete, Mozambique.
2017-2018	Vale Mozambique/Bluekudu
2017-2010	Development of a Perl script program for the classification of a pit surface
_	as to safety bench height, batter angle, and berm width geotechnical limits.
11/2018	Carmeuse, Belgium
11, 2010	Geostatistical resource estimation training with Vulcan at the company's
	offices in Belgium. ArcelorMittal, Liberia
12/2018	Mine planning training with Vulcan for surveyors, geologists and mining
,	engineers at Yekepa, Liberia.
	Golder Associates
2/2019	Surface coal mine scheduling in the Waterberg field of the Limpopo
	County in South Africa.
	Brazil Iron Limited/Forge International Ltd
4/2019	Optimisation and design of initial stage of the Fazena Moco surface mine
	in Brazil.
	Waste et Water
28/4-28/8/2020	Underground mine development study of the magnesite deposit in Ag.
	Georgios, Mantoulidou-Limnis-Ag. Annas, Euboea, Greece.
5/2021	Carmeuse SA/Unicalce SpA
	Online training of geologists in the use of Maptek Vulcan.

#### **PUBLICATIONS** (2 BOOKS, 15 JOURNAL PAPERS, 54 CONFERENCE PAPERS)

- 1. Kapageridis I, Denby B. *Ore grade estimation with modular neural network systems a case study.* In: Panagiotou G (ed) Information technology in the minerals industry (MineIT '97). AA Balkema, Rotterdam, 1998, CDROM Proceedings Paper Code: KI16. Seven (7) cross-references.
- Kapageridis I, Denby B. Neural Network Modeling of Ore Grade Spatial Distribution. In: International Conference on Artificial Neural Networks 98 (ICANN 98). Springer-Verlag, 1998, pp. 209-214. Five (5) cross-references.
- 3. Kapageridis I, Denby B., and Hunter G. *Integration of a Neural Ore Grade Estimation Tool in a 3D Resource Modeling Package.* In: Proceedings of the International Joint Conference on Neural Networks (IJCNN '99), International Neural Network Society, and the Neural Networks Council of IEEE, Washington D.C., 1999, CDROM Proceedings Paper Index #0014, Session: 10.9. Two (2) cross-references.
- Kapageridis I, Denby B, Schofield D, and Hunter G. GEMNet II A Neural Ore Grade Estimation System. In: 29th International Symposium on the Application of Computers and Operations Research in the Minerals Industries (APCOM '99), Denver CO, 1999, pp. 591-598. Two (2) cross-references.
- 5. Καπαγερίδης Ι, Denby Β, Hunter G. Εκτίμηση Περιεκτικότητας Κοιτασμάτων με Χρήση Τεχνητών Νευρωνικών Δικτύων. Ορυκτός Πλούτος, Ιούλ.- Σεπτ. 99, Νο. 112, pp. 29-36, Επιστημονική Εταιρεία Τεχνολόγων Ορυκτού Πλούτου, Αθήνα, 1999.
- 6. Kapageridis I, Denby B. *Ore Grade Estimation Using Artificial Neural Networks*. In: 2<sup>nd</sup> Regional VULCAN Conference, Maptek/KRJA Systems Ltd, Nice, 1999.
- Kapageridis I, Denby B. GEMNet II An Alternative Method for Grade Estimation. In: 9th International Symposium on Mine Planning and Equipment Selection (MPES 2000), Εθνικό Μετσόβειο Πολυτεχνείο Αθηνών, 2000, pp. 209-216. One (1) cross-reference.
- Kapageridis I. I-SiTE Laser Scanning Revolutionises Site Survey. In: 9th International Symposium on Mine Planning and Equipment Selection (MPES 2000), Εθνικό Μετσόβειο Πολυτεχνείο Αθηνών, 2000, pp. 715-719.
- 9. Neilson L, Kapageridis I. *Environmental Management with VULCAN*. In: 8<sup>th</sup> International Conference on Development and Application of Computer Techniques to Environmental Studies (ENVIROSOFT 2000), Wessex Institute of Technology, Bilbao 2000, pp. 461-470. One (1) cross-reference.
- Kapageridis I, Triantafyllou A. Use of Integrated Mining Software Package for the Training of Mining Technologists. In: 17th International Mining Congress and Exhibition of Turkey (IMCET 2001), Chamber of Mining Engineers of Turkey, Ankara 2001, pp. 527-531.
- 11. Kapageridis I. Advanced 3D Software Systems for Effective Environmental Management. In: International Workshop, New Frontiers in Reclamation: Facts and Procedures in Extractive Industry, Milos Conference Series: Restoring the Natural Balance, Milos 2001, pp. 93-98.
- 12. Kapageridis I. Artificial Neural Network Technology in Mining and Environmental Applications. In: 11th

- International Symposium on Mine Planning and Equipment Selection (MPES 2002), VŠB Technical University of Ostrava, Prague 2002. (1 cross-reference)
- 13. Kapageridis I. *Grade Interpolation Using Radial Basis Function Networks*. In: 11th International Symposium on Mine Planning and Equipment Selection (MPES 2002), VŠB Technical University of Ostrava, Prague 2002.
- 14. Kapageridis I, Tavoularis I. *Mine Access Road Design and Modelling with IROAD*. In: 11th International Symposium on Mine Planning and Equipment Selection (MPES 2002), VŠB Technical University of Ostrava, Prague 2002.
- Kapageridis I. Optimized Open Pit Mine Planning and Scheduling. In: 18th International Mining Congress and Exhibition of Turkey (IMCET 2003), Chamber of Mining Engineers of Turkey, Antalya 2003, pp. 331-338.
- 16. Kapageridis I., Triantafyllou, A. A Genetically Optimised Neural Network for Prediction of Maximum Hourly PM10 Concentration. In: 12th International Conference on Modelling, Monitoring and Management of Air Pollution (Air Pollution 2004), Wessex Institute of Technology, Ρόδος 2004, pp. 161-170.
- 17. Lee, D. and Kapageridis, I. New Dimensions in Mining Software. Materials Word, Institute of Materials, Minerals and Mining, September 2004.
- 18. Kapageridis I. *Input Space Configuration Effects in Neural Network Based Grade Estimation*. Computers & Geosciences, Vol. 31, Issue 6, International Association for Mathematical Geology, Elsevier, pp. 704-717. Three (3) cross-references.
- 19. Kapageridis I. *The Future of Mine Planning Software New Tools and Innovations*. In: 19th International Mining Congress and Exhibition of Turkey (IMCET 2005), Chamber of Mining Engineers of Turkey, Izmir 2005. One (1) cross-reference.
- 20. Kapageridis, I. Mine Schedule Implementation Using a Multi-Agent Based System. In: 18th Hellenic Conference on Operations Research, Ελληνική Εταιφεία Επιχειφησιακών Εφευνών, Πανεπιστήμιο Δυτικής Μακεδονίας, Κοζάνη 2006.
- 21. Kapageridis, I., and Chipras, D. Visual Impact Assessment of Seaside Quarrying Operations and Planned Restoration. In: 2<sup>nd</sup> International Conference on Advances in Mineral Resources Management and Environmental Geotechnology (AMIREG 2006), Technical University Crete, Chania.
- 22. Exikis, A., and Kapageridis, I. *Simulation of Air and Contaminant Flow in Underground Mine Ventilation Networks*. In: 2<sup>nd</sup> International Conference on Advances in Mineral Resources Management and Environmental Geotechnology (AMIREG 2006), Technical University Crete, Chania.
- 23. Argiantopoulou, M., and Kapageridis, I. *Multi-Agent Based Systems for Mine Planning and Simulation*. In: 2<sup>nd</sup> International Conference on Advances in Mineral Resources Management and Environmental Geotechnology (AMIREG 2006), Technical University Crete, Chania.
- 24. Kapageridis, I. Use of Tetrahedral Modelling for Variography and Grade Estimation of a Structurally Deformed Phosphate Deposit. In: 11th International Congress for Mathematical Geology (IAMG'06 — Quantitative Geology from Multiple Sources), International Association for Mathematical Geology, Liege 2006.

- 25. Kapageridis, I. Introduction to Geostatistics, ION Publications, 2006, 238 pp.
- 26. Pasiakos, G., Moutsika, D., Halari, A., and Kapageridis, I. Design and Visualisation of Underground Workings Using Information from Multiple Sources. In: 11th ACUUS Conference: Underground Space: Expanding the Frontiers, Associated Research Centers for Urban Underground Space, National Technical University of Athens, Athens, 2007. (1 cross-reference)
- 27. Kapageridis, I. *Implementation of Reporting Code Guidelines for Mineral Resources and Mineral Reserves Using a General Mine Planning Package.* In: 3<sup>rd</sup> International Conference on Sustainable Development Indicators in the Minerals Industry, Milos, 2007.
- 29. Kapageridis, I., Ioannidis, N., An Agent-Based System Framework for Dynamic Mine Scheduling. In: 5<sup>th</sup> International Symposium on High Performance Mining (Aachen International Mining Symposia AIMS 2009), RWTH Aachen University, Aachen, 2009.
- 30. Kapageridis, I.K., Current State of Integrated Software Solutions for the Mining Industry. The Masterbuilder Magazine, April 2009, Vol. 11, No. 4, pp. 78-82.
- 31. Kapageridis, I., Evagelopoulos, V., Triantafyllou, A., Prediction of PM10 Concentrations using a Modular Neural Network System and Integration with an Online Air Quality Management System. In: StatGIS 2009, Geoinformatics for Environmental Surveillance, Milos, 2009.
- 32. Kapageridis, I., LavaNet a Neural Network Modelling Toolkit for Mine Planning and Environmental Modelling. In: 3<sup>rd</sup> International Conference on Advances in Mineral Resources Management and Environmental Geotechnology (AMIREG 2009), Technical University of Crete, Athens, 2009, pp. 200-205.
- 33. Kapageridis, I., Kolovos, C., *Modelling and Resource Estimation of a Thin-Layered Lignite Deposit.* In: 34th International Symposium on the Application of Computers and Operations Research in the Minerals Industries (APCOM 2009), Vancouver, 2009, pp. 95-103.
- 34. Savvidis, S., Kapageridis, I., An Integrated Solid Waste Management Method for Western Macedonia, Greece. In: XXV International Mineral Processing Congress IMPC 2010, Brisbane, 2010.
- 35. Kapageridis, I., Triantafyllou, A., LavaNet Neural Network Development Environment in a General Mine Planning Package. Computers & Geosciences, International Association for Mathematical Geology, Elsevier.
- 36. Kapageridis, I., Variable Lag Variography Using k-means Clustering, 34th International Geological Congress, Geoscience Information Super-Symposium, Mathematical Geosciences Symposium, Soft Computing and Intelligent Methods in Mathematical Geology, Brisbane, 2012.
- 37. Kapageridis, I., Apostolikas, A., Pappas, S., and Zevgolis, I., Use of Mine Planning Software for the Evaluation of Resources and Reserves of a Sedimentary Nickel Deposit, 13th International Congress of the Geological Society of Greece, Chania, 2013.
- 38. Kapageridis, I., Koios, K., Ioannidis, N. Evaluation of Unfolding Techniques for Grade and Resource Estimation of Tectonically Deformed Deposits, 6th International Conference on

- Sustainable Development in the Minerals Industry (SDIMI2013), Milos, Greece, 2013.
- 39. Kapageridis, I. Variable Lag Variography Using k-means Clustering, Special Issue on Statistical learning in geoscience modelling: novel algorithms and challenging case studies, Computers & Geosciences, Volume 85 Part B, December 2015, 49-63.
- 40. Kapageridis, I., Albanopoulos, C., Reserves Estimation of a Marble Quarry Using Quality Indicators, Bulletin of the Geological Society of Greece, vol. L, 2016, Proceedings of the 14th Intern. Conference, Thessaloniki, May 2016.
- 41. Tsouchlakis, D., Bregu, E., Kapageridis, I., A Comparative Study of NPV Open Pit Schedule Optimisation Using Mixed Integer Programming and Evolutionary Algorithms, 2<sup>nd</sup> International Conference "Mining in Europe", Aachen International Mining Symposia, Aachen, June 2017.
- 42. Bregu, E., Tsouchlakis, D., Kapageridis, I., Application of Evolutionary Algorithms to Net Present Value Optimisation of Open Pit Mine Scheduling, 6<sup>th</sup> International Symposium and 28<sup>th</sup> National Conference on Operation Research "OR in the digital era ICT challenges", Thessaloniki June 2017.
- 43. Kapageridis, I., Albanopoulos, C., Resource and Reserves Estimation of a Marble Quarry Using Quality Indicators, The Southern African Institute of Mining and Metallurgy (SAIMM) Journal, 1/2018.
- 44. Kapageridis, I., Iordanidis, A., A Comparative Study of Lignite Resources Estimation Based on 1D Drillhole Mineable Lignite Compositing of Uncorrelated Seams and 3D Mineable Lignite Aggregation of Correlated Seams, Journal of The Southern African Institute of Mining and Metallurgy (SAIMM), 2019(11):937.
- 45. Kapageridis, I., Apostolikas, A., Koundourellis, E., Application of Mine Planning Software to Resources Estimation of the Lava Lignite Deposit in Servia – Greece, International Journal of Mining and Mineral Engineering, Special Issue on Advances in Continuous Surface Mining, Inderscience Publishers, 2019 Vol.10 No.2/3/4
- 46. Triantafyllou A., Andreadou S., Moussiopoulos N., Garas S., Kapageridis I., Tsegas G., Diamantopoulos Ch., Sachanidis Ch., Skordas I., Surface Mining in Western Macedonia, Greece: Fugitive Dust (PM10) Emissions and Dispersion, International Journal of Mining and Mineral Engineering, Special Issue on Advances in Continuous Surface Mining, Inderscience Publishers, 2019 Vol.10 No.2/3/4
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- 49. Kapageridis, I., Kerridge, A., Coloma, E., An Evolutionary Solution for Coal Reserves Modelling and Production Scheduling, 14th International Symposium for Continuous Surface Mining,

- ISCSM2018, Thessaloniki, September 2018.
- 50. Mpinos, P., Kapageridis, I., Application of the Push-Relabel Algorithm to Lignite Surface Mine Optimisation, 14th International Symposium for Continuous Surface Mining, ISCSM2018, Thessaloniki, September 2018.
- 51. Triantafyllou, A., Andreadou, M., Moussiopoulos, N., Garas, S., Kapageridis, I., Tsegas, G., Diamantopoulos, Ch., Sachanidis, Ch., Skordas, J., Surface Mining in Western Macedonia, Greece: PM10 Emissions and Dispersion, 14th International Symposium for Continuous Surface Mining, ISCSM2018, Thessaloniki, September 2018.
- 52. Kapageridis, I., Application of Variable Lag Variography on Directions Derived Using k-Means Clustering of Sample Pairs, in Proceedings of the 15th International Congress of the Geological Society of Greece, Athens, 2019.
- 53. Iordanidis, A., Kapageridis, I., Asvesta, A. Underground Coal Mining in Central Europe in the Mid. 19th Century: A Literary Documentation by Zola's "Germina", in Proceedings of the 15th International Congress of the Geological Society of Greece, Athens, 2019.
- 54. Kapageridis, I., Introduction to Mining Informatics with Maptek Vulcan, Sofia Publications, 2017, 503 pp.
- 55. Andreas Iordanidis, Argyro Asvesta, Ioannis Kapageridis, Agapi Vasileiadou, Kyros Koios, Stavros Oikonomidis, Nikolaos Kantiranis, Characterization of the coarse fraction of lignite bottom ash samples from Greece, 5th Eurasia Waste Management Symposium, 26-28 October 2020, Istanbul, Turkey.
- 56. Andreas Iordanidis, Argyro Asvesta, Ioannis Kapageridis, Agapi Vasileiadou, Kyros Koios, The efficiency of lignite-fired power plants as evidenced by bottom ash analysis, 5th Eurasia Waste Management Symposium, 26-28 October 2020, Istanbul, Turkey.
- 57. Andreas Iordanidis, Argyro Asvesta, Ioannis Kapageridis, Agapi Vasileiadou, Kyros Koios, Stavros Oikonomidis, Nikolaos Kantiranis, Vasilios Evagelopoulos, Temporal Variation in the Compositional and Thermal Characteristics of Greek Lignite Bottom Ash Samples, Solid Fuel Chemistry, Vol. 54, Issue 6, pp 427-435.
- 58. Andreas Iordanidis, Argyro Asvesta, Ioannis Kapageridis, Agapi Vasileiadou, Kyros Koios, Stavros Oikonomidis, Nikolaos Kantiranis, A comprehensive analytical characterization of Greek lignite bottom ash samples, Thermal Science, Vol. 25, Issue 3, pp. 1879-1889.
- 59. I. Kapageridis, C. Albanopoulos, S. Sullivan, G. Buchanan, E. Gialamas, Application of Machine Learning to Resource Modelling of a Marble Quarry with DomainMCF, Materials Proceedings 5 (1), 12.
- 60. A Triantafyllou, I Kapageridis, S Gkaras, F Pavloudakis, Development of Emission Factor Equations for Surface Mining Activities: The Case of the Stacker, Materials Proceedings 5 (1), 15.
- 61. I Kapageridis, A Apostolikas, G Kamaris, Contact Profile Analysis of Resource Estimation Domains: A Case Study on a Laterite Nickel Deposit, Materials Proceedings 5 (1), 89.
- 62. Ioannis Kapageridis, Ioannis Sinatkas, Argyro Asvesta, Agni Patra, Machine Learning Based Systems Application to Mineral Resource Estimation and Compliance with Reporting Codes

- for Mineral Resources, International Conference on Raw Materials and Circular Economy RawMat2021, Athens, September 2021.
- 63. A Patra, I Kapageridis, A Asvesta, I Sinatkas, Framework for the Development of a Mineral Resource Digital Twin, 16th International Congress of the Geological Society of Greece, Patras, October 2022.
- 64. C Gravalos, L Lambrinidis, I Kapageridis, Risk analysis in underground marble quarries using geotechnical data from monitoring equipment, 2nd International Conference on Raw Materials and Circular Economy RawMat2023.
- 65. A Patra, K Pilalidis, F Pavloudakis, I Kapageridis, Face Mapping in Open Pit Mines—A New Approach, Materials Proceedings 15 (1), 6.
- 66. A Asvesta, I Kapageridis, A Vasileiadou, K Koios, N Kantiranis, Granulometric, Chemical, and Mineralogical Evaluation of Greek Lignite Bottom Ash for Potential Utilization in Concrete Manufacturing, Materials Proceedings 15 (1), 50.
- 67. C Pagouni, F Pavloudakis, I Kapageridis, A Yiannakou, Transitional and Post-Mining Land Uses: A Global Review of Regulatory Frameworks, Decision-Making Criteria, and Methods, Land 13 (7), 1051.
- 68. Kapageridis, I., Gialamas, E., Albanopoulos, C., Anastasiadis, G., (2024). Spatial Declustering of Exploration Data in Marble Resource Estimation from Irregular Drilling Patterns, Proceedings of the 36th Panhellenic & 2nd International Statistics Conference (2024), Kozani.
- 69. Gravalos, C., Lambrinidis, L., Kapageridis, I., (2024). Enhancing Safety and Efficiency in Underground Marble Quarries through Statistical Analysis of Geotechnical Data, Proceedings of the 36th Panhellenic & 2nd International Statistics Conference (2024), Kozani.
- 70. Patra, A., and Kapageridis, I., (2024). Integration of Big Data Analytics in Digital Twining of Mineral Deposits, Proceedings of the 36th Panhellenic & 2nd International Statistics Conference (2024), Kozani.
- 71. Kapageridis, I., Albanopoulos, C., Gialamas, E., Pavloudakis, F., (2024). Integration of Exploration and Production Data Towards an Improved Resource Model of a Marble Quarry, Mathematical Geosciences, Special Issue on Advanced Geostatistics for Environmental Applications geoENV2024, Springer (submitted).

#### CONFERENCES PARTICIPATION

MineIT '97: Information technology in the minerals industry, National Technical University of Athens, 1997.

ICANN '98: International Conference on Artificial Neural Networks 98, European Neural Network Society, Skovde 1998.

IJCNN '99: International Joint Conference on Neural Networks, International Neural Network Society, and the Neural Networks Council of IEEE, Washington D.C., 1999.

APCOM '99: 29th International Symposium on the Application of Computers and Operations Research in the Minerals Industries, SME, Denver CO, 1999.

ENVIROSOFT 2000: 8th International Conference on Development and Application of Computer Techniques to Environmental Studies.

MPES 2000: 9th International Symposium on Mine Planning and Equipment Selection, National Technical University of Athens, 2000.

IMCET 2001: 17th International Mining Congress and Exhibition of Turkey, Chamber of Mining Engineers of Turkey, Ankara 2001.

REFAPRO 2001: International Workshop, New Frontiers in Reclamation: Facts & Procedures in Extractive Industry, Milos 2001.

MPES 2002: 11th International Symposium on Mine Planning and Equipment Selection, VŠB - Technical University of Ostrava, Prague 2002.

IMCET 2003: 18th International Mining Congress and Exhibition of Turkey, Chamber of Mining Engineers of Turkey, Antalya 2003.

AIR POLLUTION 2004: 12th International Conference on Modelling, Monitoring and Management of Air Pollution, Rhodes 2004.

IMCET 2005: 19th International Mining Congress and Exhibition of Turkey, Chamber of Mining Engineers of Turkey, Izmir 2005.

18th Hellenic Conference on Operations Research: Hellenic Company for Operations Research, June 2006, Kozani.

AMIREG 2006: 2<sup>nd</sup> International Conference on Advances in Mineral Resources Management and Environmental Geotechnology, Technical University Crete, September 2006, Chania.

IAMG 2006 – Quantitative Geology from Multiple Sources: 11th International Congress for Mathematical Geology, International Association for Mathematical Geology, September 2006, Liege.

SDIMI 2007 – 3rd International Conference on Sustainable Development Indicators in the Minerals Industry, Milos island, Greece - 17-20/6/2007.

ACUUS 2007 - 11th ACUUS Conference "Underground Space: Expanding the Frontiers", Athens, Greece, 10-13/9/2007.

GEOENV2008 - 2nd International Workshop in Geoenvironment and Geotechnics, Milos Island, Greece, 2008.

AIMS2009 - 5th International Symposium on High Performance Mining (Aachen International Mining Symposia), RWTH Aachen University, Aachen, 2009.

StatGIS2009 – 3<sup>rd</sup> International Conference on Geoinformatics for Environmental Surveillance, June 2009, Milos, Greece.

AMIREG 2009 – 3<sup>rd</sup> International Conference on Advances in Mineral Resources Engineering and Environmental Geotechnology, September 2009, Athens, Greece.

APCOM 2009 – 34th International Conference on Applications of Computers and Operations Research in the Minerals Industry, October 2009, Vancouver, Canada.

IGC 2012 - 34th International Geological Congress, Geoscience Information Super-Symposium, Mathematical Geosciences Symposium, Soft Computing and Intelligent Methods in Mathematical Geology, Brisbane, 2012.

EGE2013 – 13th Geological Congress of the Geological Society of Greece, Chania, 2013.

EGE2016 – 14th Geological Congress of the Geological Society of Greece, Thessaloniki, 2016.

ISCSM2018 - 14<sup>th</sup> International Symposium for Continuous Surface Mining, ISCSM2018, Thessaloniki, September 2018.

EGE2019 - 15th Geological Congress of the Geological Society of Greece, Athens, 2019.

RawMat2021 – 1<sup>st</sup> International Conference on Raw Materials and Circular Economy, Athens, Greece, 05-09 September 2021.

EGE2022 - 16th International Congress of the Geological Society of Greece, Patras, October 2022.

RawMat2023 – 2<sup>nd</sup> International Conference on Raw Materials and Circular Economy, Athens, Greece, 28 August - 2 September 2023.

36th Panhellenic & 2nd International Statistics Conference: Data Analysis in Engineering, 16-19 May 2024, Kozani, Greece.

15th International Conference on Geostatistics for Environmental Applications – geoENV2024, Chania, Greece, June 19-21, 2024.

#### SEMINAR ATTAINMENT

Drilling Seminar, Institute of Geological and Mining Exploration, Kozani 1994.

Introduction to VULCAN 3D Software, Maptek/KRJA Systems Ltd, Nottingham 1997.

1st Regional VULCAN Conference, Maptek/KRJA Systems Ltd, Nottingham 1997.

2<sup>nd</sup> Regional VULCAN Conference, Maptek/KRJA Systems Ltd, Nice 1999.

Model Development with ILOG OPL-CPLEX and ODM Web Seminar, ILOG Inc., Paris, France, 2007.

The ILOG JRules 6 Technical Overview Presentation, Web Seminar, ILOG Inc., Paris, France, 2007.

Writing Better MIP Models, Web Seminar, ILOG Inc., Paris, France, 2007

ILOG CPLEX 11, Web Seminar, ILOG Inc., Paris, December 2007

ILOG CP Optimizer, Web Seminar, ILOG Inc., Paris, January 2008.

Publishing KML Services with ArcGIS Server 9.3, Live Training Seminar, ESRI, March 2008.

Learn how to build state-of-the-art decision support applications and models, Web Seminar, ILOG Inc., Paris, March 2008.

Introducing ILOG CP Optimizer 2.0, Web Seminar, ILOC Inc., Paris, May 2008

ILOG JViews: Go Beyond the Basic Eclipse User Interface, Web Seminar, ILOC Inc., Paris, May 2008

ILOG OPL Development Studio 6.0, Web Seminar, ILOG Inc., Paris, September 2008.

ERDAS Imagine 9.3 – Imagine What's New, Web Seminar, ERDAS, New York, November 2008.

ILOG Optimization Webinar - Infeasibility Analysis with ILOG CPLEX, ILOG Inc., Paris, November 2008.

Maptek Africa and Europe Users Conference 2010 – Maximising Efficiency and Increasing Safety, Maptek Pty Ltd., Johannesburg, March 2010.

Maptek Evolution Open Pit Scheduling Workshop, February 2015, Edinburgh.

CONFERENCE ORGANISATION AND JOURNAL REVIEWING COMMITTEES' MEMBERSHIP	
Organising Committee	2 <sup>nd</sup> Regional Vulcan Users Conference, Maptek/KRJA Systems Ltd, Nice, 1999
International Advisory Committee	17th International Mining Congress and Exhibition of Turkey, IMCET 2001, Chamber of Mining Engineers of Turkey, June 2001, Ankara
Reviewer	Mathematical Geosciences, International Association for Mathematical Geology, Springer-Verlag.
Reviewer	Computers & Geosciences, International Association for Mathematical Geology, Elsevier.

Reviewer	Computational Intelligence
Reviewer	Computers and Concrete, An International Journal
Reviewer	Society for Mining, Metallurgy, and Exploration, Inc.
Reviewer	Earth Science Informatics, Springer
Reviewer	Expert Systems with Applications, Elsevier.
Reviewer	Southern African Institute of Mining and Metallurgy Journal
Reviewer	International Journal of Clinical Biostatistics and Biometrics
Reviewer	International Journal of Mining and Mineral Engineering, Interscience
Reviewer	Arabian Journal of Geosciences, Springer
Symposium Session Convenor	34th International Geological Congress, Geoscience Information Super- Symposium, Mathematical Geosciences Symposium, Soft Computing and Intelligent Methods in Mathematical Geology, Brisbane, 2012.
Approved Assessor	Institute of Materials, Minerals and Mining (IOM <sup>3</sup> ).
Session co-chair	15th International Congress of the Geological Society of Greece, Session T11.S2 Soft Computing and Intelligent Methods in Geosciences, Athens, 22-24 May 2019.
Organising Committee	International Conference on Raw Materials and Circular Economy (RawMat2021), Athens, Greece, 5 to 9 September, 2021
Organising Committee	International Conference on Raw Materials and Circular Economy (RawMat2023), Athens, Greece, 28 August - 2 September 2023.
Session chair	Big Data and Statistical Analysis in Geosciences, 36th Panhellenic & 2nd International Statistics Conference: Data Analysis in Engineering (2024), Kozani.

### **MEMBERSHIPS**

Chartered Engineer	Engineering Council, United Kingdom
Chartered Scientist	Science Council, United Kingdom
Member	European Neural Network Society

Reporting

Member Canadian Institute of Mining, Metallurgy and Petroleum

Member International Association for Mathematical Geology

Member Scientific Company of Mineral Wealth Technologists, Greece

Associate Member Eclipse Foundation

Member Hellenic Company for Operations Research

### FOREIGN LANGUAGES

• English: Excellent (Cambridge Proficiency)

German: Very Good (Goethe Institut Grundstuffe)

Russian: Good (Language Centre, University of Nottingham)

#### **SOCIAL ACTIVITIES / MEMBERSHIPS**

- September 2019 September 2024: President of the Athletic Club of Kastoria (handball and table tennis) (Greece)
- December 2022 today: President of the Classic Vehicles Group of Kastoria (Greece)
- May 2012 today: Member of the Triumph 2000/2500/2.5 Register (UK)
- 2004 today: Member of the Triumph Sports Club of Greece