

SECTION IV: CURRICULUM VITAE PREPARED BY CANDIDATE

A. Chronology of Education

University of British Columbia, Vancouver Canada

Ph.D. Mining Engineering, 2002
Major Fields: Management systems, information technology, mine management
Minor Degree: Management Information Systems
Dissertation Title: "Tactical Underground Mine Management"
Advisor: Dr. Malcolm Scoble

M. A. Sc. Mining Engineering, 1999
Major Fields: business justification tools, mining technology management
Thesis title: "Capital Investment Appraisal for Advanced Mining Technology:
Case Studies in GPS and Information Based Surface Mining Technology"
Advisor: Dr. Malcolm Scoble

McGill University, Montreal Canada

B. Eng. Mining Engineering, 1997
Academic Emphasis: Mining Technology

B. Chronology of Employment

Academic

2002 – Present University of Arizona, Department of Mining and Geological Engineering
Assistant Professor

- Current teaching activities include undergraduate and graduate courses in Equipment Operations Technology, Management Operations Technology, Engineering Sustainable Development, and Rock Excavation.
- Faculty advisor for the UA Chapter of Engineers Without Borders, and various other service activities
- Areas of research: management information systems, mining technology and automation management, real options analysis, data warehousing, data mining, sustainable development indicators

1997-1999 University of British Columbia, Department of Mining and Mineral Process Engineering
Teaching assistant and Research Associate

- Aided, organized/managed various departmental and inter-university projects
- Instructor: prepared notes, organized and gave lectures for first and final year undergraduate courses, assisted professors.
- Consulted for Placer Dome Canada on mining automation & robotics project
- Undertook on-site research for Teck Cominco's Highland Valley Copper mine
- Engaged in publishing journal articles, conference papers and developing research projects

Professional Experience

2004 – Present MISOM Consulting Services
Founder & Principal consultant

- Provides data warehousing and management information system (MIS) design services for mining companies; Phelps Dodge Corporation, and Peabody Energy's Powder River Coal Company.
- Provides consulting on strategic technology decisions for Phelps Dodge, Cargill Deicing Technology, Autonomous Solutions Incorporated, and Peabody Energy.
- Provides project management, strategic mine planning, and process control consulting for mine automation to confidential client on multi-million dollar project.

1999 – 2002

INCO Limited - West Mines Complex

Project Engineer - Design and implementation of Tactical Management Systems

- Part of management team and main facilitator for an industrially-focused research project.
- Implemented Ph.D. theories into a division of composed of three large underground Nickel mines
- Aid in the implementation of Information Systems and Management Procedures, engaged in various mine engineering projects and functions, Tested and implemented tactical management system.

1993 – 1999

Worked for the following mining and supplier companies, in varying capacities as an undergraduate in a cooperative program.

Highland Valley Copper Mine (Teck Cominco)	Technology Resource Engineer
INCO Limited, Mines Research	Researcher
Conwest Resources, Nanisivik mine	Underground laborer
Place Dome Canada, Mine D'Or Kiena	Engineering Assistant
ICI Canada, McMasterville explosives plant	Explosives product testing

C. Honors & Awards

- Bly Faculty Award for Outstanding Mining Engineering Faculty, 2006.
- Canadian Information Productivity Award, SAP Best Graduate Research Project 2001.
- Natural Sciences and Engineering Research Council (NSERC) of Canada, full Industrial Postgraduate Scholarship (IPS) grant (2 yrs.)
- University of British Columbia (UBC) graduate student award (1 yr)
- UBC Department of Mining and Mineral Process Engineering scholarship (2 yrs)
- CMIEF full scholarship (3 yrs.)
- McGill University Mining and Metallurgical Engineering full scholarship (3 yrs.)

D. Service & Outreach

1. Local / State Outreach

2002 – 2006

- Organized and implemented recruiting presentations in 3-5 general engineering classes per semester at Pima Community College 2001-2005
- Arizona Foundation for Resources Education; taught classes to high school teachers about mining engineering 2004-05
- Arizona Industries of the Future, Inc; participated in tele-meetings for planning for Arizona Department of Commerce/Department of Energy program 2003-04

2. National / International

2009-present

Instigated a process of improving the utilization of IT in mining internationally
Columnist for technology in key mining engineering magazine in important mining markets

- Volunteered and got accepted to be a regular columnist for several key mining columns, providing advice on IT management in mines. CIM Magazine (Canada), Madencilik Turkiye (Turkey), Technologia Minera (Peru), Minería-Camimex (Mexico).
- 2007 United Nations Conference on Trade and Development (UNCTAD)
Expert mining innovation consultant, Mauritania evaluation
- Acted as an expert on mining innovation for the UNCTAD to help Mauritanian government and industry develop innovation policies, in Mauritania.
- 2006-present Industry Summit on Mining Performance: Continuous Business Process Improvement (BPI) in the Mining, Energy, and Extractive Industries
Co-Chairman, May 10-11, 2007, continuing representation on Strategic Organizing Committee
- Facilitated the development of the organization of the only mining conference on BPI, highly populated by industry. Currently serve as a member of the Industry Advisory Board of same organization.
- 2002-present Applications of Computers and Operations Research in the Minerals Industry Organizing committee of APCOM 2009
- Facilitating the development of the organization of a leading international symposium and peer-reviewed publication containing over 100 papers, in Vancouver, Canada.
- Co-Chairman of APCOM 2007*
- Facilitated the development of the organization of a leading international symposium and peer-reviewed publication containing over 100 papers, in Santiago Chile.
- Chairman of APCOM 2005*
- Recruited & developed organization leading an international symposium and peer-reviewed publication containing over 100 papers.
- Permanent member & Incoming-Chairman of the International APCOM council*
- Incoming chairman of the IAC, currently serving as Vice-Chairman of a council of academics who govern the APCOM symposium series
- 2002-2006 Society of Innovative Mining Technology (SIMT), Canadian Institute of Mining, Metallurgy and Petroleum. (CIM)
Director of 'Innovations' page of the CIM Magazine.
- Find and manage writers for a one page column in the CIM magazine pertaining to innovation in the mining industry.
 - Support the society in various capacities from advisory roles to symposium organization.

Service to Professional Societies and Organizations (2002-present)

Society for Mining, Metallurgy, and Exploration (SME)

SME Internet Committee Chairman (2006 - 2008)

SME Mining & Exploration Division directors (2006 – present)

SME Mining & Exploration Division, Operations Research Unit Chair (2006)

SME Mining & Exploration Division, Operations Research Unit Program (2005)

SME Mining & Exploration Division, Operations Research Publications (2004)

SME UA Student Chapter Advisor (2002-2005)

SME Internet Committee Vice-chair (2002-2005)

SME Research Council, Committee Member (2005)
SME Construction Aggregates Committee (2003)
Society for Mining, Metallurgy, and Exploration, Inc. (SME)
Society for Mining, Metallurgy, and Exploration, Inc. (SME), Tucson Section
Society for Mining, Metallurgy, and Exploration, Inc. (SME), U of A Student Chapter

Engineers Without Borders (EWB)

Canadian Institute of Mining, Metallurgy and Petroleum (CIM)

On board of directors for the Society of Innovative Mining Technology (SIMT)

Director of the Innovations page for the SIMT (2004-2006)

Session Chairman at Conferences:

- 30th International APCOM symposium, Phoenix AZ (2002)
- 31st International APCOM symposium, Cape Town, South Africa (2003)
- Computer Applications in the Minerals Industry (CAMI), Alberta Canada (2003)
- 32nd International APCOM symposium, Tucson AZ (2005)
- 33rd International APCOM symposium, Santiago Chile
- Computer Applications in the Minerals Industry (CAMI), Alberta Canada (2005)
- Various others

Review of Scholarly Works

- Journal of Modeling and Simulation (1) (2002)
- Canadian Institute of Mining, Metallurgy, and Petroleum. Advanced Systems and Technology group, now called Society of Innovative Mining Technology (6 papers since 2000)
- SME Mining & Exploration, Operations Research Unit Publications Chair (2004, managed the reviews of 20 papers (as OR publications chair) and reviewed 4 papers since 2002)
- 31st Applications of Computers and Operations Research in the Mining Industry, acted as session chair and peer reviewer, reviewed 5 papers, 2003)
- 32nd Applications of Computers and Operations Research in the Mining Industry, Chairman (2004-2005, managed the reviews of 118 papers, and reviewed 9 myself)
- 33rd Applications of Computers and Operations Research in the Mining Industry, managed the reviews of 5 papers on mining and IT).
- Various others

International invited presentations since 2002

- Presented “Methodologies and Modeling tools for data-driven production-system algorithm development” to the The Julius Kruttschnitt Mineral Research Centre. 2004
- Presented “The Impact of Sustainability on Political Risk.” to the Sustainable Minerals Institute (SMI), had meetings with the various heads to discuss research opportunities: Centre for Social Responsibility in Mining, 2004
- Minerals Industry Safety and Health Centre, and WH Bryan Mining Geology Research Centre.
- Various others 2004-present

Establishing research relationships with potential international partners

- Research, teaching, and consulting collaboration with Enrique Rubio of the University of Chile's mining engineering department in the fields of data mining and block caving.
- Invited to join the board of Surface Mining Association for Research and Technology (SMART), attended meeting in Edmonton in September 2006.
- Visited MIRARCO and Laurentian University as part of a short course offering and research collaboration exploration in the summer of 2006.
- Cooperative Research Center Mining (CRCMining), Brisbane Australia
 - Developed a research program in Smart Mining Systems
 - Presented research program to CRCMining industry panel
 - While in Australia met with the heads of operators, research institutes, and technology vendors independently to gather further knowledge on technological trends and help guide the vendors with IT advice. (MINCOM, CSIRO, MineStar, MineTrack, Ashanti, Pilbara, etc...). They paid for all airline travel costs
- During two weeks in the early summer of 2002, to meet with U.S. industry, I attended the Elko Expo, toured and met with the engineering staff at Place Dome's Cortez mine, Barrick's Goldstrike mine, Stillwater mine in Montana, and Arch Coal's Black Thunder mine.
- Participated in conference in Phoenix: "Innovations in Aggregate technology", to develop links and identify research potential in aggregates.
- During trip to South Africa in 2003 developed research links with South African mining technologists: 1) toured and met with engineering staff at AngloGold Target mine in Bloomfontein (an underground gold mine using traditional reef and bulk methods), 2) manager of Advanced Systems Technology Jim Porter, 3) met with acting director of Miningtek and manager of Mining Technology of the CSIR (South Africa's governmental research group in mining technology), and 4) representatives of SAIMM and the University of Witwatersrand's Mining Engineering program.

Service to Industry – University Research/Consulting & Private Consulting

Service to industry is a key component of a researcher undertaking applied research in mining engineering. I have endeavored to meet and establish research relationships with the three largest and technically advanced mining companies operating in the US.

Freeport MacMoRan Copper and Gold Incorporated

Until the fall 2008 economic collapse, an intensive process to gain funding from initially Phelps Dodge, then Freeport (later purchased the former in 2007) had resulted in a semi-permanent program of approximately 200k per year, in developing a process labeled Data→Action. This initiative developing data mining products and services directly for hard rock surface mines using the latest information technology. The research relationship evolved into Freeport hiring my consulting company, MISOM Consulting Services, for a variety of services within their Autonomous Mining project from January 2006 until the economic collapse in November 2008.

Rio Tinto

Several meetings have been arranged with Rio Tinto (world's second largest mining company) to establish a research relationship. The manager of IS for all of Rio Tinto asked me to help them design an integrated data solution.

Peabody Energy

Peabody Energy (world's largest coal company) is has started (in 2005) a process of significant investment in information technology and business process redesign and has engaged my services to help guide the process, primarily with their flagship Powder River Coal Company in Wyoming. From the Spring of 2008 until the Fall of 2009, Peabody Energy have hired the consulting company I had founded, MISOM Consulting Services, to develop and pilot a mining data

warehouse. This sabbatical and relationship has allowed for the negotiation of a four year, \$2M research project in IT and mine optimization technology. Corporate and regional level consulting continues on projects dealing with data acquisition systems, continuous improvement and mine planning.

3. Department Service

Department Committees

Year	Name of Committee	Chairman/member
2009-present	Faculty Search Committee	Chair
2005-2006	PD Chair search committee	Member
2005-2006	Vice-Miller search committee	Member
2005	Graduate committee	Member
2003 – present	MGE curriculum committee	Member
2003 – 2004	ABET	Member
2002 – 2007	Student recruiting: <ul style="list-style-type: none">Helped develop recruiting presentationRecruiting presentation at Douglas High School, attended recruiting event at Pueblo Public High school (2002)Engineering 102 open house presentations (twice per year) (2002 – 2006)Engineering 102 at Pima CC, presentation on Mining and the Department (2002-2006)Meet-Your-Major Fair (2002-2004)	
2002 – present	Annual performance review (committee of the whole)	Member
2002-2004	Faculty advisor for SME Student Chapter	

4. College Service

2009 – present	MGE representative on the SSES Research Committee
2002-2005	MGE representative on the Undergraduate Curriculum Committee

Presentations for College

- Represented the College of Engineering at the National Transportation of Coal Association (NTCA), presented “Modern Mining Technology” (2004)
- Presented “An Introduction to the Mining System for the Systems and Industrial Engineer” in the Systems and Industrial Engineering department’s seminar series (2003) and in a course on Manufacturing Systems also for the SIE department.

5. University Service

2004-2008	<u>Engineers Without Borders (EWB) at the University of Arizona</u> <i>Founder & Faculty advisor</i> <ul style="list-style-type: none">Recruited & developed organization leading to the establishment of a chapter of EWB at UA, eventually also becoming a club within Associated Students of The University of Arizona (ASUA). Membership within its first year reached over 120 undergraduate and graduate students, and professionals.
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- Advised the EWB UA chapter leading to the successful bid to design and implement a water distribution project in Ghana for a region with 10,000 residents (largest project EWB had funded).
- Second successful bid is a computer education facility in Cameroon.
- Additional projects currently under bid development

Taught a module of Geoscience's Lowell Short Course, "Porphyry Copper Mining Methods."

E. Publications and Creative activity

Peer-reviewed journal articles

1. Gutierrez, E, Dessureault, S., Tenorio, V. (2008). "Aplicacion de Minería de Datos en el Proceso de Perforación a Lixiviación" (Application of Data Mining in the Drill-to-Leach Process). *Revista Minería*. No. 376, Año LVI. Instituto de Ingenieros de Minas. Enero 2009. 4 p.
2. Takahashi, Akira and S. D. Dessureault. 2009. "Block model reconstruction using truck fleet management system data." *Mining Technology; Transactions of the Institute of Mining and Metallurgy*. Accepted for publication in 2009.
3. Dessureault, S, Lipsett, M. and Scoble, M., 2009, "Achieving the Benefits of Information Technology in Surface and Underground Mining Processes." *CIM Magazine*. Vol. 4 No. 2. March/April 2009.
4. B. Maybee, P. Dunn, S. Dessureault, P. Kaiser, D. Robinson and M. Samis, 2009 "Impact of development strategies on the value of underground mining projects. *International Journal of Mining and Mineral Engineering (IJMME)*, Vol. 1, No. 3, 2009.
5. Benito, Ronald, S. Dessureault. 2008. "Estimation of incremental haulage costs by mining historical data and their influence in the final pit limit definition": *Mining Engineering*, Vol. 60 No. 10. October 2008.
6. Yildirim, M., S. Dessureault, and Baker, Mark. 2007, "Data mining mine data: truck-shovel fleet management systems": *CIM Magazine*, Vol. 2 No.4, June/July 2007. 8p.
7. Dessureault, S., 2007, "Data Mining Mine Data: Energy Consumption Model": *CIM Magazine*, Vol 2 No. 6, September/October 2007. 7p.
8. Dessureault, S., 2007, "Abandoning the current faulty budgeting process through information technology and systems reengineering.": *Mining Technology: Transactions of the Institute of Mining & Metallurgy, Section A*, Vol. 116 No 3, pp 129-138.
9. Dessureault, S., Sinuhaji, A., and P. Coleman, 2007, "Data Mining Mine Safety Data". *Mining Engineering Magazine*, Vol. 59 No. 8 August 2007., pp.64 -70
10. Dessureault, S., Kazakidis, V., and Z. Mayer, 2007, "Flexibility Valuation in Operating Mine Decisions using Real Options Pricing": *International Journal of Risk Assessment and Management*. Vol. 7, No. 5, 2007.
11. Dessureault, S. and A. Schissler, 2006, "Challenges to Overcome in Applying Information Technology in the Mining Industry." *Can. Inst. of Min. Met. and Pet. Bulletin*. Vol. 99 No. 1093, March/April 2006. 9p.
12. Gavelan, Z., and S. Dessureault, 2006, "Probabilistic Approach to Project-Specific Political Risk Analysis for Mineral Projects." *Mining Engineering*, vol. 58 no. 1, p 43-49.

13. Dessureault, S., 2004, "Justification techniques for information technology infrastructure in mining": Mining Technology: Transactions of the Institute of Mining & Metallurgy, Section A, vol. 113 no. 4, pp. 257-263.
14. Kazakidis, V.N., and S. Dessureault, 2004, "Incorporating Ground Delays in Underground Mine Production System Simulation": SME Transactions, Society for Mining, Metallurgy and Exploration, USA, vol. 316, pp. 51-57.
15. Dessureault, S., 2004, "Justification Techniques for Computer Integrated Mining": South African Institute of Mining and Metallurgy, Johannesburg, vol. 104, no. 2, p104-123.
16. Dessureault, S., Porter, J., and M. Woodhall, 2004, "Data Integration for Information Technology Infrastructure in Mining": Can. Inst. of Min. Met. and Pet. Bulletin vol. 97 no. 1076, p.49-56.
17. Dessureault, S., 2003, "Data Infrastructure for a Tactical Mine Management System": Mining Technology, Transactions of the Inst. Mining and Met., Vol.112 No. 2, August, pp.A73 - A85.
18. *Dessureault, S., and M. Scoble, 2001, "A Study of the Synergy of New Technology, Business Tools, and Information to Optimize Mine Production": Int. Journal of Surface Min., Reclamation and Environment, Vol. 15 No. 1, p. 6-32.
19. *Dessureault, S., and M. Scoble, 2000, "Capital Investment Appraisal for the Integration of New Technology into Mining Systems": Transactions of the Inst. Mining and Met., London, Vol. 109, Jan – Apr, p.A30-A40.
20. *Scoble, M., Dessureault, S. and E. Rubio, 2000, "Strategic Planning for Internet Applications in Mining": Can. Inst. of Min. Met. and Pet. Bulletin, vol. 93 no. 1042, p.100-104.
21. *Dunbar, S., Dessureault, S., and M. Scoble, 1999, "Analysis of Flexible Mining Systems": Int. Journal Of Mineral Resources Engineering, Imp. College Press, London. vol. 7 no. 2, p.165-179.

Under Review

1. Ross, Brad, S. Dessureault, Karen Ross, and Gavin Hilson. "Artisanal Miners of Namibia". Natural Resources Forum, in review process

Peer Reviewed Conferences

1. Sinuhaji, Amri, Dessureault, S, Casten, T, and Rubio, Enrique. "Utilization of Secondary Sizing Data for Improved Block Cave Mine Planning" 5th International Conference & Exhibition on Mass Mining, Lulea Sweden, 9-11 June 2008.
2. Dessureault, Sean. "Data mining, mining data: energy consumption modeling." Int. Symp. of Computer Applications in the Minerals Industries (APCOM 2007), Santiago Chile. April 25 – 27, 2007
3. Sinuhaji, Amri and Sean Dessureault. "Data mining, mining data: mine safety data." Int. Symp. of Computer Applications in the Minerals Industries (APCOM 2007), Santiago Chile. April 25 – 27, 2007
4. Yildirim, Metin and Dessureault, Sean. "Truck Assignment Performance Evaluation by Using Data Mining Techniques." Proc. of the 32nd Int. Symp. of Computer Applications in the Minerals Industries (APCOM 2005), Tucson, Arizona. March 30th – April 1st, 2005.

5. Dessureault, S. Justification Techniques for Computer Integrated Mining. Proc. of the 31st Int. Symp. of Computer Applications in the Minerals Industries (APCOM'03), Cape Town, South Africa. May 14-19 2003. pp. 67-72
6. *Dessureault, S., Scoble, M. Activity Based Costing and Information Engineering: Formulation of an Annual Mine Budget. Proc. of the 30th Int. Symp. of Computer Applications in the Minerals Industries (APCOM'02), Phoenix Arizona. February 24-27, 2002. pp.601-613
7. *Dessureault, S., Scoble, M., Rubio, E. Simulating Block Cave Secondary Breakage – An Application of Information and Operations Management Tools in Mass Mining System. Proc. of Massmin 2000. (AusIMM: Carlton Victoria Australia) Brisbane, Aust. Oct. 29 – Nov. 22 2000, p 893-896
8. *Dessureault, S., Scoble, M., and Dunbar, S., 1999, “Analytical management tools for continuous improvement in mining operations”; Proc. of the 29th Int. Symp. of Computer Applications in the Minerals Industries (APCOM'99), October 20-22, Golden Colorado pp. 719-726.

Conference Proceedings With Some Measure Of Peer Review

1. Yildirim, M. and Dessureault, S., 2005, “Data Mining In Pit Production Management System”; SME Annual Meeting, Feb 27-Mar 2, 2005, Salt Lake City, Utah.
2. Dessureault, S., 2004, “Developing Decision Support Systems at Large-scale Underground Mines”; SME Annual Meeting, Feb 23-25, Denver, Colorado.
3. Gavelan, Z., Dessureault, S., 2004, “Probabilistic Approach to Project-Specific Political Risk Analysis for Mineral Projects”; SME Annual Meeting, Feb 23-25, Denver, Colorado.
4. *Dessureault, S, Lipsett, M. and Scoble, M., 2002, “Achieving the Benefits of Information Technology in Surface and Underground Mining Processes”; 104th Ann. Gen. Meet., Can. Inst. Min. Metall., May, April 28 – May 1st. Vancouver, BC, 8p, CD ROM.
5. *Dessureault, S. and Scoble, M., 2001 “Strategy to Achieve the Next Evolution of Process Control in Mining: Intelligent Production Management in Mining Systems”; Proc. of the 3rd Int. Conf. on Intelligent Processing and Manufacturing of Materials, IEEE IPMM, July 29 - August 3, 2001, Vancouver, BC.
6. *Dessureault, S., Scoble, M., and Mathews, K., 2000, “Factors Controlling the Success of Mining Technology Development and Implementation”; Proc. 102nd Ann. Gen. Meet., Can. Inst. Min. Metall., March 5-10, Toronto, Ont. 2000.
7. *Dessureault, S., Scoble, M., and Dunbar, S., 1999, “Intelligent Production Management in Mining Systems”; Proc. of the 2nd Int. Conf. on Intelligent Processing and Manufacturing of Materials, IEEE IPMM, July 10 – 15, Honolulu, Hawaii, p. 145-149.
8. *Dessureault, S., Scoble, M. and S. Dunbar, 1999, “Management Tools to Appraise Advanced Technologies in Mining”; Proceedings 101st Ann. Gen. Meeting, Can. Inst. Min. Metall., May 2-5, Calgary, Alberta.
9. *Dunbar, S., Dessureault, S., and Scoble, M., 1998, “Analysis of Flexible Mining Systems”; Proceedings 100th Ann. Gen. Meeting, Can. Inst. of Min., May 3-7, Montreal, Quebec.

Invited Talks

1. Invited Speaker, CENTRO DE TECNOLOGIAS DE INFORMACION Y COMUNICACIONES (CTIC) (Center of Information Technology and Communications) <http://www.ctic.uni.edu.pe/pages/institucion.htm>. Presentation to 300+ undergrad students. Topic: New technologies and study opportunities for international students. Date: Monday September 29th, 2008 (most likely, as it was the Monday right after INFOMINA) Host: Ing. Doris Rojas (director)
2. Keynote Speaker, INFOMINA, September 26 – 27, 2008, Lima Peru
3. Invited Speaker, SME Arizona conference: “Data Mining Mine Data – Tire Data” December 3rd, 2007
4. Invited Speaker (only academic speaker invited), Global Mining Summit, “Examining Evolutionary Technologies for Effective Mining Operations.” 23-25 September 2007, Vancouver, BC, Canada
5. Keynote Speaker, APCOM 2007, ” Next Steps in Effective Development and Use of Computer Based Technology in Mines,” April 26th, 2007, Santiago Chile
6. “Effective Utilization of Information Technology”, World Mining Equipment: Loading and Haulage, May 21-24, 2006, Phoenix AZ.
7. “INNOVATION Through Effective And Novel Use Of IT & BPI”, CIM, opening speaker of the Innovations Society Session. May 1st, 2006
8. Keynote speaker, University of Chile, CONYCT (Chile’s version of NSF) for TICMIN (English version of information and communications technology for mining, an invited speaker symposium), May 3-5 2006, Santiago, Chile.
9. “Data Integration and Utilization”, World Mining Equipment: Drilling and Blasting, April 17-19, 2005, San Antonio TX.
10. “Methodologies And Modeling Tools For Data-Driven Production-System Algorithm Development”; CRCMining Conference, June 16-17, Noosa Heads, Queensland, Australia.
11. “Activity Based Costing within Mine Management Systems”, World Mining Equipment Survival, September 10-11, 2001, Toronto, Ont.
12. “Activity Based Costing: A Mine Tailored Approach”, 1999, World Mining Equipment 2000, Nov. 10-12, 1999, Toronto, Ont.

Conference Proceedings

1. Dessureault, Sean, Bartlett, Mark, and Baker, Mark. “Infrastructure Pieces for the Autonomous Surface Mine” 2007 Australian Mining Technology Conference. The Vines, Western Australia, October 2-4, 2007
2. Dessureault, S., Kecojevic, V., Nieto, A., and Ganguli, R., 2005, “Infrastructure for Integrated Data Environments and Analysis (IIDEA) for Mining and Processing Systems”; Mine Planning and Equipment Selection (MPES 2005) and Computer Applications in the Minerals Industries (CAMI 2005), Oct. 31-Nov. 3, 2005, Banff, Canada.
3. Dessureault, S. and Z. Gavelan, 2003, “The Impact of Sustainability on Political Risk”; SME Arizona Conference, Dec. 7-8, Presentation only

4. Dessureault, S., 2003, "Mine Mill Integration through Data Warehousing"; Proc. of the 4th Int. Conf. on Computer Applications in the Minerals Industries (CAMI 2003), Sept. 8-10, 2003, Calgary Alberta. Edited by Singhal / Fytas / Chiwetelu, CD-ROM
5. Dessureault, S., 2003, "Developing a Data Warehouse for Decision Support Systems for Large-Scale Underground Mines"; Proc. of the High-Performance Mine Production Symposium, April 11 and 12, Aachen, Germany, pp. 379-390.
6. Dessureault, S., Scoble, M., Dunbar, S., and Richards M., 1999, "Case Study of Capital Investment Appraisal Methods for Mining Automation"; Proc. 5th ISMMA and 1st Telemin Conference, June 14-17, Sudbury, Ont., 15p, CD-ROM.

Conference Presentations

1. Dessureault, S. 2009, "Coal Powered Business Intelligence and Sustainable Development Research", Annual Meeting of the SME Arizona Conference., Dec. 7.
2. Takahashi, Akira and Dessureault, S., 2009 "Block model translation using shovel high-precision GPS and data-rich truck fleet management systems" SME Annual Meeting, Feb 21 – 25, Denver CO
3. Dessureault, S. 2009, "Control Room Design Techniques for the Automated Surface Mine" SME Annual Meeting, Feb 21 – 25, Denver CO
4. Dessureault, S., 2009, "Integrated Mining Operations Data Warehouse" Industry Summit on Mining Performance: Continuous Business Process Improvement (BPI) in the Mining, Energy, and Extractive Industries, June 9- 11, Toronto Canada.
5. Dessureault, S., 2008, "Mine Planning Enhancement in Block Caving Operation through Data Warehousing and Data Mining", SME Annual Meeting, Feb 24-27, Salt Lake City, Utah.
6. Dessureault, S., 2007, "Critical Information Technology Requirements for effective and sustainable Business Process Improvement"; Business Process Improvement Summit, Tucson, May 10-11.
7. Dessureault, S., 2007, "Critical Information Technology Requirements for effective and sustainable Business Process Improvement"; CIM Annual Meeting, Montreal Canada, April 29-May 2nd.
8. Dessureault, S., 2007, "Data Mining Data mining, mining data: integrated unit cost variations"; SME Annual Meeting, Denver Colorado, February 25-28.
9. Dessureault, S., 2006, "Integrated Information Technology Infrastructure: Essentials for the Next Level of BPI/R"; SME Annual Meeting, St. Louis Mo, March 26-29.
10. Dessureault, S., 2005, "Tactical Open Pit Decisions Justified with Real Option Models" SME Annual Meeting, Feb 27-Mar 2, Salt Lake City, Utah.

Professional Short Courses

"Modern Mining Information Systems: Utilization and Effectiveness." [should list attendance]

- Taught: November 14-15, 2005, University of Chile, Santiago.
- Taught: March 15-17, 2006, University of Arizona.
- Taught: February 23-24, 2006, Gillette WY
- Taught: October 26-27, 2006, University of Arizona.
- Taught: June 14-15, 2006, Laurentian University, Sudbury Ontario.

- Taught: April 23-24, 2007, Santiago Chile
- Taught: August 25 – 29,, Santiago Chile, professional short course program

F. Awarded Grants and Contracts

Grants and Contracts (Total \$4,497,496 & Share awarded, \$3,439,832 received)

“Science Foundation Arizona Peabody Energy Coal Mining Research”: Peabody Energy, \$2,000,000, August 2009 – December 2012, PI 100% responsibility

“Waste to Ore Resource (WOR) Research Program: Project 1: Block Model Reconstruction.” Jigsaw Technologies, \$94,971, January 2008 – July 2009, PI 100% responsibility

“Developing Data Models for Data Mining”, WAESO, total: \$1,693, Spring 2008, PI, 100% responsibility.

“Developing Data Models for Data Mining”, WAESO, total: \$1,693, Fall 2007, PI, 100% responsibility.

“Data→Action Research Program (DARP)” Phelps Dodge Corporation, \$499, 802, August 2006-2010, PI, 100% responsibility.

“Modernizing Cave Planning & Management Systems, Project 1: Block Cave Engineering Data Infrastructure”, Freeport McMoRan, Resolution Copper Mining Company, Kennecott Utah Copper Company, \$110,733 (Freeport portion of \$36, 911 is currently funded, remaining companies are in final contract negotiation) August 2006 – December 2007, PI, 100% responsibility. See note * in pending

“Applied Problem Sets on the World Wide Web”, Western Alliance to Expand Student Opportunities (WAESO) \$3,500 Spring 2007., PI 100% responsibility.

“Developing Data Models for Data Mining”, WAESO, total: \$1,693, Spring 2007, PI, 100% responsibility.

“Short Course: "Modern Mining Information Systems-Utilization & Effectiveness" CRCMining, Brisbane Australia, \$13, 492, June 2005 – Nov 2007, Co-PI, 86% Responsibility.

“Infrastructure for Integrated Data Environments and Analysis (IIDEA) for Mining and Processing Systems.” (total: \$1,704,482, cost Share: \$655,000), July 2005 – June 2009, Co-PI, 81% Responsibility. Department of Energy, Office of Industrial Technologies, Industries of the Future, Mining Grand Challenge, Phelps Dodge Corporation, Mintec Incorporated, Dimension Technologies Global, University of Pennsylvania, Virginia Technical Institute. Note: the DOE OIT has been eliminated by the federal government. The first year funding, 2005-2006 and project goals were met (\$71,293 direct and \$122,000 for total = \$193,293)

“Safety ‘Data Mining’ Infrastructure”, National Institutes of Health (NIOSH), \$28,433, Jan 2005- Jan 2006, PI 100% responsibility.

“Applied Problem Sets on the World Wide Web”, WAESO, \$2,500), Spring 2007, PI 100% responsibility.

“Development of Sustainable Development Indicators through the Integration of Publicly Available Data Sources Part I”, WAESO, \$1,693, Spring 2006, PI 100% responsibility.

“Applied Problem Sets on the World Wide Web.” WAESO, \$2,500, Fall 2005. PI 100% responsibility.

“Decision Support System through Data Utilization: Part I: Dispatch Comparison Project”, Phelps Dodge Mining Company, \$15,000, Aug 2003 – Aug 2004, PI 100% responsibility.

“Systems engineering for earthmoving project”, WAESO, (Part I, \$3,504, Summer 2003), (Part II, \$2,567, Spring 2004), (Part III, \$2,591, Fall 2004), (Part IIIb, \$2,550, Spring 2005), (Part IV, \$2,693, Fall 2005), PI 100% responsibility.

“Engineering Applied Industry Education Research” (\$2,550) Fall 2003, PI WAESO

“Applied Problem Sets on the World Wide Web.” WAESO, \$10,000 in total, consistently every spring and fall for 2,500 each semester between Fall 2003 - Spring 2005, PI 100% responsibility.

“Foreign Travel Grant.” University of Arizona, \$1,000, May 2003, PI 100% responsibility.

“Process Mapping Methodology for Natural Resource Operations”. UA Faculty Small Grants, \$7,500, May 2002 – April 2003, PI 100% responsibility.

Pending

“Block Cave Data Warehousing and Data Mining.” ~\$1,250,000. Rio Tinto in initial company evaluation stage. PENDING, co-PI 60% (with Dr. Enrique Rubio, University of Chile), Now applying to CRC, AMIRA, MMT2

Solicited & Managed Donations for MISOM Research Lab

- Peabody Energy’s PIMOD, \$500,000 in direct costs to develop
- Phelps Dodge’s Enterprise Data Warehouse, cost them \$2.3M to develop
- PT Freeport’s DOZbase.
- Modular Mining’s Intellimine system: , dispatch system, 2 full unix systems with their monitors, key boards, and mice, on-board computer, as well as three touch-pad monitors. (2003)
- Negotiated the donation of OSISOFT’s Pi software, value of \$250,000 (2003)
- Rock Simulation: simulation program that helps design aggregate crushing plants
- Caterpillar software products: Fleet Production software, digital caterpillar performance handbooks, dozing & ripping prediction software, aprox. Value: \$50,000