

Basic Info

Born in Torino on 30th March 1948 – Graduated in Mining Engineering on spring 1972

> Italian Member of A.C.G.I.H. <

CONTINUATIVE FULL TIME OPTION

**Full professor of Occupational risk assessment and management at industrial and construction sites
professor of III level courses (Doctorate);**

Politecnico di Torino, DIATI - Department of Environment, Land and Infrastructure Engineering

Courses held at 1st Fac. Eng. of Politecnico di Torino in the past (main):

Industrial Safety and Health /Occupational Safety and Health at temporary or mobile construction sites / Quarrying and environmental rehabilitation / Opencast and underground mining and tunneling fittings

Courses held at other Foreign and Italian Universities in the past (main):

improvements in Italian mining technologies Rudarsko Geoloski Fakultet, Beograd University / Quarrying and environmental rehabilitation, Trieste University / Workshop WK006 CISDA Safety and health at construction sites, 1° e 2° Architecture Fac. of Politecnico di Torino; Industrial Risk Analysis and physic-chemical pollution management, 1-2-3 y, TPALL-Risk Assessment and Management, University of Torino.

Doctorate, Master and Advanced Schools (main):

- Vice-coord. of Metrology PhD – area “Occupational S&H and risk analysis”, and member of Doctorate on *Environmental geo-engineering*
- professor of III level graduate courses (Advanced School) - Risk assessment and management in tunneling operations & advanced computer assisted techniques for the analysis of occupational accidents and set up of prevention measures (SCUDO Politecnico Torino) / Risk assessment and management for industrial and constructions sites (Universita' Bologna)
- Director of II lev master “Occupational Safety & Health Engineering”
- Coordinator and professor in the Refresher Course for Piemonte Mining Bureau technicians (COREP - Torino and IREF & Regione Lombardia - Milano) / Master Course on Underground Environment TRUE (COREP - Torino) / Response to emergencies (COREP - Torino) / Safety management for mine and quarries technicians/Inspectors (IREF & Regione Lombardia - Milano) / Coordinator and professor of training courses for managers, technicians and workers designated to carry out activities related to the protection and prevention of occupational risks (COREP - Torino)

Main participation to Foreign and National Official Committees and Research Institutes:

- European Standard Committee CEN TC 196 (*Machines for underground mines - Safety*) / Section of Torino of the Environmental Geology and Geo-engineering Institute of the National Research Council / U.N.I. National Institute of Standardization, WG151 *Construction equipment and building material machines - Safety* - U.N.I. Edi Sc 1, GL 12 *Safety Plans* (as defined by 92/57/CEE Directive) - U.N.I. WG “*Temporary Works Equipment*”, SWG “*tunneling supports*” (ref CEN TC53/WG 12) / National Health Bureau Technical Institute ISPESL: WG *guidelines for noise control at workplaces* / C.E.I. Electro technical Italian Committee, WG 31J *Electrical Apparatus for Explosive Atmospheres* / Italian Tunneling Association S.I.G., WG 2 (*constructions*), SWG 5 (*Work safety*) and 14 (*Mechanized tunneling operations*) / EEC SHCMOEI: Repr. of Italian Ministry of Industry, national Bureau of mines, WG “Codes of good practice” / NIS - Italian Network on Silica health problems management, WG dimension stones / Tempus Programme JEP 41045-2006 (TOSHI) / UNIDO 2007-08 Project “Cleaner Production Programme – Armenia” / INAIL - Workers Compensation Authority, accident causes analysis techniques
- Referee and member of the Scientific Board of the 'Journal of Mining and Geology', Rudarsko Geoloski Fakultet - Beograd University

- Representative of SSD IngInd28/29/30 in the National Agency for the Evaluation of Universities and Research Institutes –ANVUR GEV09

Organization, coordinating or direction of Scientific activities and research groups (main, past and/or standing):

- Referee for the I Fac of Politecnico di Torino & Coordinator of the engineering courses care of the Interfaculty University Degree in Prevention techniques in the environment and at the workplace, Università di Torino
- Coordination of WG on Safety and health at workplaces and Environmental quality of: ASL-SPreSAL / SCR / Lion Turin Ferroviare / Lombardia Region / Provincia di Torino (mainly metalmechanical, mining and construction activities)
- Coordinator of an international joint project (Italian universities and European manufacturers (e.g. Herrenknecht)) for the Risk Assessment and Management in tunneling operations in critical formations (in presence of asbestos, silica, firedamp...)
- Referee for the coordination of the occupational risk assessment and management at PoliTo – UniTo
- Referee for the coordination of a joint research activity for the definitions of guidelines special for the risk assessment and management for important public facilities

Main fields of scientific and research activities - printed papers and books:

- OCCUPATIONAL RISK ASSESSMENT AND MANAGEMENT, AND ENVIRONMENTAL PROTECTION IN A SUSTAINABLE DEVELOPMENT APPROACH: guidelines on risk assessment and management, both for general industrial application and for mining, quarrying and construction activities. A quality approach for the management of the work related safety problems; computer assisted models for risk, accident and work environment analysis and management;
- UP TO DATE TECHNIQUES AND TECHNOLOGIES for opencast and underground extractive and construction activities. Case histories on the effectiveness of new techniques, Technologies and machinery
- MINING AND WINNING DESIGN: exploration and blasthole or roofbolting drilling, explosives and safe/effective use, mechanical rock winning machines, support selection, safety best practices;
- MINE, QUARRIES AND CONSTRUCTION FITTINGS: loading and haulage machinery for raw materials and dimension stones, underground ventilation during routine operations and in case of emergency, energy feeding for machinery and plants. Analysis of critical systems in suitable Reliability approaches.

Author of more than 220 printed papers, books and multimedia mainly on Occupational Risk Assessment and management.

Torino, June 2013



Prof. Eng. Mario PATRUCCO

some recently printed papers

- C.Ceste, M.Patrucco, A.Sorlini: "Underground constructions in city areas: some typical safety problems", AITES – ITA 2001 World Tunnel Congress, Milano, 10-13 june 2001, Acts, p.191-197 (Patron ed., Bologna, 2001, ISBN 88-555-2594-8),.
- M.Patrucco, R.Tommasini: "Classifying of the hazard zones and risk management in gassy tunnel driving operations", The European Conference ESREL 2001: Towards a Safer World, Torino, 16-20 september 2001, Proceedings, p.847-954, MG-Torino, ISBN 88-8202-099-5
- M.L.Debnardi, P.DallaValle, F.Lembo, L.Marmo, M.Patrucco: "Aluminum airborne particles explosions: risk assessment and management at Northern Italian factories", The European Conference ESREL 2001: Towards a Safer World, Torino, 16-20 september 2001, Proceedings, p. 85-92, MG-Torino, ISBN 88-8202-099-5
- M.Patrucco: Sicurezza ed ambiente di lavoro - vol 2 parte 4, L'INQUINAMENTO DA PARTICOLATI AERODISPERSI NEGLI AMBIENTI DI LAVORO: VALUTAZIONE E GESTIONE, marzo 2002, Collana Politeko, Torino, ISBN 88-87380-29-5
- S.Francese, M.Patrucco, G.Scioldo: "Workers exposure to airborne particulates in opencast and underground mining operations: a database approach for risk assessment and management", Data Mining III Conference 2002, Bologna, 25-27 september 2002, Proceedings, p. 829-838, WIT Press, ISBN 1-85312-925-9, ISSN 1470-6326
- M.Patrucco, A.Sorlini: "Workers safety conditions in urban underground construction: Risk evaluation, management and monitoring as applied in northern Italy", .ACUUS 2002 International Conference 'Urban Underground Space: a Resource for Cities', November 14th-16th, 2002, Torino, Italy, Ripubbl. in GEAM-Geingegneria ambientale e mineraria, XL, 1, 2003, pp. 93-100, Lit. Geda, Torino, ISSN 1121-9041
- C.Cigna, E.Lovera, M.Patrucco, D.Savoca: "Noise and dust emissions from non-metal mining activities: analysis of suitable techniques of measurement, prediction and control" SDIMI 2005 "Sustainable Development Indicators in the Mineral Industry", May 18-20, 2005, Aachen, Germany, Proceedings., pp. 297-314, VGE ed, ISBN 3-7739-5994-X
- M.Patrucco, A.Sorlini, "Mechanized tunnelling: workers risk analysis and machine adjustment to the local situation" Safety innovation criteria inside tunnels, June 29-july 1, 2005, Gijon, Asturias, Spain Proceedings pp.29-37
- M.Cardu, E.Lovera, E.Michelotti, M.Patrucco. "Quarrying by explosive and diamond wire in hard dimension stones" Proc. 3rd EFEE World Conference on Explosives and Blasting, September 13-16, 2005, Brighton – UK, Proceedings pp. 409-414, ISBN 0-9550290-0-7
- M.Patrucco et al., ISPESL, "manuale di buona pratica - Metodologie e interventi tecnici per la riduzione del rumore negli ambienti di lavoro", Supplemento di "Fogli di informazione", number 2, 2005, Roma, pp. 1-95, (+ CD Rom), ISBN 88-89415-08-8
- M. Cardu, E. Lovera, M. Patrucco, "Loading and haulage in quarries: criteria for the selection of excavator – dumper system", MPES 05 "Mine planning and Equipment Selection", October 31-November 3, 2005, Banff (Alberta), Canada, Atti :The Reading Matrix Inc. Irvine, CA,. (CD ROM - ISSN 1712-3208) (ed. R. Singhal et al.). pp. 1594-1606.
- C.Cigna, A.Di Gregorio, I.Fava, E.Lovera, M.Patrucco, D.Savoca, C.Secchi: "A sustainable approach specially developed for the opencast extracitve activities: some proposal as under evaluation in Regione Lombardia", CISAP 2 – 2 nd International Conference on Safety & Environment in Process Industry, 21-24 may 2006, Napoli, Italy Proceedings (Chemical Engineering Transactions, vol 9, 2006) pp. 257-262 (ed. AIDIC), ISBN 88-901915-1-1
- A.Camisassi, C.Cigna, S.Nava, M.Patrucco, D.Savoca: "Load and hauling machinery: an evaluation of the hazard involved as a basis for an effective risk evaluation" Mine Planning and Equipment Selection (MPES 2006), 20-22 september 2006, Torino, Italy, Proceedings pp. 395-400 (ed. by .Cardu, R.Ciccu, E.Lovera, E.Michelotti) ISBN 88 901342 4 0
- F.Lembo, M.D'Acunti, M.Patrucco, D.Bersano: "Un nuevo y efectivo enfoque a la Inspección de Trabajo: el caso de un túnel en el Norte-Oeste de Italia" Primer coloquio sobre coordinación de seguridad y salud en la construcción. 21 - 22 febbraio 2008, Barcellona, Spagna. pp. 1-10 Atti su CD-ROM.
- M. Patrucco, S. Francese & altri: "Misure di prevenzione e protezione per ridurre l'esposizione a polveri contenenti silice libera cristallina – Comparto lapideo – relazione conclusiva" – Network Italiano Silice - Sottogruppo Lapidei. Coordinamento Regioni, ISPESL, INAIL, Ist.Sup.Sanita', Sondrio, aprile 2008 [http://www.trentinosalute.net/context_nis]
- D.Bersano, C.Cigna, M.patrucco, J.M.Pession, P.F.Ariano, S.Prato, R.Romano, G.Scioldo: "Avvio e gestione di attività estrattive: un approccio in "Prevention Through Design"", GEAM-Geingegneria ambientale e mineraria, XLVI, 1, 2009, pp. 5-15, Patron ed., Bologna, ISSN 1121-9041

M.D'Acunti, M.Patrucco, D.Bersano, C.Cigna, S.Francese, "Environmental conditions during tunneling operations: the evaluation and management of the workers exposure to airborne dust in the shotcreting phase", ITA-AITES World tunnel congress, 23-28 maggio 2009, Budapest, Hungary, Proceedings pp. 639-641, ISBN 978-963-06-7239-9

D.Bersano, C.Cigna, M.Patrucco, J.M. Pession, P.F.Ariano, S.Prato, R.Romano, G.Scioldo "Avvio e gestione di attività estrattive: sviluppo di un software interattivo a supporto di un approccio in "Prevention Through Design "" GEAM. Geoingegneria ambientale e mineraria, Anno XLVI, n. 1, Aprile 2009 (126), Lit. Geda, Torino, ISSN 1121-9041, p. 5-19

M.Patrucco et al: Construction Methodologies and Structural Performance of Tunnel Linings, caps "2 - state of the art in tunnel construction" and "9 – Safety aspects during construction", Starrylink Ed, ISBN 978-88-96225-31-8, Brescia 2009.

M.Patrucco, D.Bersano, C.Cigna F.Fissore: "Computer image generation for job simulation: an effective approach for occupational Risk Analysis", Safety Science, vol 48 , 4, april 2010.

D.Bersano, C.Cigna, M.Patrucco, J.M.Pession, P.F.Ariano, S.Prato, R.Romano, G.Scioldo, "Extractive activities start up and management: a computer assisted specially developed "Prevention through Design" approach" International Journal of Mining, Reclamation and Environment, ISSN: 1748-0930 (in print)

M. Patrucco, D. Peila, M. Falanesca: "A Risk Analysis approach for rock-falls in quarries", 12th int. symp. on environmental issues and waste management in energy and mineral production SWEMP 2010, May 24-26, 2010, Prague, Czech Republic.

M. Demichela, S. Murè, L. Monai, M. Patrucco: "Occupational accidents data collection and analysis", ESRA - European Sustainability Reporting Association, SSARS 2010, 4th Summer Safety & Reliability Seminars, 20-26 June 2010 Sopot Poland, accepted for presentation.

P.Berry, M.Patrucco: titolo IV: cantieri temporanei o mobili - capo i misure per la salute e sicurezza nei cantieri temporanei o mobili. Commentario TU in materia di sicurezza sul lavoro, ed. Zanichelli, in corso di stampa

M.Demichela, L.Monai, M.Patrucco: "Computer Assisted Technique for in deep analysis of Work Related Accidents: an effective approach for Occupational Risk Assessment and Management", Safety Science, sent for evaluation to.

D.Labagnara, M.Patrucco, A.Sorlini: capitolo: Aspetti Tecnologici e di Valutazione e Gestione del rischio occupazionale nei cantieri per la realizzazione di opere infrastrutturali in sotterraneo. Ingegneria forense: metodologie, protocolli e casi di studio. Dario Flaccovio Ed., Palermo, ottobre 2011, ISBN 9788857901015, pp. 247-272.

M. Patrucco, D. Labagnara, M. Coggiola, E. Pira: "Aspetti di valutazione e gestione del rischio associato alle fasi di generazione e riutilizzo del marino di galleria", GEAM. Geoingegneria ambientale e mineraria, XLVIII, 2, maggio-agosto 2011, 133, pp. 69-84

D. Bersano, D. Labagnara, M. Patrucco, V. Pellegrino: "Affidabilità: la "Cenerentola" nella progettazione degli impianti di ventilazione in galleria", GEAM. Geoingegneria ambientale e mineraria, XLVIII, 2, maggio-agosto 2011, 133, pp.17-26

A.Martinetti, M.Patrucco, P.Molina, R.Romano: "Impostazione di una banca dati contenente i più comuni infortuni nelle attività estrattive con particolare riferimento al criterio di valutazione del documento di sicurezza e salute (DSS) per la gestione del rischio" – febbraio 2012
http://www.provincia.torino.gov.it/ambiente/file-storage/download/attivita_estrattiva/pdf/linea_guida_DSS.pdf

D.Labagnara, M.Patrucco, C.Cirio: "Occupational Safety and Health aspects in mechanized full facetunnel driving: the situation of ante 89/392/ECC TBMs" in ITA-AITES World Tunnel Congress 2012, Bangkok, 18-23 maggio 2012

A.Martinetti, P.Molina, M.Patrucco, R.Romano: "A formalized approach in Prevention through Design and detailed definition of the input data on the basis of occurred accidents: some experiences at Italian extractive activities", 5th International Conference on Safety & Environment in Process & Power Industry, Milan 3-6 June, 2012 (Chemical Engineering Transactions, Vol 26 part.2, ISBN 978-88-95608-17-4; ISSN 1974-9791, pp 627-632)

F.Bronuzzi, L.Monai, M.Patrucco: "Correct and effective characterization of fire-arms noise: a basic aspect to provide reliable input data for the reduction of emitted noise from shooting ranges in urbanized area", 5th International Conference on Safety & Environment in Process & Power Industry, Milan 3-6 June, 2012 (Chemical Engineering Transactions, Vol 26 part.2, ISBN 978-88-95608-17-4; ISSN 1974-9791, pp 507-512)

D. Labagnara, A. Martinetti, M. Patrucco: "The Prevention through Design approach as a key tool in tunnelling operations and muck reuse", International Conference on Sustainable Solid Waste Management, Athens 28-29 June, 2012

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R.Luzzi, L.Maida, A.Martinetti, M.Patrucco. "Information, Formation and Training for the Maintenance Operations: the Lesson Learned from Fatal Accidents". Chemical Engineering Transactions Vol. 32, pp. 229-234, 2013, ISBN 978-88-95608-23-5, ISSN 1974-9791, DOI:10.3303/CET1332039. Atti del convegno ICheaP-11, 11 th International Conference on Chemical & Process Engineering, 2-5 June 2013 Milan

D. Labagnara, M. Patrucco, P. Rossetti, V. Pellegrino: "Predictive assessment of the asbestos content in the Western Italian Alps: an essential tool for an effective approach to risk analysis and management in tunneling operations and muck reuse", Environmental Earth Sciences, Publisher Springer-Verlag, ISSN: 18666280, Online ISSN: 1866-6299, DOI: 10.1007/s12665-012-2174-1, Vol xx, pp. xx-xx, Already published in <http://link.springer.com/article/10.1007%2Fs12665-012-2174-1#>, the printed mag. is scheduled