
PAOLO BERRA, PhD

Via Dei Guarneri 24, Milan, Italy.

Birth date: 1/2/1971, Italian, Married.

e-mails:

CERN, Geneva: Paolo.Berra@cern.ch

SICAS Industrial Group, Milan: Paolo.Berra@sicas.it

Harvard University, Boston: pberra@opm38.hbs.edu



Present positions:

□ ***Sicas Euroclean (Milan, Italy)***

2002-2007 *Position: Chief Executive Officer and Owner*

Sicas Industrial Group is a leading European manufacturer in mechanical engineering and industrial vehicles. Dr P. Berra has managed, as a CEO, the re-organization and the international growing of the Group (turnover 2002-2007: + 300%). Today, after joint-ventures and acquisitions, it is composed of two main production facilities in Italy, one company in France (Matis) and a world-wide sale network of about 150 dealers/agents in 30 different countries. A Financial Company as well as partnerships in Italy (CGT-Caterpillar), UK (Scarab) and Emirates complete the assets of the Group. Sicas is today a member of different Italian Industrial Associations and of the European Industrial Association EUnited in Brussels (representing 80 engineering companies with 40 bn Euro of sales and 200000 employees).

□ ***Foundation of Oncological Hadrontherapy (TERA-CERN)***

c/o CERN - European Organisation for Nuclear Research (Geneva, Switzerland)

2002-2007 *Position: Scientific Associate - part-time*

Technology transfer for the engineering and construction of a novel accelerator for cancer therapy with European Research Institutes and Industries.

□ ***Harvard University, Business School (Boston, USA)***

2007-2009 Business Administration – Executive Education

Previous positions:

□ ***CERN-European Organisation for Nuclear Research (Geneva, Switzerland)***

1998-2002 *Position: International Officer (Technology Transfer Division and TERA Foundation)*

Engineering design and construction of a novel proton accelerator for cancer therapy (LIBO project). This 20 M\$ project has been created within an international collaboration between TERA Foundation, CERN and the Italian Institute of Nuclear Physics. The aim was to build a prototype for a new compact particle accelerator for radiotherapy in the frame of a consortium of Research Institutes and Industries.

□ ***CERN-European Organisation for Nuclear Research (Geneva, Switzerland)***

1998-2000 *Position: Scientific Associate (ATLAS Collaboration)*

ATLAS Technical Co-ordinator Group

Chairman assistant of the ATLAS Production Readiness Reviews within the Technical Co-ordinator Group. ATLAS is a one billion dollar experiment of the Large Hadron Collider (LHC) under construction in Geneva for the High Energy Physics Community. It is an international collaboration of more than 2000 people, 150 Research Institutes and Industries from 50 nationalities, under the responsibility of CERN.

□ ***1996 European Institute for Oncology (Milan, Italy)***

□ ***1995 National Centre of Research, Advanced Institute of Biomedicine (Milan, Italy)***

Design of a novel synchrotron for cancer therapy for the National Centre of Oncological Hadrontherapy (CNAO). This 100 M\$ project, created by TERA Foundation (Geneva and Novara) and the Italian Institute of Nuclear Physics, and financed by the National Minister of Health, is now under construction in Pavia.

Scientific education

□ ***Claude Bernard University Lyon 1, Institute of Nuclear Physics (Lyon, France)***

PhD Nuclear Physics.

□ ***Milan University, Enrico Fermi Institute for Nuclear Studies (Milan, Italy)***

MSc Nuclear Engineering – Nuclear Reactors and Particle Accelerators

(with a Bachelor degree in Mechanical Engineering).

Management education

□ ***Harvard University, Business School (Boston, USA)***

OPM Business Administration (present).

□ ***MIT, Massachusetts Institute of Technology (Boston, USA)***

Management of Product Strategy.

□ ***EPFL, Swiss Federal University of Technology (Lausanne, Switzerland)***

Diploma in Management of entrepreneurship.

Additional skills and others

Languages: - ***Italian, English, French***

Affiliations: - 2006 Member of CEO Committees, European Industrial Association EUnited (Brussels).

- 1996 Member of Italian National Institute of Nuclear Physics (Rome).

- 1998 Member of Italian Engineering Society (Milan).

ANNEX

List of main publications

- S. Allegretti, U. Amaldi, P. Berra, F. Bourhaleb, S. Braccini, M. Crescenti, G. Fagnola, G. Magrin, P. Pearce, E. Rosso, B. Szeless, S. Toncelli, M. Weiss, R. Zennaro, *IDRA: an innovative centre for diagnostic and protontherapy*, Proceeding of 10th Workshop on Heavy Charged Particles in Biology and Medicine, Oropa, 2005.
- S. Allegretti, U. Amaldi, P. Berra, S. Braccini, M. Crescenti, G. Fagnola, G. Magrin, P. Pearce, E. Rosso, B. Szeless, M. Weiss, R. Zennaro, *The Cyclinac for carbon ion therapy*, Proceeding of 10th Workshop on Heavy Charged Particles in Biology and Medicine, Oropa, 2005.
- P. Berra, *Conception, construction et essai d'un accélérateur linéaire à protons impulsé à 3 GHz (LIBO) pour la thérapie du cancer*, © University Claude Bernard Lyon 1, n° 163-2005. Published by the Atelier National De Reproduction (ANRT), Grenoble, 2006. Published on CERN-EDMS id. 787414, <https://edms.cern.ch/document/787414/2>, Geneva, 2006. Published on CDS CERN-THESIS-2007-054.
- U. Amaldi, P. Berra, K. Crandall, D. Toet, M. Weiss, R. Zennaro, E. Rosso, B. Szeless, M. Vretenar, C. Cicardi, D. De Martinis, D. Giove, D. Davino, M. R. Masullo, V. Vaccaro, *LIBO-A linac-booster for protontherapy: construction and tests of a prototype*, Physics Research, Nuclear Instrument and Methods Journal, NIMA521, 04, Elsevier ed., 2004.
- *Infinitely CERN, Memories from fifty years of research 1954-2004*, 164-167, Ed. Suzanne Hurter, 2004.
- U. Amaldi, P. Berra, S. Braccini, M. Crescenti, G. Magrin, P. Pearce, S. Toncelli, M. Weiss, R. Zennaro E. Rosso, B. Szeless, *The cyclinac: an accelerator for diagnostics and hadrontherapy*, Proton Therapy Cooperative Group Meeting, Abstracts, Paris, 2004.
- C. De Martinis, D. Giove, C. Cicardi, M. Mauri, U. Amaldi, P. Berra, K. Crandall, D. Toet, M. Weiss, R. Zennaro, E. Rosso, B. Szeless, M. Vretenar, D. Davino, M. R. Masullo, V. Vaccaro, *Realizzazione di un modulo di acceleratore lineare a 3 GHz come booster di un ciclotrone da 60/70 MeV per applicazioni in adroterapia*, Fisica e Tecnologia degli Acceleratori, Capri, 2-4 Giugno 2003.
- C. De Martinis, C. Birattari, D. Giove, L. Serafini, P. Berra, E. Rosso, B. Szeless, U. Amaldi, K. Crandall, M. Mauri, D. Toet, M. Weiss, R. Zennaro, M. R. Masullo, V. Vaccaro, L. Calabretta, A. Rovelli, *Beam tests on a proton linac booster for hadrontherapy*, Proceeding European Particle Accelerator Conference 2002, published by the European Physical Society, Paris.
- *LIBO accelerates*, CERN bulletin 22/4/2002, Geneva, 2002.
- U. Amaldi, P. Berra, E. Rosso, B. Szeless, M. Vretenar, K. Crandall, M. Mauri, D. Toet, M. Weiss, R. Zennaro, C. Cicardi, C. De Martinis, D. Giove, L. Grilli, D. Davino, M. R. Masullo, V. G. Vaccaro, L. Calabretta, A. Rovelli, *Successful acceleration test of the first module of the proton linac booster "LIBO"*, Proton Therapy Cooperative Group Meeting, Abstracts, Catania, 2002.
- *Medical accelerator is on course*, International Journal of High-Energy Physics, CERN Courier, Vol. 41, num. 1, jan/feb 2001, Institute of Physics Publishing Ltd, Bristol, UK.
- P. Berra, E. Rosso, B. Szeless, M. Vretenar, C. Cicardi, D. De Martinis, D. Giove, D. Davino, M. R. Masullo, V. Vaccaro, U. Amaldi, K. Crandall, R. Zennaro, M. Weiss, *The first module of the proton linac LIBO has been tested at full power*, Particles Journal, n. 27, jan 2001, Northeast Proton Therapy Center – Massachusetts General Hospital, Boston.
- *CERN technology in service of medicine*, CERN bulletin 22/1/2001, Geneva, 2001.

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- P. Berra, E. Rosso, B. Szeless, M. Vretenar, C. Cicardi, D. De Martinis, D. Giove, D. Davino, M. R. Masullo, V. Vaccaro, U. Amaldi, K. Crandall, R. Zennaro, M. Weiss, *The LINac BOOSTER (LIBO)*, 10th Anniversary of TERA Foundation for the Oncological Hadrontherapy, Mirasole, 2001. Available also for the CERN Technology Transfer Web Site (www.cern.ch).
 - B. Szeless, P. Berra, E. Rosso, M. Vretenar, U. Amaldi, K. Crandall, D. Toet, M. Weiss, R. Zennaro, C. Cicardi, D. De Martinis, D. Giove, D. Davino, M. R. Masullo, V. Vaccaro, *Successful high power test of a proton linac booster (LIBO) prototype for hadrontherapy*, Proceeding Particle Accelerator Conference 2001, published by IEEE (ref. 01CH37268C) for the Nuclear and Plasma Sciences Society and the American Physical Society, Chicago.
 - P. Berra, S. Mathot, E. Rosso, B. Szeless, M. Vretenar, U. Amaldi, K. Crandall, D. Toet, M. Weiss, R. Zennaro, C. Cicardi, D. De Martinis, D. Giove, D. Davino, M. R. Masullo, V. Vaccaro, *Study, construction and test of a 3GHz proton linac-booster (LIBO) for cancer therapy*, Proceeding European Particle Accelerator Conference 2000, presented at EPAC2000 and published by the European Physical Society, Vienna.
 - E. Rosso, B. Szeless, M. Vretenar, R. Zennaro, C. Cicardi, C. De Martinis, D. Giove, D. Davino, M. R. Masullo, V. Vaccaro, U. Amaldi, P. Berra, K. Crandall, D. Toet, M. Weiss, *The LIBO project*, Poster Session, Swiss Microsystem Forum, London, 2000.
 - P. Berra, E. Rosso, B. Szeless, M. Vretenar, U. Amaldi, K. Crandall, D. Toet, M. Weiss, R. Zennaro, C. Cicardi, D. De Martinis, D. Giove, D. Davino, M. R. Masullo, V. Vaccaro, *The status of LIBO project*, TERA 2000/3 ACC 3, Novara, 2000.
 - E. Rosso, B. Szeless, M. Vretenar, R. Zennaro, C. Cicardi, D. Giove, C. De Martinis, D. Davino, M. R. Masullo, V. Vaccaro, U. Amaldi, P. Berra, K. Crandall, M. Weiss, *The LIBO project*, TERA/99, presented at the Scientific Committee of National Institute of Nuclear Physics (INFN) and Laboratori Nazionali del Sud (Catania), 1999.
 - P. Berra, *Analisi delle distorsioni dell'orbita chiusa di un sincrotrone per adronterapia oncologica*, Enrico Fermi Institute for Nuclear Studies, © Milan University, 1996.

List of Production Readiness Reviews - ATLAS Collaboration

- The ATLAS Transition Radiation Tracker: End-Cap mechanics (CERN, Geneva, 1998).
 - ATLAS Forward Calorimeter: mechanics and electronics (CERN, Geneva, 1998).
 - The ATLAS Tile Calorimeter Optics Instrumentation (CERN, Geneva, 1998).
 - The ATLAS Liquid Argon Signal Feed Through (CERN, Geneva, 1999).
 - The ATLAS Tile Calorimeter Photomultipliers (CERN, Geneva, 1999).
 - The Silicon Detectors of the ATLAS SCT (Final Design Review) (CERN, Geneva, 1999).
 - The ATLAS Barrel Rail System (Basic Design Review) (CERN, Geneva, 1999).
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