DARIO CROSETTO   Email: **Crosetto@att.net**   **DeSoto, TX, 75115   U.S.A.**

Testimonials and evaluations from experts in the field who have appreciated Crosetto's scientific approaches

Provided in the current section are testimonials extracted from letters that Crosetto has received. These scientists underline the type of scientific rigorous procedure contained in his innovative approaches demonstrating why they have attained credibility by other scientists from several institutions. Although these testimonials may reinforce the reader's trust in his innovations and the benefit to mankind they will make possible, what is most important and should be more convincing is **the science itself.**

Following are representative citations extracted from some of the letters from scientists Photocopies of original letters are available upon request:

- On 2/4/94, John People, Director of the *Superconducting Super Collider* (SSC), (former Director of *Fermi National Laboratory*) writes to Crosetto on the occasion of delivering a patent award check for an invention that he made for the SSC:

  "*It gives me great pleasure to act as an agent for both University Research Association Inc. and US Department of Energy in transmitting the enclosed Patent Award check for your excellent work ....your invention will serve to enhance the ability of the high energy physics community to complete and/or improve its research infrastructure within the government as well as with university and private sector research institutions. Moreover, your invention, if commercialized with private industry, will serve to create jobs in the US economy and abroad. I salute you and encourage you to continue your innovative activity to the benefit of mankind.*"

- On 2/27/95, Joel Butler, Head, Computing Division at Fermi National Laboratory, writes a letter to be submitted with his grant application submitted to several panels of scientists appointed by Government Agencies (NIH, NSF, DOE, etc.):

  "*About one year ago, FERMILAB conducted a review of the proposal by Dario Crosetto... The review committee consisted of five electronics experts and three physicists... This review committee found the design to be promising for its potential application in "HEP triggering" and possibly elsewhere, and to be a technically sound and feasible approach... I would like to strongly endorse funding... it would undoubtedly be of interest to the scientific community.*"

- On 9/18/94, Pier Giorgio Innocenti, Division Leader Electronics and Computing for Physics (ECP) at CERN-Geneva during the period Crosetto was working at the Super Collider (SSC), he was invited by CERN to give a seminar. After his presentation Innocenti writes in a letter:

  "*From the seminar given by Dario Crosetto at CERN on September 12, 1994 one could appreciate the progress of the design over the last twelve months,...I believe that the proposed architecture represents a development of interest not only to high energy physics experiments but also to medical physics and other area, as a good match of high performance and affordable price.*"

  For the past 15 years, Innocenti had known in depth Crosetto's scientific rigorous procedure, in particular for working in the group Innocenti was leading during Crosetto's appointment as visiting scientist in the late eighties. During that period Crosetto designed and built a modular parallel processing system for IBM PC and VME with Transputers and DSP with only the help of a student during a period of six

months. Also on that occasion there was a return on investment of his work for the community because CERN stipulated an agreement with the German Company Struck to commercialize for several years the above mentioned work.

- On 11/23/00, Pier Giorgio Innocenti, after reading in Crosetto's book about the efficiency increase in a cost-effective manner of current PET of over 400 times provided by his innovations, in a subsequent letter, following a technical evaluation of his project, states:

"In short, the proposed system will drastically reduce the radiation dose to the patient, shorten the scanning time and produce an image of improved resolution. The design principles of the proposed 3D-Flow system are sound and rest on Crosetto's long experience in electronics design and digital signal processing. My perception of the proposal is very positive and I hope that the ideas will materialize in an instrument which is badly needed."

- On 10/19/01, Catharinus Verkerk, writes a letter of support for Crosetto's innovations in detecting particles in Positron Emission Technology. Verkerk knew Crosetto for several years when he was appointed in 1980 by Nobel Laureate Abdus Salam of the International Center for Theoretical Physics (ICTP) Trieste, Italy, to be Director of the College on Microprocessors for PhD engineers and physicists of the third world countries as practical technological tools for the emancipation of the emerging countries. Verkerk had also the position of group leader of a Data Handling Division at CERN and Director for several years for the CERN School of Computing. Crosetto was appointed by Verkerk since the start of the College on Microprocessors on 1980 to be part of the team of lecturers and instructors and for ten years he dedicated one month per year (using his holiday time) to teach at the ICTP in Trieste or in one of the emerging countries (Sri Lanka, China, Ghana, Columbia, Argentina, Mexico) on how to build hardware and software for the construction of a complete computer or instrumentation starting from components such as microprocessors that cost about $1.

- On 1/11/93, Sergio Cittolin, Group Leader, Readout Architectures Group at CERN writes a letter of support for Crosetto's innovative ideas on data architecture for particle identification and processing (which solves the same problems present in a PET detector) that Crosetto was developing at the SSC laboratory:

"The unit could have several applications in the next generation of high energy physics experiments in the domain of trigger processor and readout data movers."

- On 9/12/94, François Bourgeois, Deputy Division Leader, Electronics and Computing for Physics (ECP) at CERN-Geneva, together with Sergio Cittolin, Group Leader, Readout Architectures Group, after attending Crosetto's seminar at CERN on September 12, 1994, co-signed a letter in which they write:

"Dario Crosetto gave a seminar at CERN on 12 September 1994 and reported the progress made over the past twelve months. It is a pleasure for us to acknowledge here the excellent work done on the specification of the processor cell, its simulation in VHDL and, last but not least, the solution proposed at the system design level for the packaging of large multi-dimensional arrays of processors..."

- On 2/11/93, Livio Mapelli, Group Leader on Data Acquisition and Processing at CERN, with experience at the Lawrence Berkley Laboratory -LBL- (he was also among the committee members who evaluated his innovative technology during a public review at FERMILAB on 12/14/93 which was requested by the Director of the SSC) writes:

"I have read with interest the notes SSCL-576 and 607 on your project... To conclude, I regard such a project as a valid R&D addressing one of the major difficulties for SSC and LHC experimentation. The technology used is modern and promising and the architecture seems adequate for the solution of the problem. The scalability of the system gives as spin-off the possible utilization of the scheme in other, less demanding areas."

- On 11/22/93, Barry Barish, Professor at California Institute of Technology (CALTECH), responsible with Mike Shaevitz for one of the two largest experiments at SSC (GEM) costing over $500 million, writes a letter of appreciation for Crosetto's innovative projects and of support for funding for continuing their development

- On 11/4/93, Michael Shaeviz, from Columbia University, Nevis Laboratory (responsible, with Barish, for the GEM experiment at SSC) writes a letter to the SSC management in support of the development of Crosetto's innovations. During Shaevitz visits at the SSC in 1993, Crosetto worked with Shaevitz writing the description of Crosetto's project that was included in the trigger section of the official document *"Technical Design Report"*, for the GEM experiment (SSCL-SR-1219). In this document, the GEM collaboration (about one thousand scientists) approved the inclusion from page 7-10 to 7-14 in reference, of Crosetto's innovative project for the first level trigger. In this letter Shaeviz writes:

    "...Dario's progress on this project has been very good and should be continued through the completing of this first prototype system... I recommend that this project be funded..."

- On 11/4/93, Mike Harris, GEM experiment Chief Engineer at SSC, writes a letter "in strong support" of Crosetto's project for the *"immense possibilities for extensive use in trigger applications in HEP and in nuclear physics."*

- On 10/23/93, Silvio Turrini, Engineer, inventor, designer of advanced, high performance integrated circuits at "DIGITAL" (the company that produced VAX computers), writes a letter of appreciation of Crosetto's work and support of it after having read his article SSCL-PP-445

- On 7/8/93, Maris Abolins, Professor at Michigan State University, one of the scientists responsible for the trigger of the experiment "DØ" at FERMILAB, writes a letter of great appreciation of Crosetto's innovations for particle identification and details its technical advantages and merits compared to the other "hard-wired" schemes.

- On 11/5/93, Andrew Lankford, Professor at the University of California, responsible for the electronics for the other $500 million experiment (SDC) at SSC, writes a letter of support of Crosetto's innovations to the management of SSC reporting how its technical feasibility was established through discussions with experts and concludes *"Thank you for your consideration of support for this interesting and very important project."* Crosetto also received other letters of support from members of the same collaboration (SDC) such as Professor Giorgio Bellettini on 3/23/93. This shows that projects like his with scientific merits can break the barriers of "party-lines" because, although Crosetto was a member of GEM experiment (that was in some form in competition with SDC experiment), the scientists of the competing SDC experiment did not refrain from recognizing the merits of his innovations. Also scientists from CERN who were (at that time) in competition with SSC, nevertheless had no problem recognizing the merit of Crosetto's innovations. The same was true of scientists from other experiments at FERMILAB, LBL and from BNL, as witness the previous letters.

- Crosetto received other letters among which are those dated 2/23/95, 4/7/95 and 1/23/96 from Peter Antich, Professor and Director of Advanced Radiological Science, Chair, Graduate Program in Radiological Science and Wechun Pak Professor of Bone Biophysics at Southwestern Medical Center at Dallas, Texas. In those letters, besides their appreciation of Crosetto's project, they show interest in carrying on a collaboration with NIH funding. Such letters were included in the submission of proposals for grant applications to NIH. There were also those dated 11/16/93, from Sergio Conetti, professor at University of Virginia, responsible for the trigger in experiments at FERMILAB and at CERN (LHCb); one dated 10/10/94, from Professor Gianni Conte, from the Engineering Department of the University of Parma where Crosetto gave a seminar; the letter dated 9/30/94, from Enrico Tanzi, from CNR in Milan; the letter dated 11/3/93, from Hank Crawford, from Lawrence Berkeley Laboratory (LBL), Group Leader for STAR and AGS experiments; the letter from Habib Zaidi, Director of the PET group at the Hospital at the University of Geneva, Switzerland. In addition there are the letters from some members of the review committee in Dallas (7/1/03) that examined Crosetto's innovative technology that can be implemented in the 3D-CBS project and generated the report where they unanimously approve the validity and feasibility and recommend funding (see the final report at www.3d-computing.com/pb/Review_rep.pdf).

- On 7/3/03, Michele Barone, Professor at NCSR Demokritos Institute of Nuclear Physics, Athens, Greece, member of the CMS Collaboration at CERN, member of the organizing Committee of seven International Conferences, in Astrophysics and Physics for Medical Applications, after following in real-time, the webcast of the Dallas review on 7/1/03 and having posed questions, writes Crosetto a letter of invitation to present his innovations at a conference. Later, in November 2005, he writes in the presentation to Crosetto's book [5]: "*The cleverness on which Crosetto's technology is based consists of the communication and process capability intrinsic in his parallel processing system used in the data acquisition system as Crosetto pioneered nine years ago at CERN to be used on High Energy physics experiments at the new accelerators. … Crosetto's innovation, together with another of his innovations using economical crystal detectors with an improved and simplified assembly, could be an incentive to be used on a large population, thanks to the low cost and low radiation for the patient…*"

- On 8/7/00, Frank Guy, writes a review of Crosetto's book. Frank Guy is a research scientist, with 33 years of experience in nuclear physics and in particle beam and accelerator physics at the Lawrence Livermore Laboratory, the Los Alamos National Laboratory (LANL), and the Superconducting Super Collider Laboratory (SSC). He writes on Amazon.com a review to Crosetto's book [1]: "*…many oncologists dismiss PET. They are unfamiliar with its use and with interpretation of PET images compared to MRI or CT; the cost is high; the radiation dose is large; and until recently, insurance companies would not pay for a PET scan. Crosetto's book describes how this situation can be improved by increasing PET scanning efficiency by a remarkable 40,000%. He focuses on improvements to detector geometry, as well as innovative data processing techniques that make better use of the raw detector data. Cost, time and radiation dose could be dramatically reduced, allowing PET scans to be widely used. No longer would anxious patients and their loved ones have to wait a few more months for another CT scan to see if that dreaded spot has gotten bigger, meanwhile possibly spreading cancer cells throughout the body. Also, a single screening PET scan per year could replace multiple cancer screening tests (mammograms, colonoscopy, lung x-rays, etc), and even circulatory system and coronary screening, for much less*"

- On 8/15/00, Stefano Buono, research scientist at CERN and President Director of the Company Advanced Accelerator Applications in St. Genis, France, writes on Amazon.com a review of Crosetto's book [1]: *"It is amazing how revolutionary inventions come from the capacity to put together technological progress in different fields and a few simple but smart ideas. The final result looks 'simple,' and 'evident,' but only 'after.' This is the case of Crosetto's invention which is, in my view, a real revolution: The possibility of transforming a PET scanner into a one-year check-up tool is a real breakthrough in the battle against cancer, and I wish it could be a reality as soon as possible."*

- On 1/2/01, Habib Zaidi, Senior Physicist and head of the PET Physics Group at the Geneva University Hospital, Switzerland writes on Amazon.com a review of Crosetto's book [1]: *"A novel scanner design based on knowledge gained from the inventor's experience in the field of high energy physics that should allow faster data acquisition with less cost to health care organizations and lower the radiation dose to the patient for cancer screening purposes."*

- On 5/4/02, Jerry Merryman, Co-inventor of the handheld calculator with Nobel Prize-winner Jack Kilby at Texas Instruments, Patent No. 3,819,921 writes: *"I have carefully reviewed his designs and compared the calculated performance to existing machines, and found the performance to be highly superior ... The electronic data processing used in this machine is key to the superior performance ... In my opinion, his project is extremely worthy of support, and represents a very significant advance in medical imaging."*

- On 8/23/04 Honorable Raffaele Costa, President of Province Cuneo, Italy wrote a letter stating: *"...I am certain that next to people convinced of the usefulness of Crosetto's project, there are others with doubts, as has occurred often in the past for other inventions. However, I think it is worthwhile to address the matter seriously and make in depth objective studies."*

It is necessary to overcome the inertia toward any big changes in a market caused by innovation and it is necessary to overcome all resistance from influential people who have a different agenda. Because there are many people who sincerely want to see a substantial reduction in cancer death as soon as possible, the right thing to do first is to disseminate Crosetto's innovation, mission and goals that will revolutionize the way health care will be practiced. **Thus the most important thing to do at this time is "education" and, "dissemination" of Crosetto's innovations, mission and goals**.

In order to promote in depth understanding, Honorable Costa points out that *"...because of the enormous consequences and stake at hand to fight the development of this devastating illness, it is urgent and worthwhile to address the issue with appropriate, impartial in depth scientific study"*,

- on 6/1/05, Honorable Costa requested an explanation in simple words from scientists and experts in the field about the value of Crosetto's innovations and the benefits that would be provided to the patients and society. The impartial expertise needed to effectively evaluate such innovations that allow over 400

times efficiency improvements over current PET should be selected from a list of individuals including: ,

a)   a physician interested in a machine which provides the best information on minimum abnormal metabolism in order to improve early diagnosis of cancer

b)   a senior astrophysicist (experimental physicist) expert in photons that are the basic signals related to abnormal metabolism to be identified and all available information accurately extracted

c)   an expert in electronics, analog in particular, knowledgeable in extracting electrical signals from the photons and also to review several area of the project related to electronics

d)   a computer scientist and experimental physicist, expert in digital electronics and computers because the 3D-CBS consists of sections requiring extraction of data from detectors and processing data with fast front-end parallel processing electronics , and

e)   an executive officer from a large industry who could review the soundness of Crosetto's innovations as being introduced in a commercial product, verifying that the final machine is the best balance between cost and performance for a competitive commercial product.

Honorable Costa received five letters from such well qualified scientists and experts in the field related to the construction of the 3D-CBS innovative technology:

a)   On 6/17/05, Stuart Peake, a board certified diagnostic, radiologist presently practicing at RHD Memorial Medical Center in Dallas, Texas, where he serves as Medical Director of Radiology as well as past Chairman of the Hospital Board Directors, writes to the Honorable Costa: *"Recently I had the pleasure of reviewing a prototype PET scanner, called 3-D Complete Body Screening (3D-CBS) that is being build by Dario Crosetto. I am particularly interested in PET, since I believe the clinical applications of this particular entity have far reaching possibilities in the future. Presently those of us in clinical medicine have very few diagnostic tools for cancer screening that are not either invasive, or inordinately expensive and do not find cancer at an early stage. The possibility of cancer screening utilizing PET imaging with FDG is certainly appealing in terms of yearly cancer screening, providing the radiation dose can be kept at a minimum and the cost reasonable. Dario Crosetto's particular design is ingenious and may well achieve this goal. It makes perfectly sense to capture more photons more accurately that will show abnormal metabolism, which is typical of cancer cells at an early stage. Earlier stage cancer detection is well know for being the most effective way to reduce cancer death. I applaud your interest as a Public Official in pursuing these objectives of early cancer detection as you stated in several press releases in Italian newspapers in reference to Crosetto's innovation and goal. Because the essence of Crosetto's project is exactly that of early cancer detection by capturing hundreds of times more signals from the nutrient (glucose, water, or others) metabolized by the body cells, your interest in having his project and innovations realized is a great service to the community."*

b)   On 6/26/05, Paul Bartholdi, senior astrophysicist at the observatory of Geneva in Switzerland, with experience in Europe, USA and internationally, who also was on the team that discovered with a 2 meter telescope a planet around 51 Pegasi in 1995, while their American colleagues were unable to find it with a 10 meter telescope writes to the Honorable Costa the following: *"... Dario Crosetto proposes a radical new design: moving back to very cheap crystals, enlarging very significantly the detector surface to catch the maximum number of photons (this is possible because the crystals are not very expensive), and, above all, use a lot of modern digital electronics in a clever way to extract all the available information from the photons. With this synergy of improvements, the 3D-CBS will need only a few percent of the radioactivity necessary for the traditional PET. As a side effect, the new electronic will provide better images, easier detection of very small tumors (usually never seen before), and quantification of the abnormal cancerous metabolism, even before a tumor is formed."*

c)   On 6/23/05, Jerry, D. Merryman who has 50 years of experience in electronics and a 38-year career at Texas Instruments where he was the named inventor of over 60 patents and is known principally for co-inventing the electronic hand-held calculator, with Jack Kilby, who was awarded the Nobel Prize in Physics, wrote a letter to Honorable Costa stating: *"…I have carefully reviewed his design and compared the calculated performance to existing machines and found the performance to be highly superior. This novel technique provides better abnormal metabolic information in a shorter time with less radiation to the patient. A primary means of accomplishing this is the use of more detectors to cover a larger solid angle, and a new electronic technique capable of handling the increased data rate and allowing a more efficient use of economical crystals in the detector. A novel electronic technique, combined with an improved/ simplified detector assembly are the principal features of Crosetto's invention. … I agree that Crosetto's technology has better sensitivity at a lower cost compared to current PET machines. His claims are based on solid scientific grounds and are the combination of several innovations in their concepts and in their implementation. These can be summarized as an innovative parallel processing architecture and implementation that when combined with a simplified detector assembly and a more sophisticated photon detection real-time algorithm allows measuring more accurately the energy, the impact point and the arrival time of the incident photons in the PET detector. This allows capturing more accurately more photons even when low cost crystal detectors are used in order to keep affordable the cost of the entire 3D-CBS device (3-D Complete Body Screening). The photons are signals related to the nutrient to the body cells. Knowing that cancer cells are hyperactive and require more nutrient, we can see that the advantage of detecting hundreds of times more nutrient to the body cells, allows detection of cancer at a much earlier stage when a minimum out of balance metabolism manifests in the body's organs. His innovation in the electronics allows also building the machine in the most cost-effective manner to provide a lower cost per photon captured, and its increased efficiency allows lowering the radiation dose to the patient to a level acceptable by the International Commission for Radiation Protection for annual examination. The principal benefit of lower cost examination and lower radiation dosage will be to modify the medical climate so that a large portion of the population at high risk of cancer (age, hereditary, risk from*

chemicals such as smoke) are willing to be screened with a safe device detecting the minimum abnormal metabolism. Detecting minimum abnormal metabolism on asymptomatic people provides a much earlier cancer detection, which is known to be the best way to reduce cancer death"

d)   On June 18, 2005, Prof. A. E. Werbrouck, physicist and computer science expert, former Dean of the Computer Science faculty in Turin, Italy,   writes to Honorable Costa: *"...Recently I have spent four mornings with Dario Crosetto to examine and understand all aspects of the actual project. We discussed the aspects of the geometry (for the Complete Body Screening device), the optimal determination of the energy and location of the impact of the single photons generated from the annihilation of positron-electon, the choice of crystals that convert high energy photons in light, the electronic system that acquire and filter data, including the photon arrival time, all the above in order to guarantee the purest identification of the pair of photons resulting from single annihilations. At the end of these sessions, I was convinced that Dario Crosetto had thought to all problems inherent to the construction of a detector for an early detection of abnormal metabolism and he has optimized all solutions keeping in mind the cost of realization versus the resulting efficiency, without neglecting the damage that may derived from giving radioactive substance to the patient for the examination.... I am convinced that the realization of a prototype of his project ... is justified in the current fight against cancer"*.

e)   On 6/20/05, Ruben Sonnino, Vice President of ST Microelectronics, among the five largest semiconductor companies in the world, with 30 years in the semiconductor industry, writes to the Honorable Costa the following: *"...The reassurance that I intend to offer with this letter is based on the fact that Crosetto has repeatedly demonstrated being able to sustain the confrontation with scientists from the largest international research laboratories such as Fermi National Laboratory, proving each time the validity of his work to pass the test or examination. For example, I have witnessed at meetings with "Venture Capitalists" with the President of Siemens Nuclear Medicine, Director of PET at Siemens and on both occasions, Crosetto answered all questions and no one was able to point out scientific, feasibility or cost effectiveness errors in his proposals. "Venture Capitalists" preferred to finance projects (such as a product to clean optical fibers) with a very short term return on investment. This does not diminish the validity of Crosetto's projects, which have not been considered primarily because they did not fit in the objectives pursued by the investors. However, Crosetto passed all tests, including a "business plan" examined by the Venture Capitalists and was recognized for accuracy of detail projection of five years operation with cost in services, material, cash flow, break even point, for which he was awarded a prize of $10,000. I was also present at the meeting on November 6, 2002 in DeSoto of Crosetto and the President of Siemens Nuclear Medicine Michael Reitermann, the Director of PET at Siemens, Vilim Simcic and other people among whom was a physicist with experience at national research laboratories. I can attest that there was no question Crosetto could not answer satisfactorily, or that any error or scientific or economical inconsistency in Crosetto's calculations or claims pointed out by the examiner ....(this is also proven by a tape recording that was made with the consensus of the participants) I therefore encourage you to continue with confidence, taking example from the Director of the*

Superconducting Super Collier who requested in 1993 at the highest level of the scientific community a review of Crosetto's innovative ideas. Also on that occasion, Crosetto did not disappoint anyone because his claims have always a solid scientific and economical basis. ... Crosetto's innovations have as their objective the achievement of maximum efficiency in capturing photons that are associated with a nutrient compound to the cancer cells, allowing visualization of the minimum abnormal metabolism which is typical in the presence of cancer cells because by being hyperactive, they require more nutrient than normal cells."

Besides the opinions expressed in the cited letters from emeritus reviewers in specific fields related to the success of bringing Crosetto's innovations to fruition for the patients, more important is the result of the hardware he designed and built that worked in the first version he built, proving that his ideas are based on solid ground. Following is a summary from a report that was signed after a recent inspection made by professionals (CEO and chief scientific inspector of an Italian organization who represents the major cancer research centers in Italy) who witnessed in the laboratory in Dallas Crosetto's hardware working:

"Crosetto, besides having understood the limitations of the current PET, found solutions to overcome them*, conceived the architecture of the electronic system**, designed and built the heart of the system***, it is distinctive that the above work of a single person, actually resulted in all 68 onboard 3D-Flow processors working on the first hardware version built."
(Details related to the previous statement:
*The author overcame them with an improved and simplified detector assembly, along with innovative electronics enabling the execution of sophisticated real-time algorithms while displaying to physicians the relevant information on abnormal metabolism..
**The author designed the details, demonstrated the proof of concept in hardware, and engineered the system in IBM and VME boards.
***The 3D-FlowTM DAQ IBM PC photon detection board with 2211 components with over 20,000 pins, was built with only $20,000 per board.)

Note: Not only is designing and building such a project, developing and building electronic boards of such performance and complexity normally the work of a team of engineers costing hundreds of thousands of dollars as stated by the reviewers on July 1, 2003, but normally it requires more than one version to get it to work.

While many letters of recommendation typically present a long list of adjectives supporting the candidate, letters cited above refer to precise facts, such as specific computer architectures, approaches, technological improvements that Crosetto presented in seminars, patent awards, and articles or books he wrote. These letters contain comments from experts in the field who make specific technical reference to system architecture, data acquisition systems, particle recognition, applications in physics and medicine, benefits that Crosetto's innovations provide together with the impact they will have on society.

The cited letters, were received from respected experts and top leaders of international research groups (of the three most important research laboratories in the world: CERN, FERMILAB and SSC). Crosetto was invited to give seminars at CERN in 1994 (CERN Bulletin 36/94) and 1998 (CERN Bulletin 3/98), when he was no longer employed by CERN. He has also been invited to give seminars to several international laboratories and universities such as: Columbia Nevis Lab (NY), Michigan State University, Rice University (TX), Santa Cruz University (CA), FERMILAB, LBL, BNL, Desy Laboratory at Heildelberg University

(Germany), Saclay Laboratory at the CPPM Marseille University (France), Academia Sinica (China).

SELECTED PUBLICATIONS

[1] Crosetto, D: "Logical Reasoning and Reasonable Answers Consistent with Declared Objectives for the Benefit of Mankind." *International Seminars on Planetary emergencies 40th Session, Erice, 19-24 August 2008.* www.crosettofoundation.com/uploads/211.pdf

[2] Crosetto, D.: "Ignored Discovery Now Proven Capable of Saving Millions of Lives from Premature Cancer Death Demands Rethinking the Direction of Research" Book: Astroparticle, Particle and Space Physics, Detectors and Medical Physics Applications. Editor: World Scientific, pp.624-639 - 2008. http://www.crosettofoundation.com/uploads/134.pdf

[3] Crosetto, D.: 400$^+$ times improved PET efficiency for lower-dose radiation, low-cost cancer screening. ISBN 0-9702897-0-7. 2000. Available at Amazon.com

[4] Crosetto, D.: LHCb base-line level-0 trigger 3D-Flow implementation. Nuclear Instr. and Methods in Physics Research, Sec. A, vol. 436 (1999) pp. 341-385. Part 1 http://www.crosettofoundation.com/uploads/147.pdf Part 2 http://www.crosettofoundation.com/uploads/148.pdf

[5] Crosetto, D. Saving lives through early cancer detection: Breaking the current PET efficiency barrier with the 3D-CBS." 2001. www.3d-computing.com/pb/3d-cbs.pdf.
http://www.crosettofoundation.com/uploads/100.pdf

[6] Crosetto, D.: "Rethinking Positron Emission Technology for Early Cancer Detection" Book: Astroparticle, Particle and Space Physics, Detectors and Medical Physics Applications. Editor: World Scientific, 2006, pp. 692-696. http://www.crosettofoundation.com/uploads/112.pdf

[7] Crosetto, D.: "Come Vincere il Cancro". Book. Ed. Clavilux. 2005. Available at www.clavilux.it

[8] Crosetto, D., U.S. Patent No. 7,051,309 B1. May 23, 2006

[9] Crosetto, D.: A modular VME or IBM PC based data acquisition system for multi-modality PET/CT scanners of different sizes and detector types. Presented at the IEEE Nuclear Science Symposium and Medical Imaging Conference, Lyon, France, 2000, IEEE-2000-563, http://www.3d-computing.com/pb/ieee2000-563.pdf.

[10] Crosetto, D.: Real-time, programmable, digital signal-processing electronics for extracting the information from a detector module for multi-modality PET/SPECT/CT scanners. Presented at the IEEE Nuclear Science Symposium and Medical Imaging Conference, Lyon, France, 2000, IEEE-2000-567, http://3d-computing.com/pb/ieee2000-567.pdf

[11]   Crosetto, D.: "3D-Flow DAQ IBM PC board for Photon Detection in PET and PET/CT" IEEE-NSS-MIC-2003. Conference Record. M3-130. http://www.crosettofoundation.com/uploads/105.pdf

[12] Crosetto, D.: "The 3-D Complete Body Screening (3D-CBS) Features and Implementation" IEEE-NSS-MIC-2003. Conference Record. M7-129. www.3d-computing.com/pb/IEEE2003_M7-129p.pdf. http://www.crosettofoundation.com/uploads/107.pdf

[13] Crosetto, D.: "Channel Reduction and Time Coincidence IBM PC board for PET" IEEE-NSS-MIC-2003. Conference Record. M6-131.

[14] Crosetto, D.: "Development of an Innovative Three-Dimensional Complete Body Screening Device - 3D-CBS" Book: Astroparticle, Particle and Space Physics, Detectors and Medical Physics Applications. Editor: World Scientific, 2004, pp. 350-359. http://www.crosettofoundation.com/uploads/103.pdf

[15]   See review of Crosetto's book at http://www.3d-computing.com/pb/review_scient.pdf

[16]   See Final Report of the committee who reviewed Crosetto's innovative technology at www.3d-computing.com/pb/Review_rep.pdf. http://www.crosettofoundation.com/uploads/101.pdf

[17] Crosetto, D.: A fast cluster finding system for future HEP experiments. Nuclear Instruments and Methods in Physics Research A311 (1992) pp. 49-56.

[18] Crosetto, D.: "System Design and Verification Process for LHC Programmable Trigger Electronics" IEEE NSS-MIC. Seattle (WA) Oct. 24-30, 1999. http://www.crosettofoundation.com/uploads/118.pdf

[19] Crosetto, D.: Digital Signal Processing in high energy physics. Lecture before the CERN School of Computing at Yesermonde, Belgium 2-15 September 1990. Publ. by CERN 91-05. 14 May 1991. http://www.crosettofoundation.com/uploads/227.pdf

[20] Buono, S. and Crosetto, D.: "Test results of Real-Time Algorithms Executed on FDPP with SPACAL data." CERN/ECP 90-6, 5 October, 1990.

[21] Crosetto, D.: "High-Speed, Parallel, Pipelined, Processor Architecture for front-end Electronics, and Method of Use Thereof." LHCb 96-2, TRIG 96-1. CERN, Geneva.

[22] Conetti, S. e Crosetto, D.: "Implementing the Level-0 Trigger," IEEE Trans. Nucl. Science 43, 170 (1996).

[23] Crosetto, D.: U.S. Patent No. 5,937,202 August 10, 1999.

[24] Crosetto, D.: "Interfacing detectors to triggers and DAQ electronics." Note LHCB 99-006, 1999, pp. 1-59. Available at the European Center for Nuclear Research (CERN) in Geneva, Switzerland.

[25] Crosetto, D.: "Real-Time system design environment for multichannel high-speed data acquisition system and pattern-recognition." IEEE Real Time conference, Santa Fe, (NM) June 14-18, 1999.

[26] Crosetto, D.: "System design and verification process for LHC programmable trigger electronics." IEEE NSS-MIC Seattle (WA) Oct. 24-30, 1999.

[27] Crosetto, D.: "Fast Particles Identification in Programmable form at Level-0 Trigger by means of the 3D-Flow System." Fourth Workshop on Electronics for LHC Experiments. Pp. 517-522. September 21-25, 1998.

[28] Amato, S. et al.: LHCb technical proposal. By LHCb Collaboration. CERN-LHCC-98-04, CERN-LHCC-P-4, Feb 1998. 180pp

[29] M. Botlo, D. Crosetto, et al.: The STAR cluster-finder ASIC. Proc. Xth IEEE Real Time Conference 1997, Beaune, France, September 22-26, 1997.

[30] Crosetto, D.: Ninth Conference on Real-Time Computer Applications in Nuclear, Particle, and Plasma Physics. MSU, East Lansing, MI, May 23-26, 1995. IEEE Transactions in Nuclear Science, Feb. 1996.

[31] Conetti, S., Crosetto, D.: "Implementing level-1 trigger algorithms for beauty particle detection at LHC-B in real time on a 3D-flow system." 1996. Paper presented at 9th Conference on Real-Time Computer Applications in Nuclear, Particle and Plasma Physics (RT 95), East Lansing, MI, 22-25 May 1995. Published in IEEE Trans.Nucl.Sci.43:170-177,1996.

[32] Crosetto, D.: U.S. Patent No. 5,590,284

[33] Alderighi, M, Crosetto, D., et al.: (ICA3PP-95). IEEE 0-7803-2018-2195. Vol. 2, pp. 761-763. 1995.

[34] Crosetto, D. 3D-flow with fewer than 100-K gates versus other processors for DAQ and level-1 trigger. 1995. Prepared for IEEE 1994 Nuclear Science Symposium (NSS) and Medical Imaging Conference (MIC), Norfolk, Virginia, 30 Oct - 5 Nov 1994. Published in IEEE Trans.Nucl.Sci.42:854-859,1995.

[35] Conetti, S., Crosetto, D., Triggering at LHC-B and the 3D-flow system. 1995. Prepared for 5th Annual LeCroy Conference on Electronics for Particle Physics, Chestnut Ridge, NY, 10-11 May 1995. In *Chestnut Ridge 1995, Electronics for particle physics* 145-160.

[36] Crosetto, D.: "Massively Parallel-Processing System with 3D-Flow Processors." Published by IEEE Computer Society. 0-81816-6322-7194, pp. 355-369. 1994.

[37] Crosetto, D.: U.S. Patent No. 5,331,315

[38] Crosetto, D.: "Programmable Level-1 Trigger with 3D-Flow Array," Computing in HEP, San Francisco, CA, 21-27 April 1994. Editor: S.C. Loren, pp. 57-61

[39] Crosetto, D.: "Digital Programmable Level-1 Trigger for Calorimeter with 3D-Flow Processor Array," IV International Conference on Calorimetry in HEP, 19-25 Sept, 1993 - La Biodola, Elba, Italy.

[40] Crosetto, D.:"Digital Programmable Level-1 Trigger with 3D-Flow Assembly," SSCL-Preprint-445, August 1993, submitted to Nuclear Instruments and Methods in Physics Research.

[41] Crosetto, D.:"Real-Time Tracking with a 3D-Flow Processor Array." Workshop on B Physics at Hadron Accelerators, June 21-July2, 1993. Snowmass, Colorado. SSCL-Preprint-516

[42] Crosetto, D.: "Data Stream Pipeline 3D-Flow Processor System for a Programmable Level-1 Trigger." Eight Conference on Real-Time Computer Applications in Nuclear, Particle and Plasma Physics, Vancouver, June 8-11, 1993

[43] Crosetto, D.: "Parallel-Processing system with 3D-Flow," Proceedings of the International Conference on Electronics for Future Colliders, May 4-6, 1993, LeCroy Corporation, Chestnut Ridge, New York.

[44] Lefman, W.C., et al. GEM technical design report. By GEM Collaboration. GEM-TN-93-262, SSCL-SR-1219, Jul 31, 1993. 628pp. This version includes corrections through 15 June 1993.

[45] Crosetto, D.: "General Programmable Level-1 Trigger with 3D-Flow Assembly System for Calorimeters of Different Sizes and Event Rates. SSCL-607, Dec. 1992. Submitted to *Nuclear Instruments and Methods in Physics Research.*

[46] Crosetto, D.: "A modular parallel processing system for trigger decision and DAQ in HEP experiments," *Nuclear Instruments and Methods in Physics Research*, A315, (1992), 487-490.

[47] Crosetto, D.: "A new approach in device testing," NASECODE VIII, Proceedings of the Eight International Conference on the Numerical Analysis of Semiconductor Devices and Integrated Circuits, May 19-22, 1992. Vienna, Austria

[48] Crosetto, D. "A Fast cluster finding system for future HEP experiments. 1992. Published in Nucl.Instrum.Meth.A311:49-56,1992.

[49] Crosetto, D.: "3D-Flow Processor for a Programmable Level-1 Trigger," Computing in High Energy Physics, CHEP92, 21-25 September, 1992, Annecy, France, 803-806.

[50] Crosetto, D.: "Calorimeter Programmable Level-1 Trigger," III International Conference on Calorimetry in High Energy Physics, Corpus Christi, Sept. 29-Oct. 2, 1992. SSCL-Preprint-180, October 1992.

[51] Crosetto, D.: "3D-Flow Processor for a Calorimeter Programmable Level-1 Trigger," SSCL-Preprint-165, TNS Conference Issue, November 1992

[52] Crosetto, D.: "3D-Flow Processor for a Programmable Level-1 Trigger," SSCL-Preprint-164, Nuclear Science Symposium (NSS), Medical Imaging Conference (MIC), Orlando, Florida, October 25-31. 1992

[53] Crosetto, D.,: "3-D flow processor preliminary technical specifications. SSCL-594, Oct 1992. 4pp.

[54] Crosetto, D.: "A Fast Cluster Finding System for Future HEP Experiments," Computing in High Energy Physics, 1991, CHEP91, Tsukuba, 229-236.

[55] Buono, S., Crosetto, D.: "Fast Digital Parallel Processing Module Software Development," CERN/ECP 90-22, 21 December 1990.

[56] Crosetto, D.:"A Fast Cluster Finding System for Future HEP Experiments," CERN/ECP 90/14, 30 November 1990.

[57] Bertolino, F. et al.: "A DSP based FASTBUS board for data acquisition or high level trigger control in DELPHI electromagnetic calorimeters. 1989. Presented at Real Time Computer Applications in Nuclear, Particle and Plasma Physics, Williamsburg, Virginia, 16-19 May 1989. Published in IEEE Trans.Nucl.Sci.36:1469-1474,1989.

[58] Aarnio et al. "The DELPHI detector at LEP. By DELPHI Collaboration. CERN-PPE-90-128, CERN-EF-90-5, Sep 1990. 73pp. Published in Nucl.Instrum.Meth.A303:233-276,1991.

[59] Crosetto, D. "Fast Digital Parallel Processing Module (Fdpp). . CERN-DD/89-33, CERN-SPS/89-50, Dec 1989. 37pp.

[60] Burns, A., Chapman-Hatchett, A., Crosetto, D., et al.: "The BOSC project". 1990. *In the Proceedings of 2nd European Particle Accelerator Conference (EPAC 90), Nice, France, 12-16 Jun 1990, pp 803-805*

[61] Crosetto, D.: "Digital signal processing in high-energy physics. 1990. In *Nieuwpoort 1990, Proceedings, Computing* 263-292. (see Conference Index).

[62] Crosetto, D. A local / global architecture for level 2 calorimeter triggers. D. Crosetto (INFN, Turin) , N. Ellis (Birmingham U.) , G. Mornacchi (CERN) , J. Strong (Royal Holloway, U. of London) . Oct 1990. Prepared for ECFA Large Hadron Collider (LHC) Workshop: Physics and Instrumentation, Aachen, Germany, 4-9 Oct 1990. Published in *Aachen 1990, Large Hadron Collider, vol. 3* 145-148

[63] Crosetto, D.: "DSP review and applications." Oct 1990. Prepared for ECFA Large Hadron Collider (LHC) Workshop: Physics and Instrumentation, Aachen, Germany, 4-9 Oct 1990. Published in *Aachen 1990, Large Hadron Collider, vol. 3* 104-111.

[64] Crosetto, D.: "A software package for testing and debugging the Fast Digital Data Processor board." INFN report (one co-author) - INFN/TC-88/12. 1988.

[65] Crosetto, D.: "A fast zero suppression algorithm for the Forward Electromagnetic Calorimeter (FEMC), implemented on DSP56000."DAS-DELPHI report (two co-authors) - DELPHI/88-40 DAS-82, June 2nd 1988.

[66] Crosetto, D.: - Patent (Italy) - Sistema modulare per il trattamento in parallelo, in forma digitale, di algoritmi matematici.

[67] Crosetto, D.: "Parallel arrays of digital signal processor as central decision elements for upper level triggers in High Energy Physics experiments." IEEE Transaction on Nuclear Science (three co-authors) – 35:248-252. February, 1988. -

[68] Crosetto, D.: "Use of digital signal processors (DSP) in high-energy physics experiments." 1988. In *Trieste 1988, Proceedings, The impact of digital microelectronics and microprocessors on particle physics* 112-115.

[69] Crosetto, D.: "A possible hardware implementation of the HPC II level trigger." DAS-DELPHI report - DELPHI/87-100 DAS-65, December 1st 1987.

[70] Crosetto, D.: "Use of Digital Signal Processors (DSP) in High Energy Physics Experiments." CERN "Mini and Micro Computer Newsletter", - October, 1987

[71] Crosetto, D.: "A Fast Digital Data Processor for the FEMC trigger. (VME version), User's Manual, rev. 1.0." CERN-DELPHI report - DELPHI/87 - DAS-58 July 1st, 1987

[72] Crosetto, D.: "Fast Digital Data Processor. A modular system for parallel digital processing algorithms (VME version). FDDP" CERN-EP preprint - CERN-EP/87-151, August 25th, 1987.

[73] Crosetto, D. et al.: "Realization of an automatic set-up to measure electrical characteristics of solid state detectors". - INFN report (four co-authors) - INFN/TC-86/7. 1986.

[74] Crosetto, D.: "Automatized microscope for nuclear emulsion measurements." Nuclear Track, Vol. 12 Nos 1-6, pp. 253-255, 1986 (three co-authors) -

[75] Crosetto, D.: "Proposal for the second and third level trigger of the Forward ElectroMagnetic Calorimeter. CERN-DELPHI report (five co-authors) - DELPHI/86-100 DAS-42, November 1986

[76] Crosetto, D.: "A low cost microprocessor development system for laboratory use based on STD-BUS, Z80-CPU and CP/M operating system. MICRO-LEARN"-INFN report (one co-author) - INFN/TC-85/5.

OTHER PUBLICATIONS

[77] Pedroli, G., Salvo, D., Crosetto, D.: "A proposito della Tecnologia Innovativa 3D-CBS" Notiziario di Medicina Nucleare ed Imaging Molecolare. Anno V, n. 2. pp. 26-68.

http://www.aimn.it/pubblicazioni/notiziario_online/notiziario_052_09 6.pdf

[78] Crosetto, D.: etal.: "Understanding a new idea for a Cancer Screening device" Available at Amazon.com, ISBN 0-9702897-1-5. Pub. October 12, 2000.

[79] Levine, M., Crosetto, D. et al.: "The Star Cluster-Finder ASIC" LeCroy. http://www.lecroy.com/lrs/EPP/levine.htm

[80] Crosetto, D.: "Programmable Level-1 Trigger with Digital Filtering," SDC note, SDC-93-488, 23 April

[81] Crosetto, D. "3-D flow processor preliminary technical specifications." By SDC Collaboration (D. Crosetto *for the collaboration*). SDC-92-369, Mar 1993. 5pp. Fermilab Library Only.

[82] Crosetto, D.: "Calorimeter Programmable Level-1 Trigger 3584 Trigger Tower 3D-Flow System Assembly," SDC note, SDC-92-391, 10 December 1992.

[83] Crosetto, D.: "3D-Flow Processor for a Programmable Level-1 Trigger (Feasibility Study)," SSCL-601, October 1992.

[84] Crosetto, D.: "Fully pipelined and programmable level 1 trigger." By SDC Collaboration (D. Crosetto *et al.*). SDC-92-368, Jul 1992. 65pp. Fermilab Library Only.

[85] Crosetto, D.: "3D-Flow Processor Preliminary Technical Specifications," SSCL-594, October 1992.

[86] Crosetto, D., L. Love: "Fully Pipelined and Programmable Level-1 Trigger," SSCL-576,. July 1992.

[87] Crosetto, D.: "Calorimeter Programmable Level-1 Trigger 1250 Trigger Tower 3D-Flow Assembly System," GEM note, GEM-TN-92-248, December 1992.

[88] Crosetto, D.: "A New Approach in Device Testing," SDC note, SDC-92-228, February, 1992

[89] Crosetto, D., Shao, B.B.: "A Software Package For Testing And Debugging The Fast Digital Data Processor Board. . INFN/TC-88/12, Mar 1988. 7pp.

[90] Crosetto, D.: "Utilizzo di Digital Signal Processors (DSP) in High Energy Physics Experiments" .NOTIZIARIO INFN, - June/Sept. 1987.

[91] Manfredotti, C., Crosetto, D. et al.: "Realization Of An Automatic Setup To Measure Electrical Characteristic Of Solid State Detectors. INFN/TC-86/7, Apr 1986. 9pp.

[92] Crosetto, D.: "A microcomputer controlled PAL programmer." INFN report (one co-author) - INFN/TC-85/15.

[93] Crosetto, D. et al.: "Digitalized microscope for the Beauty search experiment WA75." INFN- Internal note (two co-authors) - June 1984

DOCUMENTS OF SOME RELEVANCE

[94] Crosetto, D. "Basic innovative concept that enables acquiring data at a very high input data rate while simultaneously allowing necessary time to accurately analyze the information."
www.crosettofoundation.org/uploads/291.pdf

[95] Crosetto, D. "Other innovations targeted to the 3D-CBS (Three-Dimensional Complete Body Screening) Medical imaging device for early cancer detection". www.crosettofoundation.org/uploads/310.pdf

[96] Crosetto, D. "Proof of concept of Crosetto's inventions"
www.crosettofoundation.org/uploads/309.pdf

[97] Crosetto, D. "The Solution: for a substantial reduction of premature cancer death"
www.crosettofoundation.org/uploads/258.pdf

LIST OF PRESENTATIONS TO: CONFERENCES, SEMINARS, COLLEGES

Poster presentation in Houston, Texas, at the Baylor College of Medicine on October 8, 2006, at the conference: "Contribution of the Italian Researchers in the world, The past, The Present, The future, with the title "Innovative technology for early cancer detection"

Presentation in Dallas, Texas at the University of North Texas (South Campus) on September 28, 2006

Presentation (recorded on videotape) in Como, Italy on October 20, 2005 to scientists from all over the world at the Astroparticle, Particle and Space Physics, Detectors and Medical Physics Applications conference the article: ""Rethinking Positron Emission Technology for Early Cancer Detection" Book: Astroparticle, Particle and Space Physics, Detectors and Medical Physics Applications. Editor: World Scientific, 2006, pp. 692-696

Presentation in Dallas, Texas, at the North Lake College on October 9, 2005, at the conference: "Contribution of the Italian Researchers in the world, The past, The Present, The future, with the title "Innovative technology for early cancer detection"

Presentation (recorded on videotape) in Rome, Italy on November 17, 2004 to scientists and health care government management at the Superior Council of Health.

Presentation (recorded on videotape) in Rome, Italy on July 15, 2004 to scientists and health care government management at the Superior Council of Health.

Presentation in Rome, Italy on February 11, 2004 to the Minister of Health Honorable Girolamo Sirchia

Presentation in Milan, Italy on December 11, 2034 to the Director of IEO prof. Umberto Veronesi

Presentation (recorded on videotape) in Como, Italy on October 10, 2003 to scientists from all over the world at the Astroparticle, Particle and Space Physics, Detectors and Medical Physics Applications conference the article: "Development of an Innovative Three-Dimensional Complete Body Screening Device - 3D-CBS" Book: . Editor: World Scientific, 2004, pp. 350-359

Poster presentation in Portland (OR), on October 23, 2003, at the IEEE Nuclear Science Symposium and Medical Imaging conference of the article "The 3-D Complete Body Screening (3D-CBS) Features and Implementation" IEEE-NSS-MIC-2003. Conference Record. M7-129. www.3d-computing.com/pb/IEEE2003_M7-129p.pdf

Poster presentation in Portland (OR), on October 23, 2003, at the IEEE Nuclear Science Symposium and Medical Imaging conference of the article "3D-Flow DAQ IBM PC board for Photon Detection in PET and PET/CT" IEEE-NSS-MIC-2003. Conference Record. M3-130.

Poster presentation in Portland (OR), on October 23, 2003, at the IEEE Nuclear Science Symposium and Medical Imaging conference of the article "Channel Reduction and Time Coincidence IBM PC board for PET" IEEE-NSS-MIC-2003. Conference Record. M6-131

Presentation in Dallas, TX, to the North Texas Life Science Society on January 15, 2003.

Presentation in Dallas, TX, to the North Texas Enterprise Center for Medical Technology (NTEC) on June 5, 2003

Presentation in Torino, Italy to the physicians, government and hospital managers at the Hospital Molinette on October 8, 2003.

Presentation in San Diego (CA), on November 4-10, 2001, at the IEEE Nuclear Science Symposium and Medical Imaging Industry section.

Presentation in Geneva, Switzerland on May 10, 2001 at the University Faculty of Physics with the participation of several scientists from CERN. See the articles "Saving lives through early cancer detection: Breaking the current PET efficiency barrier with the 3D-CBS." 2001. www.3d-computing.com/pb/3d-cbs.pdf.

Presentation in Geneva, Switzerland at the Hospital Cantonal de Geneve on May 14, 2001 to physicians, medical physicists and physicists, technicians, software designer of program for medical imaging

Presentation in Tsukuba Science City Japan, on March 13, 2001 the article "Fast Cluster Finding System for Future HEP Experiments" at the conference Computing in High Energy Physics

Presentation in Turin, Italy at the University, Faculty of Physics on May 18, 2001

Presentation in Lyon, France on October 18, 2000, at the IEEE Nuclear Science Symposium and Medical Imaging conference of the article "A modular VME or IBM PC based data acquisition system for multi-modality PET/CT scanners of different sizes and detector types. IEEE-2000-563, http://www.3d-computing.com/pb/ieee2000-563.pdf.

Presentation in Lyon, France on October 18, 2000, at the IEEE Nuclear Science Symposium and Medical Imaging conference of the article "Real-time, programmable, digital signal-processing electronics for extracting the information from a detector module for multi-modality PET/SPECT/CT scanners. IEEE-2000-567, http://3d-computing.com/pb/ieee2000-567.pdf.

Presentation in Seattle, Washington, in October on October 27, 1999, at the IEEE Nuclear Science Symposium and Medical Imaging conference of the article "System Design and Verification Process for LHC Programmable Trigger Electronics".

Invited by the group that is developing "pixel detectors" at Stanford Linear Accelerator. October 20-24, 1993.

Invited by STAR experiment at RICH at BNL to give a presentation, July 1993

Presentation at the workshop on B Physics at Hadron Accelerators June 21-July 2, 1993, Snowmass, Colorado.

Invited to give a seminar at the D0 experiment Stonybrook, N. Y., June 1993

Presentation at the LeCroy Conference on Electronics for Future Colliders, May 4-6, 1993, Chestnut Ridge, New York.

Presentation at the Trigger meeting of the SDC collaboration meeting on April 23, 1993, at the University of California, Irvine (CA)

Presentation at the GEM Trigger meeting of the GEM collaboration meeting at SSCL, Dallas, on 5 November 1992 "Fully Programmable Level-1 Trigger," (copies of transparencies)

Presentation at the SDC- Trigger meeting of the SDC collaboration meeting on 23 October 1992. "Fully Programmable Level-1 Trigger," (Copies of transparencies)

Preparation of the description of the Digital option of the programmable Level-1 Trigger for the GEM TDR Technical Design Report.

Preparation of the Digital Programmable Level-1 Trigger Cost Estimate for the GEM experiment.

Presentation of the "Digital Programmable Level-1 Trigger option for GEM Experiment" for the GEM calorimter at the GEM Electronic *Design Review*. SSCL, February 24, 1993.

Presentation of the results concerning the test of the TMC1004 chip (Time to Digital converter) at the S-node meeting at SSCL on 1/28/92 and 3/3/92

Presentation in Annecy, France on September 22, 1992 at the conference Computing in High Energy Physics

Lecture at CERN School of Computing, Ysermonde, Belgium 2-15 September 1990, "Digital Signal Processing in High Energy Physics,"

Presentationin Aachen, Germany, on October 5, 1990 at the Large Hadron Collier Workshop the article "DSP review and applications"

Poster session - ESONE Conference VMEbus IN RESEARCH ETH, Zurich. October 11, 12, 13, 1988. FDDP. Fast Digital Data Processor. A modular system for parallel digital processing algorithms (VME version).

Note - LXXIV Congresso Nazionale SIF. Urbino. (Italy) October 6/11th 1988. "Use of parallel array of DSP's for high level triggers of the luminosity monitor of DELPHI". CERN 24th Meeting on FASTBUS Developments 19th January 1988. Seminar: "The FDDP: A Fast Digital Data Processor for use in the DELPHI Trigger System".

Lecturer and instructor at the College on microprocessors - 1988 Universidad National de San Luis, Facultad de Ciencias Fisico, Matematicas y Naturales. Second Latin American College on Microprocessors. "Sensors and actuators". "Analog to digital and digital to analog conversion". "Digital Signal Processors".

-Contributed paper and poster session - International Centre for Theoretical Physics. Trieste. March 28/30 1988. Impact of Digital Microelectronics and Microprocessors on Particle Physics. "Use of Digital Signal Processors (DSP) in High Energy Physics Experiments". "A fast zero suppression algorithm for the Forward ElectroMagnetic Calorimeter of DELPHI implemented on the DSP56001".

Lecturer and instructor at the College on microprocessors - 1987 International Centre for Theoretical Physics. Trieste. Fourth College on microprocessors. "Polling and interrupt". "Analog to Digital, Digital to Analog conversion and DSP".

Seminar - May, 1987 Laboratorio de Instrumentacao e Fisica Experimental de Particulas. Lisboa. Portugal. May 11th - May 22nd 1987. Fast electronics and Fastbus. "Digital Signal Processors in Delphi".

Lecturer and instructor at the College on microprocessors - 1986 University of Hefei, China. Second Asian Regional College on Microprocessors. "Polling and interrupt". "Analog to Digital, Digital to Analog and DSP". "A case study project: a close-loop system control.

Seminars - October 1986. Institute of Physics, Chinese Academy of Sciences, and High Energy Physics Institute. Beijing, China. "New developments in Computer Science and Technology". "Digital Signal Processors".

Lecturer and instructor at the College on microprocessors - 1986 University of Science and Technology of Colima, Mexico. Mexican, Caribbean and Central America Regional College. Microprocessors: Technology and Applications. "Polling and interrupt. "Analog to Digital, Digital to Analog conversion and DSP". "A case study project: a close-loop system control".

Lecturer and instructor at the College on microprocessors - 1985. International Centre for Theoretical Physics. Trieste. Third College "Polling and interrupt". "Analog to Digital and Digital to Analog conversion" "A case study project: a close-loop system control".

Lecturer and instructor at the College on microprocessors - 1985 University of Bogota, Colombia. First Latin American Regional College on Microprocessors. "Polling and interrupt". "Analog to Digital and Digital to Analog conversion". "A case study project: a close-loop system control".

Lecturer and instructor at the College on microprocessors - 1984 University of Colombo, Sri-Lanka. First Asian Regional College on Microprocessors. "Polling and interrupt". "Analog to Digital and Digital to Analog conversion". "A case study project: a close-loop system control".

Seminar - June 1983. International Centre for Theoretical Physics. Trieste. Conference on non-conventional energy sources and summer workshop on the physics of non-conventional energy sources. "Sun finder and tracker".

Lecturer and instructor at the College on microprocessors - 1983 International Centre for Theoretical Physics. Trieste. Second College on microprocessors. "Polling and interrupt"."Analog to Digital and Digital to Analog conversion. "A case study project: a close-loop system control".

Lecturer and instructor at the College on microprocessor - 1981. International Centre for Theoretical Physics. Trieste. First College on microprocessors. "Analog to digital and digital to analog conversion".