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Education:

• *PhD - Dec., 1995:*	Northwestern University	High Energy Particle Physics
• *Summer 1995:*	Sicily, Italy	ERICE: Spin Structure of Nucleon
• *Summer 1994:*	Sorento, Italy	CERN Summer School in Particle Physics
• *B.S.- Dec., 1988:*	Univ. of Puerto Rico, Rio Piedras	Physics & Mathematics *cum laude*

Fellowships and Honors:
- *2008-2009:* DOE/USCMS Leave of absence.
- *2002-2004:* Sloan Research Fellow from Sloan Foundation.
- *2002-2003:* Woodrow Wilson Fellow from the Mellon Foundation.
- *1999:* CERN Achievement Award – Post-doctoral.
- *1996-1998:* CERN Fellowship with Experimental Physics Division – Post-doctoral.

Research Experience and Employment:

Summer 2005 - Present: Associate Professor, Northwestern University
- Participating in the CMS experiment at the Large Hadron Collider at CERN:
  - Co-convener for "Detector Performance Group" for hadronic calorimeter system.
  - Focus on calibration for the Hadronic Calorimeter & Data Validation – Analysis/software/DB, calibration system/test beam/special runs/collision data.
  - Analysis efforts in electroweak and exotica.
- Participating in the CLIC-CTF3 facility:
  - focus on instrumentation development: beam loss monitor and pulse length measurement with RF-pickup.

Nov. 1999 - Spring 2005: Assistant Professor, Northwestern University
- Participating in NA48-1 and NA48-2 experiments at CERN: CP–Violation in K_s and $K^{\pm}$:
  - special focus on semileptonic decays in both K and hyperons to extract V_{us} CKM matrix element, and first observation for $K_s \to \pi^0 ll$ ($l = e, \mu$).
- Feasibility studies for a $\gamma\gamma$-collider as a Higgs Particle Factory based on CLIC technology, to have a low energy machine as an intermediate steps toward a multi-TeV collider:
  - co-leader of American $\gamma\gamma$ study group.
  - involved in CLIC machine R&D at the CTF3 facility at CERN.
  - collaborating with LLNL and CLIC members.
- Technological development with Richardson Electronics LTD:
  - radiation-hard gas-sealed ionization chambers for high counting rate environments.
  - detector originally developed for NUMI/MINOS, now to be used at FNAL, CTF3 and LHC.
- Finalizing the analysis of the data from the NA59 experiment that was taken in the summer of 2000:

– crystals as high energy polarizers and polarimeters.

• Feasibility studies for new experiments at FNAL using the NUMI-beamline facilities and/or muon storage ring:

– next generation of neutrino oscillation experiments (*over 100 citations*).

Jan. 1998-Oct. 1999: Research Staff: European Center for Particle Research (CERN)

• Proposed and ran the NA59 experiment:
"Use of crystals to produce linearly/circularly polarized photon beams starting from unpolarized electrons"

• The NA48 experiment: *CP–Violation in the neutral kaon system:*

– continue with NA48 responsibilities listed below.

– participated in the direct-CP violation measurement, ϵ'/ϵ, 1998-data.

Jan. 1996-Dec. 1997: Scientific Fellow: European Center for Particle Research (CERN)

• The NA48 experiment: *CP–Violation in the neutral kaon system:*

– trigger processing system – software-programmable 40 MHz pipelined – novel technique.

– data Concentrator – Modules with zero suppression in LKr calorimeter readout system.

– develop part of the Level-3 Software-based trigger for rare kaon decays.

– participated in the direct-CP violation measurement, ϵ'/ϵ, 1997-data (*over 200 citations*).

– proposed and conducted direct search for the supersymmetric R^0 hadron.

Sept. 1989- Dec. 1995: Ph.D. Student: Northwestern University

• Participated in Polarized Deep Inelastic Muon Scattering experiment SMC at CERN:

– coordinator of review paper of the results for the experiment (*over 200 citations*).

– work on Main Muons System for the experiment – based on streamer tubes.

– made feedback system to guarantee Muon System stability under changes in P and T.

– refurbished beam hodoscope system to monitor/reconstruct direction of incoming muons.

– work on Pattern Recognition and Track Fitting.

– Monte Carlo Simulation and Event Generation – GEANT based.

– first measurement of the g_2 polarized structure function (*over 100 citations*).

Research Related Responsibilities and Professional Service:

- CMS HCAL Detector Performance Group co-convener (since 2007).
- Selected by CERN Director General, Dr. Robert Aymar, as a member of the CLIC Advisory Board (since 2005).
- CMS HCAL calibration co-convener (since 2005-2007).
- NA48 analysis coordinator for semileptonic decays (since 2003).
- Co-convener for the $\gamma\gamma$ collider USA working group of ALCPG (since 2002).
- Co-spokesperson of NA59 experiment (since 1998) at CERN.
- Co-convener at SNOWMASS-2001 of E3-SO2 (2001):
  $\Rightarrow$ *Physics capabilities of $\gamma\gamma$ colliders with energies below 1 TeV.*
- Co-convener at FNAL of a lab-wide Physics Study Group (20001-2002):
  $\Rightarrow$ *Physics case for a brighter booster at FNAL.*

Recent Conferences Organized:

- PHOTON 2007, 2009: *"PHOTON"*
- LCWS 2005, 2006, 2007, 2008: *"Linear Collider Workshops"*
- LIE 2007: *"Physics and Technologies of Laser-Electron Interaction toward the ILC"*
- KAON 2005 (June 2005): *" International workshop and Kaon Decays to be held at Northwestern next year (joint effort with Univ. of Chicago and FNAL)"*
- CERN-CNGS (March 2002): *"3rd International Workshop on Neutrino Beam Instrumentation"*
- ASPEN CENTER FOR PHYSICS (June 2002): *" Workshop on Underground Science Long Baseline Neutrino Oscillations and Proton Decay"*
- SNOWMASS (July, 2001): *"Summer Study Working Group for High Energy Photon Collider"*
- FNAL (June, 2001): *"Workshop on Physics Potentials at FNAL with Stronger Proton Sources"*
- FNAL (March, 2001): *" 2nd International Workshop on High Energy Photon Colliders "*
- FNAL-NUMI (Sept. 2000): *" 2nd International Workshop on Neutrino Beam Instrumentation"*

Department Responsibilities:

- Graduate Recruitment and Admission Committee (since 2000); Chair 2003-2004, 2004-2005, 2005-2006.
- Laboratory and Lecture Equipment (since 2004); Chair 2005-2006, 2006-2007, 2007-2008.
- Long Range Planning, 2004-2005, 2005-2006.

Academic Related Responsibilities:

- Four Ph.D. Students:
  - Andrey Pozdnyakov – CMS, since 2008.
  - Steve Won – CMS, since 2006.
  - Anne Dabrowski – NA48, since 2002. Now a CERN Fellow.
  - Teresa Fonseca – NA48, since 2001. Now a CERN Fellow.
- One Master Student:
  - Silvia Goy-Lopez – NA48, Finish-2003.
- One Research Assistant Prof.:
  - Anton Anassatov – CMS/CDF, since 2008.

Academic Related Responsibilities (continue):

- Six Post-docs:
  - Radek Ofierzynski – since 2007, DOE Supported.
  - Armen Apyan – since 2002, ICAR Supported.
  - Michal Szleper – since 2001-2007. Now at Warsaw-CMS.
  - Thibuat Lefreve– 2003-2004. Now a CERN staff.
  - Gokhan Unel – 2000-2003. Now at Florida State University.
  - Steve Eichblatt- 2000-2001. Now at IBM.
- Seven Pre-doctoral Fellows:
  - Robert Grosse – South Africa, Fall 2001.
  - Ola Wessley – Sweden, Fall 2001.
  - Anne Dabrowski– South Africa, Winter - Spring 2001.
  - Sahal Yacoob – South Africa, Winter - Spring 2002.
  - Pratrick Motylinski – Denmark, Fall - Spring 2002-3.
  - Ozlem Yasar – Turkey Spring 2003.
  - Matthew Wood – USA, Summer 2003-4.
- Fourteen Undergraduate research projects:
  - Shawn Stevens – 2001-2.
  - Janet Colucci – 2002.
  - Mengkai Shieh – 2001-4.
  - Mark A. Takagi – Summer 2003.
  - James Hebden – Summer 2004.
  - Grant Simpson – Summer 2004.
  - Rachel Scheidegger – 2004 – 2005.
  - Justin Lieber– Summer 2005.
  - Will Shepherd – Summer 2006.
  - Yoni Kahn – Summer 2007 at CERN, shared with Michael Schmitt.
  - Matthew Pevarnik– Summer 2007 at CERN, student from Renseeler.
  - Julian Jacobson – Summer 2008 at CERN.
  - Eric Dzienkowski – Summer 2008 at CERN, student from Renseeler.
  - Sebastian Ellis – Summer 2008 at CERN, student from Manchester.
- Minority Student Summer Program Adviser.
  - Mitaire Ojaruega – 2001.
- Visitors that participated in academic activities:
  - Prof. Vladimir Strakovenko, Novosibirsk, Summer 2001.
  - Dr. Armen Apyan, Armenia, Fall 2001.
  - Prof. Yuri Kononets, Moscow, Winter 2002.
  - Dr. Sven Heinemeyer, CERN, Summer 2003,2004.

Academic Related Responsibilities (continue):

- Undergraduate Level Teaching (2003-2008):
  - Phyx 110-1: Freshman Seminar: Sources of Energy for the Future.
  - Phyx 339-3: Introduction to Particle and Nuclear Physics.
  - Phyx 359-3: Advanced Physics Laboratory.

- Graduate Level Teaching (2000, 2001, 2002):
  - Phyx 424-1: Nuclear Physics (2001, 2002).
  - Phyx 424-2: Particle Physics (2000, 2001, 2002).

- Extra-mural:
  - Journal Club/Seminar Series (since 2001).
  - Special Lectures (Fall 2003) by Dr. John Ellis, CERN Theory Division – Director's Adviser for non-member states at CERN. *Topic: COSMIC CONNECTIONS – (a) The Search for Supersymmetry, (b) Supersymmetric Dark Matter, (c) Neutrino Physics and Baryogenesis, (d) Lepton Flavour Violation and Cosmology*

Research Support:

Current and Past		
Department of Energy (DOE): Main grant	Co-PI: 2006-2009	$ 3180K
Department of Energy (DOE): Beam Instrumentation for CLIC	PI: 2006-2009	$ 133K
Department of Energy (DOE): CMS supplement (manpower)	PI: 2007-2008	$ 38K
Department of Energy (DOE): CMS supplement (travel)	PI: 2007-2008	$ 43K
Department of Energy (DOE): CMS teaching buyout (6.5-month)	PI: 2007-2008	$ 90K
Department of Energy (DOE): Suppl. DOE	PI: 2006-2007	$ 100K
Department of Energy (DOE): Suppl. HCAL Proj.	PI: 2006-2007	$ 23K
Department of Energy (DOE): Ground Motion	PI: 2005-2006	$ 28K
Department of Energy (DOE): Supplement: Graduate Students	PI: 2005-2006	$ 12K
Department of Energy (DOE): KAON 2005 Conference	PI: 2005	$ 10K
Illinois Consortium of Accelerator Research (ICAR)	PI: 2003-2004	$ 450K
Department of Energy (DOE)	PI: 2003-2004	$ 75K
Sloan Research Fellowship	PI: 2003-2004	$ 20K
Illinois Consortium of Accelerator Research (ICAR)	PI: 2002-2003	$ 450K
Department of Energy (DOE)	PI: 2002-2003	$ 60K
Sloan Research Fellowship	PI: 2002-2003	$ 20K
Woodrow Wilson Fellowship	PI: 2002-2003	$ 35K
Illinois Consortium of Accelerator Research (ICAR)	Co-PI: 2001-2002	$ 450K
Research and Development on Cooling of Intense Muon Beams	Co-PI: 2001-2002	$ 30K
Department of Energy (DOE)	PI: 2001-2002	$ 45K
Illinois Consortium of Accelerator Research (ICAR)	Co-PI: 2000-2001	$ 450K
Research and Development on Cooling of Intense Muon Beams	Co-PI: 2000-2001	$ 30K
Department of Energy (DOE)	PI: 2000-2001	$ 45K
Northwestern Univ. startup	Jan. 2000	—

Scholarly recognitions:

- Members of CLIC Adisory Board
- Detector Performace Convener for the Hadronic Calorimeter of the CMS detector at the LHC.
- CMS Institutional Board Member
- USCMS Institutional Board Member
- CMS-HCAL Institutional Board Member

Community Work – Special Interest in Education:

Improving High School Physics Education – Currently supporting and promoting the development of teaching at the High School level through video-conference using the latest multimedia technology. This project is a collaborative effort between Northwestern Univ. and Academia Maria Reina in Rio Piedras, P.R. (USA). This is the so-called the "Virtual Teacher Project". Past virtual teachers: Shira Karp, Art Schmidt, Gokhan Unel. Program under expansion to San Luis Rey School from Lajas, P.R. and Colegio de Ingieneria de Mayaguez, P.R..

I am collaborating with doctors, politicians and university in Puerto Rico to see if they can invest on a low energy proton/carbon ion accelerator for medical purposes – Cancer therapy.

Talks at Conferences and Seminars (since 2000)
available at http://diablo.phys.northwestern.edu/

Nov. 2008:	Invited talk at the International Linear Collider Workshop, Chicago $\Rightarrow$ *Plenary talk:* $\gamma\gamma$ *and* $e-\gamma$ *Colliders*
May 2007:	Wisconsin, USA: PHENO 2007 $\Rightarrow$ *Most recent NA48 results and Vus*
June 2006:	Chicago, USA: CALOR 2006 $\Rightarrow$ *Calibration methods for hadronic Calorimeter at the CMS/LHC Experiment*
May 2006:	San Juan, PR: CIPANP 2006 $\Rightarrow$ *Most recent NA48 results and Vus*
March 2006:	Antalya, Turkey: CMS Integration and Physics Simulation Workshop $\Rightarrow$ *First results for HCAL calibration at the LHC*
Nov. 2005:	Caltech High Energy Seminar $\Rightarrow$ *New results on* V_{us} *and Direct CP violation from the NA48 Experiment at CERN*
May 2005:	CERN: Kaon Mini workshop $\Rightarrow$ *Kaon leptonic and semileptonic decays*
March 2005:	CKM 2005: Workshop on the Unitary Triangle $\Rightarrow$ V_{us} *measurements at NA48*
Dec. 2004:	CPNSH: CP studies and non-standard Higgs Physics Workshop

⇒ *CP violating Higgs at $\gamma\gamma$ Collider*

Oct. 2004: Invited talk at FNAL: Wine and Cheese
⇒ *Recent Results from the CERN NA48 Collaboration*

Oct. 2004: Northwestern: Colloquium.
⇒ *40 years after the discovery of Strangeness,*

Parity, and CP violations – Why are we still working on Kaon Physics?

June 2004: Florence: Colloquium.
⇒ *Nano Beams of Light*

June 2004: Heavy Quark and Leptons 2004, San Juan, P.R.
⇒ *Recent Results on Rare Kaon and Hyperon Decays at NA48*

May 2004: Invited talk at Symposium: 40th Years of Lepton Colliders, Novosibirsk, Russia
⇒ *$\gamma\gamma$ Physics at High Energies*

May 2004: CERN: Kaon Mini-Workshop
⇒ *Leptonic Decays at NA48*

May 2004: American Physical Society, Denver Spring Meeting
⇒ *Explicit CP-violation in the Higgs Sector at $\gamma\gamma$ Colliders*
and other Future Colliders

April 2004: Invited talk at the International Linear Collider Workshop, Paris
⇒ *Plenary talk: $\gamma\gamma$ and $e-\gamma$ Colliders*
⇒ *Parallel talk: Explicit CP-violation in the Higgs Sector at $\gamma\gamma$ Colliders*

April 2004: Indiana Univ.– Bloomington: High Energy Seminar
⇒ *$\gamma\gamma$ Colliders to study the Higgs, as part of the R&D program*
for multi-TeV e+e- colliders

March 2004: Univ. of Illinois– Urbana: High Energy Seminar
⇒ *$\gamma\gamma$ Colliders to study the Higgs, as part of the R&D program*
for multi-TeV e+e- colliders
⇒ *Latest Results from NA48 on K_L & K_S CP Violating Related Rare Decays*

Jan. 2004: ALCPG: SLAC, Palo Alto, CP Violation in Linear Colliders
⇒ *Several Parallel and Plenary talks: $\gamma\gamma$ Physics, Beam Instrumentation*
and Beam Dynamics

July 2003: ALCPG: Cornell, New York, Alternative for more Advanced $\gamma\gamma$ Colliders
⇒ *Several Parallel talks: $\gamma\gamma$ Physics and Interaction Region*

June 2003: Invited talk Fourth Tropical Workshop on Particle Physics and Cosmology,
Cairns, Queensland, Australia
⇒ *NA48 Results: Rare Decays in Neutral Kaon System*

March 2003: University of Chicago: High Energy Physics Seminar.
⇒ *Using crystals to solve the nucleon's spin crisis' TODAY,*

... and look for physics beyond the Standard Model TOMORROW⇒ NA59 Results

Jan. 2003: ALCPG: Arlington, Texas, Capabilities of $\gamma\gamma$ Colliders for Standard Model Studies
⇒ *Several Parallel talks: $\gamma\gamma$ Physics*

Sept. 2002: 26th Advanced ICFA Beam Dynamics Workshop on Nanometer Size Colliding Beams (Nanobeam 2002), Lausanne, Switzerland
⇒ *Several Parallel talks: Beam Stability, $\gamma\gamma$ Test Facility Test Facility and $\gamma\gamma$ Interaction Region*

Sept. 2002: Invited talk to the CERN SPS Committee on the most
⇒ *Recent results of the NA59 experiment*

July 2002: ALCPG: Santa Cruz, California, $\gamma\gamma$ Colliders
⇒ *Several Parallel talks, $\gamma\gamma$ Physics*

June 2002: FNAL: Wine & Cheese
⇒ *Can we see CP-violation in leptons at FNAL? Case study presented*

May 2002: FNAL: New Initiatives at NUMI
⇒ *NUMI Off-Axis Beam Possibilities – Road to CP-violation in leptons*

April 2002: FNAL: Invited talk 20th ICFA Advanced Beam Dynamics Workshop High Intensity High Brightness Hadron Beams

March 2002: CERN: 3rd International Workshop on Neutrino Beams and Instrumentation
⇒ *Characteristics and Production of Gas Sealed, Radiation Hard, Small Ionization Chambers*

Feb. 2002: SLAC: 9th International Workshop on Linear Colliders
⇒ *$\gamma\gamma$ physics at a test facility based on the SLD/SLC experiment*

Feb. 2002: Invited talk for 2002 Aspen Winter Conference on Particle Physics: Current and Upcoming Discoveries.
⇒ *Higgs at $\gamma\gamma$ colliders*

Jan. 2002: Invited talk for WIN 2002: Weak Interactions and Neutrinos.
⇒ *Higgs at $\gamma\gamma$ colliders*

Dec. 2001: NP01, Japan: Neutrino Experiments in Intense Proton Beams.
⇒ *NUMI Off-Axis Beam Possibilities – Road to CP-violation in leptons*

July 2001: Snowmass 2001: A Summer Study on the Future of Particle Physics.
⇒ *Several Parallel and Plenary talks*

May 2001: University of South Carolina: High Energy Physics Seminar.

April 2001: Workshop on the Future of Higgs Physics – Invited talk:
⇒ *Higgs at $\gamma\gamma$ colliders*

March 2001:	2nd International Workshop on High Energy Photon Colliders. ⇒ *Several Parallel and Plenary talks*
Nov. 2000:	Luderitz 2000: Invited talk, Luderitz, Namibia. ⇒ *Using crystals to solve the nucleon's spin crisis' TODAY,* *.... and look for physics beyond the Standard Model TOMORROW*
Oct. 2000:	University of Maryland: High Energy Seminar. ⇒ *CP-Violation in Neutral Kaon System*
July 2000:	CERN: Neutrino Factory Instrumentation Workshop. ⇒ *Gas Sealed Small Ionization Chambers* *and Secondary Emission Chambers*
April 2000:	American Physical Society: Invited talk, Long Beach, California. ⇒ *Review CP-Violation in Neutral Kaon System*

Publications

Main publications

Kaon and hyperon related physics and instrumentation:

1. J. R. Batley *et al.* [NA48/2 Collaboration], "Measurements of Charged Kaon Semileptonic Decay Branching Fractions $K^{\pm}- > pi^0mu^+ - nuandK^{\pm}- > pi^0e^+ - nu$ and Their Ratio," Eur. Phys. J. C **50**, 329 (2007) [Erratum-ibid. C **52**, 1021 (2007)] [arXiv:hep-ex/0702015]. ⇒ Main author.

2. J. R. Batley *et al.*, "Determination of the relative decay rate K(S) → pi e nu / K(L) → pi Phys. Lett. B **653**, 145 (2007).

3. J. R. Batley *et al.* [NA48/I Collaboration], "Measurement of the branching ratios of the decays Xi0 –¿ Sigma+ e- anti-nu/e and anti-Xi0 –¿ anti-Sigma+ e+ nu/e," Phys. Lett. B **645**, 36 (2007) [arXiv:hep-ex/0612043].

4. A. Lai *et al.* [NA48 Collaboration], "Measurement of the ratio Gamma(K(L) –¿ pi+ pi-)/Gamma(K(L) –¿ pi+- e-+ nu) and extraction of the CP violation parameter —eta(+-)—," Phys. Lett. B **645**, 26 (2007) [arXiv:hep-ex/0611052].

5. A. Lai *et al.* [NA48 Collaboration], "Measurement of $K^0_{\mu 3}$ form factors," Phys. Lett. B **647**, 341 (2007) [arXiv:hep-ex/0703002].

6. J. R. Batley *et al.* [NA48/2 Collaboration], "Search for direct CP violating charge asymmetries in $K^{\pm} \to \pi^{\pm}\pi^+\pi^-$ and $K^{\pm} \to \pi^{\pm}\pi^0\pi^0$ decays," Eur. Phys. J. C **52**, 875 (2007) [arXiv:0707.0697 [hep-ex]].

7. S. Heinemeyer, Y. Kahn, M. Schmitt and M. Velasco, "An Experiment to Search for Light Dark Matter in Low-Energy ep Scattering," arXiv:0705.4056 [hep-ex].

8. J. R. Batley *et al.* (NA48/2 Collaboration), "Search for direct CP violation in the decays K+- → 3pi+-," Phys. Lett. B **634**, 474 (2006) [arXiv:hep-ex/0602014].

9. J. R. Batley *et al.* (NA48/2 Collaboration), "Observation of a cusp-like structure in the pi0 pi0 invariant mass distribution from K+- → pi+- pi0 pi0 decay and determination of the pi pi scattering lengths," Phys. Lett. B **633**, 173 (2006) [arXiv:hep-ex/0511056].

10. J.R. Batley *et al.* (NA48/1 Collaboration), "Observation of the rare decay $K_S \to \pi^0\mu^+\mu^-$" Phys.Lett. **B599** 197 (2004). (doi link) [arXiv:hep-ex/0409011] ⇒ One of the main authors.

11. A. Lai *et al.* (NA48 Collaboration), "Measurement of the radiative K(e3) branching ratio," Phys. Lett. B **605**, 247 (2005) [arXiv:hep-ex/0411069].

12. A. Lai *et al.* (NA48 Collaboration), "Measurement of K0(e3) form factors," Phys. Lett. B **604**, 1 (2004).

13. A. Lai *et al.* (NA48 Collaboration), "Measurement of the branching ratio of the decay K(L) → pi+- e-+ nu and extraction of the CKM parameter |V(us)|," Phys. Lett. B **602**, 41 (2004).

14. J.R. Batley *et al.* (NA48/1 Collaboration), "Observation of the rare decay $K_S \to \pi^0e^+e^-$," Phys. Lett. **B576**, 43 (2003) (doi link) [arXiv:hep-ex/0309075] (*16 citations*)

15. G. Barr *et al.*, "The trigger for $K^0 \to \pi^0\pi^0$ decays of the NA48 experiment at CERN," Nucl. Instrum. Meth. **A485**, 676 (2002) (doi link)

16. NA48 Collaboration, "A precise measurement of the direct CP violation parameter $Re(\epsilon'/\epsilon)$," Eur. Phys. J. **C22** 231 (2001) (doi link) [arXiv:hep-ex/0110019] (*68 citations*)

17. NA48 Collaboration, "The NA48 Lkr Calorimeter Readout Electronics," IEEE Trans. Nucl. Sci. **47**, 136 (2000).

18. NA48 Collaboration, "A New Measurement of Direct CP Violation in two pion decays of the neutral kaon", Phys. Lett. **B465** 335 (1999) (doi link) [arXiv.org/hep-ex/9909022] (*220 citations*)

19. B. Gorini *et al.*, "A 40 MHZ Pipelined Trigger for $K^0 \to \pi^0\pi^0$ Decays for the CERN", IEEE Trans. Nucl. Sci. **45**, 1771 (1998) (doi link)

20. G. Fischer *et al.*, "A 40-Mhz-Pipelined Trigger For $K_0 \to 2\pi^0$ Decays For The CERN NA48 Experiment," (doi link) Nucl. Instrum. Meth. A **419**, 695 (1998)

21. M.M.Velasco, "Review of CP violation in Kaon decays", *Proceedings for 1997 Heavy Flavor Symposium*, Santa Barbara, California, July 7-11, 1997.
⇒ Main author.

Proton colliders – CMS:

22. R. Adolphi *et al.* [CMS Collaboration], "The CMS experiment at the CERN LHC," JINST **3**, S08004 (2008).

23. G. L. Bayatian *et al.* [CMS Collaboration], "CMS technical design report, volume II: Physics performance," J. Phys. G **34**, 995 (2007).

24. D. G. . d'Enterria *et al.* [CMS Collaboration], "CMS physics technical design report: Addendum on high density QCD with heavy ions," J. Phys. G **34**, 2307 (2007).

Linear colliders and physics beyond the standard model:

25. S. Heinemeyer, M. Velasco, "Exploring Complex Phases of the MSSM at Future Colliders", [arXiv:hep-ph/0506267]
⇒ Co-editor.

26. S. Heinemeyer, M.M. Velasco, M.D. Wood, "Explicit CP Violation in the Higgs Sector at gamma-gamma Colliders and Other Future Colliders", *Proceedings of the International Conference on Linear Colliders*, Paris, April 19-23, 2004
http://lotus.phys.northwestern.edu/%7Eschmittm/nuhep-exp/04-16
⇒ Co-editor.

27. D. Asner, S. Asztalos, A. De Roeck, S. Heinemeyer, J. Gronberg, J.F. Gunion, H.E. Logan, V. Martin, M. Szleper, M.M. Velasco, "Complementarity of a low energy photon collider and LHC physics," [arXiv:hep-ph/0308103] ⇒ Co-editor.

28. D. Asner *et al.*, "Higgs physics with a gamma gamma collider based on CLIC 1," Eur. Phys. J. **C28** 27 (2003) (doi link) [arXiv:hep-ex/0111056] (*19 citations*)
⇒ One of the main authors.

29. D. Asner, B. Grzadkowski, J. F. Gunion, H. E. Logan, V. Martin, M. Schmitt and M. M. Velasco, "New results for a photon photon collider," [arXiv:hep-ph/0208219] ⇒ Main authors.

30. M. M. Velasco *et al.*, "Photon photon and electron photon colliders with energies below a TeV," in *Proc. of the APS/DPF/DPB Summer Study on the Future of Particle Physics (Snowmass 2001)* ed. N. Graf, eConf **C010630**, E3005 (2001) [arXiv:hep-ex/0111055] (*15 citations*)
⇒ Main authors.

31. NA48 Collaboration, "Direct Search for Light Gluinos", Phys. Lett. **B446** 117 (1999) (doi link) ⇒ Main authors.

32. M.M.Velasco,"Direct Search for Light Gluinos", *Proceedings for ICHEP 98 XXIX International Conference High Energy Physics*, UBC, Vancouver, B.C., Canada, July 23-29, 1998.
⇒ Main author.

Beam instrumentation and construction:

33. T. Behnke *et al.* [ILC Collaboration], "ILC Reference Design Report Volume 4 - Detectors," arXiv:0712.2356 [physics.ins-det]. ILC Reference Design Report: ILC Global Design Effort and World Wide Study. By ILC Collaboration (James Brau, (Ed.) et al.). FERMILAB-APC, Aug 2007. 147pp. e-Print: arXiv:0712.1950 [physics.acc-ph]

34. Braun:2007zza H. H. Braun *et al.*, "Non Destructive Single Shot Bunch Length Measurements for the CLIC Test Facility 3," *In the Proceedings of Particle Accelerator Conference (PAC 07), Albuquerque, New Mexico, 25-29 Jun 2007, pp 4069.*

35. T. Lefevre *et al.*, "Instrumentation for longitudinal beam gymnastics in FEL's and at the CLIC Test Facility 3," CERN-AB-2007-025.

36. Th. Lefevre *et al.*, "Development of a Beam Loss Detection System," *Proceedings for 11th Beam Instrumentation Workshop*, May 3-6, 2004, in Knoxville, TN.
http://lotus.phys.northwestern.edu/%7Eschmittm/nuhep-exp/04-10

37. Th. Lefevre *et al.*, "Beam Loss Monitoring at the CLIC Test Facility 3," *Proceedings for 9th biennial European Particle Accelerator Conference*, July 5-9, Lucerne, Switzerland.
http://lotus.phys.northwestern.edu/%7Eschmittm/nuhep-exp/04-08

38. NA59 Collaboration, A. Apyan *et al.* [NA59 Collaboration], "Results on the coherent interaction of high energy electrons and photons in oriented single crystals," Nucl. Instrum. Meth. B **234**, 128 (2005) [arXiv:hep-ex/0506050].

39. NA59 Collaboration, "Measurement of Coherent Emission and Linear Polarization of Photons by Electrons in the Strong Fields of Aligned Crystals," [arXiv:hep-ex/0406026] *Submitted for publication in June, 2004.*
⇒ Main author.

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