

Elenco dei lavori del Dott. **Mauro Migliorati**

Pubblicazioni su rivista:

- P1. N. Biancacci, **M. Migliorati**, L. Palumbo, S. Persichelli, and V. G. Vaccaro, *Electromagnetic fields and Greens functions in elliptical vacuum chambers*, **Physical Review Accelerators and Beams**, 20, 101004 (2017).  
doi: 10.1103/PhysRevAccelBeams.20.101004.
- P2. D. Alesini, M. Bellaveglia, S. Bini, F. Cardelli, L. Ficcadenti, A. Gallo, V. Lollo, **M. Migliorati**, A. Mostacci, L. Palumbo, L. Pellegrino, V. Pettinacci, L. Piersanti, and S. Tocci, *Design of high gradient, high repetition rate damped C-band rf structures*, **Physical Review Accelerators and Beams**, 20, 032004 (2017).  
doi: 10.1103/PhysRevAccelBeams.20.032004.
- P3. R. Bartolini, S. Casalbuoni, M. P. Cox, S. Gerstl, A. W. Grau, T. Holubek, E. C. Longhi, **M. Migliorati**, G. Rehm, D. Saez de Jauregui, J. C. Schouten, B. Spataro, R. Voutta, and R. P. Walker, *Cold vacuum chamber for diagnostics: Analysis of the measurements at the Diamond Light Source and impedance bench measurements*, **Physical Review Accelerators and Beams**, 19, 053201 (2016).  
doi: 10.1103/PhysRevAccelBeams.19.053201.
- P4. N. Biancacci, S. Gilardoni, E. Métral, **M. Migliorati**, S. Persichelli, and B. Salvant, *Transverse beam coupling impedance of the CERN Proton Synchrotron*, **Physical Review Accelerators and Beams**, 19, 041001 (2016).  
doi: 10.1103/PhysRevAccelBeams.19.041001.
- P5. R. Fedele, T. Akhter, S. De Nicola, **M. Migliorati**, A. Marocchino, F. Massimo, and L. Palumbo, *The concept of coupling impedance in the self-consistent plasma wake field excitation*, **Nuclear Instruments and Methods in Physics Research**, A 829 (2016), pp. 397402.  
doi: 10.1016/j.nima.2016.03.105.
- P6. M. Scisciò , L. Lancia, **M. Migliorati**, A. Mostacci, L. Palumbo, Y. Papaphilippou, and P. Antici, *Parametric study of transport beam lines for electron beams accelerated by laser-plasma interaction*, **Journal of Applied Physics**, 119, 094905 (2016).  
doi: 10.1063/1.4942626.
- P7. **M. Migliorati**, L. Palumbo, *Multibunch and multiparticle simulation code with an alternative approach to wakefield effects*, **Physical Review Special Topics - Accelerators and Beams**, 18, 031001 (2015).  
doi: 10.1103/PhysRevSTAB.18.031001.
- P8. A. Cianchi, V. Balandin, M. Castellano, E. Chiadroni, L. Catani, N. Golubeva, K. Honkavaara, G. Kube, and **M. Migliorati**, *First non-intercepting emittance measurement by means of optical diffraction radiation interference*, **New Journal of Physics**, 16, 113029 (2014).  
doi: 10.1088/1367-2630/16/11/113029.
- P9. R. Bartolini, S. Casalbuoni, M. P. Cox, S. Gerstl, A. W. Grau, T. Holubek, E. C. Longhi, **M. Migliorati**, G. Rehm, D. Saez de Jauregui, J. C. Schouten, G. Sikler, B. Spataro, R. Voutta, and R. P. Walker, *Cold vacuum chamber for diagnostics: Instrumentation and first results*, **Physical**

**Review Special Topics - Accelerators and Beams**, 17, 103201 (2014).  
doi: 10.1103/PhysRevSTAB.17.103201.

- P10. M. Ferrario, D. Alesini, M. Alessandroni, M.P. Anania, S. Andreas, M. Angelone, A. Arcovito, F. Arnesano, M. Artioli, L. Avaldi, D. Babusci, A. Bacci, A. Balerna, S. Bartalucci, R. Bedogni, M. Bellaveglia, F. Bencivenga, M. Benfatto, S. Biedron, V. Bocci, M. Bolognesi, P. Bolognesi, R. Boni, R. Bonifacio, F. Boscherini, M. Boscolo, F. Bossi, F. Broggi, B. Buonomo, V. Calo, D. Catone, M. Capogni, M. Capone, K. Cassou, M. Castellano, A. Castoldi, L. Catani, G. Cavoto, N. Cherubini, G. Chirico, M. Cestelli-Guidi, E. Chiadroni, V. Chiarella, A. Cianchi, M. Cianci, R. Cimino, F. Ciocci, A. Clozza, M. Collini, G. Colo, A. Compagno, G. Contini, M. Coreno, R. Cucini, C. Curceanu, F. Curciarello, S. Dabagov, E. Dainese, I. Davoli, G. Dattoli, L. De Caro, P. De Felice, V. De Leo, S. Dell'Agnello, S. Della Longa, G. Delle Monache, M. De Spirito, A. Di Cicco, C. Di Donato, D. Di Gioacchino, D. Di Giovenale, E. Di Palma, G. Di Pirro, A. Dodaro, A. Doria, U. Dosselli, A. Drago, K. Dupraz, R. Escribano, A. Esposito, R. Faccini, A. Ferrari, A. Filabozzi, D. Filippetto, F. Fiori, O. Frasciello, L. Fulgentini, G. P. Gallerano, A. Gallo, M. Gambaccini, C. Gatti, G. Gatti, P. Gauzzi, A. Ghigo, G. Ghiringhelli, L. Giannessi, G. Giardina, C. Giannini, F. Giorgianni, E. Giovenale, D. Giulietti, L. Gizzi, C. Guaraldo, C. Guazzoni, R. Gunnella, K. Hatada, M. Iannone, S. Ivashyn, F. Jegerlehner, P.O. Keeffe, W. Kluge, A. Kupsc, L. Labate, P. Levi Sandri, V. Lombardi, P. Londrillo, S. Loreti, A. Lorusso, M. Losacco, A. Lukin, S. Lupi, A. Macchi, S. Magaz, G. Mandaglio, A. Marcelli, G. Margutti, C. Mariani, P. Mariani, G. Marzo, C. Masciovecchio, P. Masjuan, M. Mattioli, G. Mazzitelli, N.P. Merenkov, P. Michelato, F. Migliardo, **M. Migliorati**, C. Milardi, E. Milotti, S. Milton, V. Minicozzi, S. Mobilio, S. Morante, D. Moricciani, A. Mostacci, V. Muccifora, F. Murtas, P. Musumeci, F. Nguyen, A. Orecchini, G. Organtini, P.L. Ottaviani, C. Pace, E. Pace, M. Paci, C. Pagani, S. Pagnutti, V. Palmieri, L. Palumbo, G.C. Panaccione, C.F. Papadopoulos, M. Papi, M. Passera, L. Pasquini, M. Pedio, A. Perrone, A. Petralia, M. Petrarca, C. Petrillo, V. Petrillo, P. Pierini, A. Pietropaolo, M. Pillon, A.D. Polosa, R. Pompili, J. Portoles, T. Prosperi, C. Quaresima, L. Quintieri, J.V. Rau, M. Reconditi, A. Ricci, R. Ricci, G. Ricciardi, G. Ricco, M. Ripani, E. Ripicci, S. Romeo, C. Ronsivalle, N. Rosato, J.B. Rosenzweig, A.A. Rossi, A.R. Rossi, F. Rossi, G. Rossi, D. Russo, A. Sabatucci, E. Sabia, F. Sacchetti, S. Salducco, F. Sannibale, G. Sarri, T. Scopigno, J. Sekutowicz, L. Serafini, D. Sertore, O. Shekhovtsova, I. Spassovsky, T. Spadaro, B. Spataro, F. Spinozzi, A. Stecchi, F. Stellato, V. Surrenti, A. Tenore, A. Torre, L. Trentadue, S. Turchini, C. Vaccarezza, A. Vacchi, P. Valente, G. Venanzoni, S. Vescovi, F. Villa, G. Zanotti, N. Zema, M. Zobov, F. Zomer, *IRIDE: Interdisciplinary research infrastructure based on dual electron linacs and lasers*, **Nuclear Instruments and Methods in Physics Research**, A 740 (2014), pp. 138-146.  
doi: 10.1016/j.nima.2013.11.040.
- P11. N. Biancacci, V. G. Vaccaro, E. Métral, B. Salvant, **M. Migliorati**, and L. Palumbo, *Impedance studies of 2D azimuthally symmetric devices of finite length*, **Physical Review Special Topics - Accelerators and Beams**, 17, 021001 (2014).  
doi: 10.1103/PhysRevSTAB.17.021001.
- P12. S. Bini, B. Spataro, A. Marcelli, S. Sarti, V. A. Dolgashev, S. Tantawi, A. D. Yeremian, Y. Higashi, M. G. Grimaldi, L. Romano, F. Ruffino, R. Parodi, G. Cibin, C. Marrelli, **M. Migliorati**, and C. Caliendo, *Molybdenum sputtering film characterization for high gradient accelerating structures*, **Chinese Physics C**, Vol. 37, No. 9 097005 (2013).  
doi: 10.1088/1674-1137/37/9/097005.
- P13. D. Alesini, A. Citterio, G. Campogiani, L. Ficcadenti, **M. Migliorati**, A. Mostacci, L. Palumbo, S. Persichelli, and R. Zennaro, *Tuning procedure for traveling wave structures and its application to the C-Band cavities for SPARC photo injector energy upgrade*, **Journal of Instrumentation**, 8 P10010 (2013).  
doi: 10.1088/1748-0221/8/10/P10010.

- P14. M. Ferrario, **M. Migliorati**, L. Palumbo, *Space charge effects*, invited review paper published by CERN in the Proceedings of the *CAS-CERN Accelerator School: Advanced Accelerator Physics, Trondheim, Norway, 1929 August 2013*,, CERN-2014-009 (CERN, Geneva, 2014), pp. 331-356.
- P15. M. Ferrario, **M. Migliorati**, L. Palumbo, *Wake fields and instabilities in linear accelerators*, invited review paper published by CERN in the Proceedings of the *CAS-CERN Accelerator School: Advanced Accelerator Physics, Trondheim, Norway, 1929 August 2013*,, CERN-2014-009 (CERN, Geneva, 2014), pp. 357-375.
- P16. A. Bacci, D. Alesini, P. Antici, M. Bellaveglia, R. Boni, E. Chiadroni, A. Cianchi, C. Curatolo, G. Di Pirro, A. Esposito, M. Ferrario, A. Gallo, G. Gatti, A. Ghigo, **M. Migliorati**, A. Mostacci, L. Palumbo, V. Petrillo, R. Pompili, C. Ronsivalle, A. R. Rossi, L. Serafini, B. Spataro, P. Tomassini, and C. Vaccarezza, *Electron Linac design to drive bright Compton back-scattering gamma-ray sources*, **Journal of Applied Physics**, 113, 194508 (2013).  
doi: 10.1063/1.4805071.
- P17. **M. Migliorati**, S. Persichelli, H. Damerau, S. Gilardoni, S. Hancock, and L. Palumbo, *Beam-wall interaction in the CERN Proton Synchrotron for the LHC upgrade*, **Physical Review Special Topics - Accelerators and Beams**, 16, 031001 (2013).  
doi: 10.1103/PhysRevSTAB.16.031001.
- P18. **M. Migliorati**, A. Bacci, C. Benedetti, E. Chiadroni, M. Ferrario, A. Mostacci, L. Palumbo, A. R. Rossi, L. Serafini, and P. Antici, *Intrinsic normalized emittance growth in laser-driven electron accelerators*, **Physical Review Special Topics - Accelerators and Beams**, 16, 011302 (2013).  
doi: 10.1103/PhysRevSTAB.16.011302.
- P19. S. Casalbuoni, **M. Migliorati**, A. Mostacci, L. Palumbo, and B. Spataro, *Beam heat load due to geometrical and resistive wall impedance in COLDDIAG*, **Journal of Instrumentation**, 7, P11008 (2012).  
doi: 10.1088/1748-0221/7/11/P11008.
- P20. P. Antici, **M. Migliorati**, A. Mostacci, L. Picardi, L. Palumbo, and C. Ronsivalle, *Sensitivity study in a compact accelerator for laser-generated protons*, **Journal of Plasma Physics**, 78, 04 (2012), pp 441-445.  
doi: 10.1017/S0022377812000414.
- P21. P. Antici, A. Bacci, C. Benedetti, E. Chiadroni, M. Ferrario, A. R. Rossi, L. Lancia, **M. Migliorati**, A. Mostacci, L. Palumbo, and L. Serafini, *Laser-driven electron beamlines generated by coupling laser-plasma sources with conventional transport systems*, **Journal of Applied Physics**, 112, 044902 (2012).  
doi: 10.1063/1.4740456.
- P22. B. Spataro, D. Alesini, V. Chimenti, V. Dolgashev, Y. Higashi, **M. Migliorati**, A. Mostacci, R. Parodi, S. G. Tantawi, A. D. Yeremian, *High-power comparison among brazed, clamped and electroformed X-band cavities*, **Nuclear Instruments and Methods in Physics Research**, A 657 (2011), pp. 88-93.  
doi: 10.1016/j.nima.2011.06.047.
- P23. G. Dattoli, M. Labat, **M. Migliorati**, P.L. Ottaviani, S. Pagnutti, E. Sabia, *The FEL SASE operation, bunch compression and the beam heater*, **Optics Communications**, 284 (2011), pp.

1945-1950.

doi: 10.1016/j.optcom.2010.11.052.

- P24. D. Filippetto, **M. Migliorati**, A. Mostacci, L. Palumbo, et al., *Phase space analysis of velocity bunched beams*, **Physical Review Special Topics - Accelerators and Beams**, 14, 092804 (2011).  
doi: 10.1103/PhysRevSTAB.14.092804.
- P25. B. Spataro, A. Valloni, D. Alesini, N. Biancacci, L. Faillace, L. Ficcadenti, A. Fukusawa, L. Lancia, **M. Migliorati**, F. Morelli, A. Mostacci, B. OShea, L. Palumbo, J.B. Rosenzweig, A. Yakub, *RF properties of a X-band hybrid photoinjector*, **Nuclear Instruments and Methods in Physics Research**, A 657 (2011), pp. 99-106.  
doi: 10.1016/j.nima.2011.04.057.
- P26. P. Antici, **M. Migliorati**, A. Mostacci, L. Picardi, L. Palumbo, and C. Ronsivalle, *A compact post-acceleration scheme for laser-generated protons*, **Physics of Plasmas**, 18, 073103 (2011).  
doi: 10.1063/1.3574361,  
anche Virtual Journal of Ultrafast Science, July 2011, Vol. 10, Issue 8 - High Field Physics.
- P27. J.B. Rosenzweig, A. Valloni, D. Alesini, G. Andonian, N. Bernard, L. Faillace, L. Ficcadenti, A. Fukusawa, B. Hidding, **M. Migliorati**, A. Mostacci, P. Musumeci, B. OShea, L. Palumbo, B. Spataro, A. Yakub, *Design and applications of an X-band hybrid photoinjector*, **Nuclear Instruments and Methods in Physics Research**, A 657 (2011), pp. 107-113.  
doi: 10.1016/j.nima.2011.05.046.
- P28. L. Giannessi, **M. Migliorati**, et al. (The SPARC Study Group), *Self-amplified spontaneous emission for a single pass free-electron laser*, **Physical Review Special Topics - Accelerators and Beams**, 14, 060712 (2011).  
doi: 10.1103/PhysRevSTAB.14.060712.
- P29. M. Ferrario, **M. Migliorati**, et al. (The SPARC Study Group), *Laser comb with velocity bunching: preliminary results at SPARC*, **Nuclear Instruments and Methods in Physics Research**, A 637 (2011), pp. S43-S46.  
doi: 10.1016/j.nima.2010.02.018.
- P30. M. Venturini, **M. Migliorati**, C. Ronsivalle, M. Ferrario, C. Vaccarezza, *Dynamics of longitudinal phase-space modulations in an rf compressor for electron beams*, **Physical Review Special Topics - Accelerators and Beams**, 13, 080703 (2010).  
doi: 10.1103/PhysRevSTAB.13.080703.
- P31. M. Ferrario, **M. Migliorati**, et al., *Experimental demonstration of emittance compensation with velocity bunching*, **Physical Review Letters**, 104, 054801 (2010).  
doi: 10.1103/PhysRevLett.104.054801.
- P32. G. Dattoli, **M. Migliorati**, *Transport matrix of a solenoid with linear fringe field*, **Il Nuovo Cimento**, Vol. 124 B, N. 4 (2009), pp. 385-394.  
doi: 10.1393/ncb/i2009-10780-0.
- P33. G. Dattoli, **M. Migliorati**, A. Schiavi, M. Venturini, *A Vlasov solver for collective effects in particle accelerators*, **Il Nuovo Cimento**, Vol. 32 C, N. 2 (2009), pp. 161-164.  
doi: 10.1393/ncc/i2009-10394-7.

- P34. G. Dattoli, **M. Migliorati**, *A model of laser heater undulator system for self-amplified free electron lasers*, **Journal of Applied Physics**, 105, 023111 (2009).  
doi: 10.1063/1.3054513.
- P35. G. Dattoli, **M. Migliorati**, K. Zhukovsky, *Summation formulae and Stirling numbers*, **International Mathematical Forum**, Vol. 4, No. 41 (2009), pp. 2017-2040.
- P36. P. Antici, M. Fazi, A. Lombardi, **M. Migliorati**, L. Palumbo, P. Audebert, J. Fuchs, *Numerical study of a linear accelerator using laser-generated proton beams as a source*, **Journal of Applied Physics**, 104, 124901 (2008).  
doi: 10.1063/1.3021160.
- P37. L. Giannessi, et al. (The SPARC Study Group), *Seeding experiments at SPARC*, **Nuclear Instruments and Methods in Physics Research**, A 593 (2008), pp. 132-136.  
doi: 10.1016/j.nima.2008.04.073.
- P38. P. Antici, M. Fazi, A. Lombardi, **M. Migliorati**, L. Palumbo, P. Audebert, J. Fuchs, *Postacceleration of laser-generated high-energy protons through conventional accelerator linacs*, **IEEE Transactions on Plasma Science**, Vol 36, No. 4, (2008), pp. 1843-1846.
- P39. A. Cianchi, **M. Migliorati**, et al. (The SPARC Study Group), *High brightness electron beam emittance evolution measurements in an RF photoinjector*, **Physical Review Special Topics - Accelerators and Beams**, 11, 032801 (2008).  
doi: 10.1103/PhysRevSTAB.11.032801.
- P40. G. Dattoli, **M. Migliorati**, *Associated Laguerre polynomials: monomiality and bi-orthogonal functions*, **International Mathematical Forum**, Vol. 3, No. 19 (2008), pp. 901-909.
- P41. A. Bacci, M. Boscolo, E. Chiadroni, A. Cianchi, D. Filippetto, **M. Migliorati**, A. Mostacci, P. Musumeci, C. Ronsivalle, A. R. Rossi, *Analysis methodology of movable emittance-meter measurements for low energy electron beams*, **Review of Scientific Instruments**, 79, 013303 (2008).  
doi: 10.1063/1.2835715.
- P42. M. Ferrario, **M. Migliorati**, et al., *Direct measurement of the double emittance minimum in the beam dynamics of the SPARC high-brightness photoinjector*, **Physical Review Letters**, 99, 234801 (2007).  
doi: 10.1103/PhysRevLett.99.234801,  
anche Virtual Journal of Ultrafast Science, January 2008 Vol. 7, Issue 1 - High Field Physics.
- P43. G. Dattoli, I. Khomasuridze, **M. Migliorati**, P. E. Ricci, *Generating functions involving arbitrary products*, **Tamsui Oxford Journal of Mathematical Sciences**, Vol 23-3 (2007), pp. 269-276.
- P44. M. Boscolo, M. Ferrario, V. Fusco, **M. Migliorati**, L. Palumbo, B. Spataro, C. Vaccarezza, L. Giannessi, M. Quattromini, C. Ronsivalle, L. Serafini, *First simulations results on laser pulse jitter and microbunching instability at Sparxino*, **International Journal of Modern Physics A**, Vol. 22, N. 23 (2007), pp. 4254-4264.  
doi: 10.1142/S0217751X07037809.
- P45. **M. Migliorati**, A. Schiavi, G. Dattoli, *Simulations of coherent synchrotron radiation effects in electron machines*, **International Journal of Modern Physics A**, Vol. 22, N. 23 (2007), pp.

4235-4244.

doi: 10.1142/S0217751X07037780.

- P46. M. Ferrario, V. Fusco, **M. Migliorati**, L. Palumbo, *Emittance degradation due to wake fields in a high brightness photoinjector*, **International Journal of Modern Physics A**, Vol. 22, N. 23 (2007), pp. 4214-4234.  
doi: 10.1142/S0217751X07037779.
- P47. D. Alesini, A. Bacci, A. Falone, **M. Migliorati**, A. Mostacci, F. Palpini, L. Palumbo, B. Spataro, *Design and RF measurements of an X-band accelerating structure for the SPARC project*, **International Journal of Modern Physics A**, Vol. 22, N. 23 (2007), pp. 4022-4038.  
doi: 10.1142/S0217751X07037603.
- P48. D. Alesini, B. Spataro, **M. Migliorati**, A. Mostacci, L. Palumbo, V. Baglin, B. Jenninger, F. Ruggiero, *Coupling impedances studies and power loss measurements of the COLDEX upgraded vacuum chamber*, **Nuclear Instruments and Methods in Physics Research**, A 581 (2007), Technical Note, pp. 885-889 .  
10.1016/j.nima.2007.08.147.
- P49. G. Dattoli, L. Mezi, **M. Migliorati**, *Operational methods for integro-differential equations and applications to problems in particle accelerator physics*, **Taiwanese Journal of Mathematics**, Vol. 11, No. 2 (2007), pp. 407-413.
- P50. G. Dattoli, **M. Migliorati**, A. Schiavi, *Study of coherent synchrotron radiation effects by means of a new simulation code based on the non-linear extension of the operator splitting method*, **Nuclear Instruments and Methods in Physics Research**, A 574 (2007), pp. 244-250.  
doi: 10.1016/j.nima.2007.02.076.
- P51. G. Dattoli, **M. Migliorati**, S. Khan, *Solutions of integro-differential equations and operational methods*, **Applied Mathematics and Computation**, Vol. 186 (2007), pp. 302-308.  
doi: 10.1016/j.amc.2006.07.104.
- P52. G. Dattoli, **M. Migliorati**, H. M. Srivastava, *Sheffer polynomials, monomiality principle, algebraic methods and the theory of classical polynomials*, **Mathematical and Computer Modelling**, Vol. 45 (2007), pp. 1033-1041.  
doi: 10.1016/j.mcm.2006.08.010.
- P53. G. Dattoli, **M. Migliorati**, K. Zhukovsky, *An elementary account of relativistic cosmology*, **La Rivista del Nuovo Cimento**, Vol. 29, No. 10 (2006).  
doi: 10.1393/ncr/i2006-10012-6.
- P54. G. Dattoli, **M. Migliorati**, *The truncated exponential polynomials, the associated Hermite forms and applications*, **International Journal of Mathematics and Mathematical Sciences**, Vol. 2006, ID 98175 (2006), pp. 1-10.  
doi: 10.1155/IJMMS/2006/98175.
- P55. D. Alesini, L. Falbo, **M. Migliorati**, *Longitudinal beam dynamics simulation in electron rings in strong RF focusing regime*, **Physical Review Special Topics - Accelerators and Beams**, 9, 094402 (2006).  
doi: 10.1103/PhysRevSTAB.9.094402.

- P56. B. Spataro, D. Alesini, **M. Migliorati**, A. Mostacci, L. Palumbo, V. Baglin, B. Jenninger, F. Ruggerio, *Impedances of the cold bore experiment, COLDEX, installed in the SPS machine*, **Nuclear Instruments and Methods in Physics Research**, A 564 (2006), pp. 38-43.  
doi: 10.1016/j.nima.2006.03.038.
- P57. M. Ferrario, **M. Migliorati**, L. Palumbo, *Wake fields and instabilities in linear accelerators*, invited review paper published by CERN in the Proceedings of the *CERN Accelerator School - Intermediate accelerator physics, DESY, Zeuthen, Germany, 15 - 26 September 2003*, CERN-2006-002, 26 January 2006, pp. 343-359.
- P58. D. Alesini, A. Falone, **M. Migliorati**, A. Mostacci, F. Palpini, L. Palumbo, B. Spataro, *Design and RF measurements of an X-band accelerating structure for linearizing the longitudinal emittance at SPARC*, **Nuclear Instruments and Methods in Physics Research**, A 554 (2005), pp. 1-12.  
doi: 10.1016/j.nima.2005.07.072.
- P59. G. Dattoli, G. De Ninno, **M. Migliorati**, *Landau damping and free-electron laser interaction in storage rings*, **The European Physical Journal**, D 33 (2005), pp. 273-277.  
doi: 10.1140/epjd/e2005-00050-8.
- P60. R. Bartolini, G. Dattoli, L. Mezi, **M. Migliorati**, A. Renieri, *An empirical model of saw tooth instability and multiple Touschek scattering in storage rings*, **Optics Communications**, 244 (2005), pp. 349-353.  
doi: 10.1016/j.optcom.2004.09.053.
- P61. G. Dattoli, L. Mezi, **M. Migliorati**, P. L. Ottaviani, M. E. Couplie, *Potential well distortion saw-tooth instability and FEL dynamics*, **Nuclear Instruments and Methods in Physics Research**, A 538 (2005), pp. 756-759.  
doi: 10.1016/j.nima.2004.08.130.
- P62. G. Dattoli, **M. Migliorati**, H. M. Srivastava, *Bessel summation formulae and operational methods*, **Journal of Computational and Applied Mathematics**, 173 (2005), pp. 149-154.  
doi: 10.1016/j.cam.2004.03.002.
- P63. D. Alesini, et al. (The SPARX Study Group), *The SPARC/X SASE-FEL Projects*, **Laser and Particle Beams**, 22 (2004), pp. 341-350.  
doi: 10.1017/S0263034604223199.
- P64. G. Dattoli, L. Mezi, **M. Migliorati**, *An operational solution for the motion equation of bodies in non-inertial frames*, **Il Nuovo Cimento**, Vol. 119 B, N. 6 (2004), pp. 565-569,  
10.1393/ncb/i2004-10097-6,  
anche ENEA (ISSN/0393-3016), RT/2004/23/FIS.
- P65. G. Dattoli, **M. Migliorati**, H. M. Srivastava, *A class of Bessel summation formulas and associated operational methods*, **Fractional Calculus & Applied Analysis**, Vol 7, N. 2 (2004), pp. 169-176.
- P66. D. Alesini, R. Boni, A. Gallo, F. Marcellini, **M. Migliorati**, L. Palumbo, M. Zobov, *Third harmonic cavity design and RF measurements for the Frascati DAΦNE collider*, **Physical Review Special Topics - Accelerators and Beams**, 7, 092001 (2004).  
doi: 10.1103/PhysRevSTAB.7.092001.

- P67. G. Dattoli, **M. Migliorati**, H. M. Srivastava, *Some families of generating functions for the Bessel and related functions*, **Georgian Mathematical Journal**, Vol 11, N. 2 (2004), pp. 219-228.
- P68. D. Alesini, et al. (The SPARX Study Group), *Status of the SPARC project*, **Nuclear Instruments and Methods in Physics Research**, A 528 (2004), pp. 586-590.  
doi: 10.1016/j.nima.2004.04.107.
- P69. R. Bartolini, C. Bruni, M. E. Couprise, G. Dattoli, L. Giannessi, D. Garzella, L. Mezi, **M. Migliorati**, G. Orlandi, A. Renieri, *Saturation and electron-beam lifetime in a storage ring free-electron laser*, **Physical Review**, E 69, 036501 (2004).  
doi: 10.1103/PhysRevE.69.036501.
- P70. B. Spataro, D. Brandt, F. Caspers, D. Li, **M. Migliorati**, A. Mostacci, L. Palumbo, F. Ruggiero, L. Vos, *On trapped modes in the LHC recombination chambers: numerical and experimental results*, **Nuclear Instruments and Methods in Physics Research**, A 517 (2004), pp. 19-27.  
doi: 10.1016/j.nima.2003.09.046,  
anche LHC Project Report 604, CERN, (2002), anche LNF-03/14 (P), Frascati, 9 Settembre 2003.
- P71. G. Dattoli, L. Mezi, **M. Migliorati**, *Evolution operators and Euler angles*, **Il Nuovo Cimento**, Vol. 118 B, N. 5 (2003), pp. 493-498, anche ENEA - Serie innovazione (ISSN/0393-3016), RT/2003/56/FIS.
- P72. C. Cesarano, G. Dattoli, **M. Migliorati**, *On new families of summation formulae of ordinary and generalized Bessel functions*, **International Mathematical Journal**, Vol. 4, N. 3 (2003), pp. 239-246.
- P73. D. Alesini, A. Gallo, S. Guiducci, F. Marcellini, **M. Migliorati**, L. Palumbo, M. Zobov, *Longitudinal beam dynamics in the Frascati DAΦNE  $e^+ e^-$  collider with a passive third harmonic cavity in the lengthening regime*, **Physical Review Special Topics - Accelerators and Beams**, 6, 074401 (2003).
- P74. D. Alesini, et al. (The SPARX Study Group), *Conceptual design of a high-brightness linac for soft X-ray SASE-FEL source*, **Nuclear Instruments and Methods in Physics Research**, A 507 (2003), pp. 502-506.
- P75. D. Alesini, et al. (The SPARX Study Group), *The SPARC project: a high-brightness electron beam source at LNF to drive a SASE-FEL experiment*, **Nuclear Instruments and Methods in Physics Research**, A 507 (2003), pp. 345-349, anche contributo a *2003 Particle Accelerator Conference*, pp. 3285-3287, Portland, May 2003, anche SPARC-GE-03/002, Frascati, 11 Maggio 2003.
- P76. G. Franchetti, S. Gilardoni, K. Hanke, E. B. Holzer, A. Lombardi, **M. Migliorati**, F. Tazzioli, C. Vaccarezza, *Muon phase rotation and cooling: simulation work at CERN*, **Journal of Physics G: Nuclear and Particle Physics**, 29 (2003), pp. 1649-1651, anche CERN-NUFACT Note 119, CERN, 2002.
- P77. G. Dattoli, L. Mezi, **M. Migliorati**, *Motion of bodies in apparent force fields and evolution operator methods*, **Il Nuovo Cimento**, Vol. 117 B, N. 7 (2002), pp. 781-788, anche ENEA - Serie innovazione (ISSN/1120-5571), RT/INN/2001/28.

- P78. R. Bartolini, J. I. M. Botman, G. Dattoli, L. Mezi, **M. Migliorati**, C. Thomas, *An analytical solution for the Haissinski equation with purely inductive wake fields*, **Europhysics Letters**, 60 (1), pp. 66-71, (2002).
- P79. R. Bartolini, G. Dattoli, L. Giannessi, M. Marsi, L. Mezi, **M. Migliorati**, M. Trovo, R. Walker, *Interplay between electron beam instabilities and storage ring FEL dynamics*, **Nuclear Instruments and Methods in Physics Research**, A 491 (2002), pp. 507-511.
- P80. M. Angelici, **M. Migliorati**, A. Mostacci, L. Palumbo, F. Ruggiero, S. Ugoli, *Wakefields due to surface waves in a beam pipe with a periodic rough surface*, **Physical Review Special Topics - Accelerators and Beams**, 5, 044401 (2002).
- P81. R. Bartolini, M. E. Couplie, G. Dattoli, G. De Ninno, L. Mezi, **M. Migliorati**, A. Renieri, R. Roux, *Suppression of the sawtooth instability in a storage ring by free-electron laser: an example of nonlinear stabilization by noise*, **Physical Review Letters**, 87, 134801 (2001).
- P82. G. Dattoli, L. Mezi, **M. Migliorati**, A. Renieri, M. E. Couplie, D. Garzella, D. Nutarelli, C. Thomas, G. De Ninno, R. Walker, *Electron beam properties and impedance characterization for storage rings used for free electron lasers*, **Nuclear Instruments and Methods in Physics Research**, A 471 (2001), pp. 403-411.
- P83. **M. Migliorati**, L. Palumbo, *Longitudinal single-bunch instabilities*, invited review paper published by CERN in the Proceedings of the *Joint US-CERN-JAPAN-RUSSIA Accelerator School, Russia 2000*, in AIP Proceedings 592, *High quality beams*, pp. 231-259, anche LNF-01/005 (P), Frascati, 1 Febbraio 2001.
- P84. G. Dattoli, L. Mezi, **M. Migliorati**, L. Palumbo, *Storage ring free-electron laser and microwave-type instabilities*, **Il Nuovo Cimento** Vol. 115 B, N. 6 (2000), pp. 639-644.
- P85. **M. Migliorati**, L. Palumbo, G. Dattoli, L. Mezi, *Saw-tooth instability in storage rings: simulations and dynamical model*, **Nuclear Instruments and Methods in Physics Research**, A 437 (1999), pp. 134-140.
- P86. G. Dattoli, L. Mezi, **M. Migliorati**, L. Palumbo, A. Renieri, *Storage ring free electron lasers and saw-tooth instability*, **Nuclear Instruments and Methods in Physics Research**, A 433 (1999), pp. 683-689.
- P87. G. Dattoli, L. Mezi, **M. Migliorati**, L. Palumbo, *A Simple model for the saw tooth instability in storage rings*, **Il Nuovo Cimento**, Vol. 112 A, N. 5 (1999), pp. 491-497.
- P88. **M. Migliorati**, L. Palumbo, *Instabilities in storage rings*, **Il Nuovo Cimento**, Vol. 112 A, N. 5 (1999), pp. 461-465.
- P89. **M. Migliorati**, *Single bunch behavior and microwave instability*, **Il Nuovo Cimento**, Vol. 112 A, N. 5 (1999), pp. 485-490.
- P90. G. Dattoli, L. Mezi, **M. Migliorati**, A. Renieri, *Storage ring free electron laser dynamics, with the inclusion of bunch lengthening and energy spread increasing effects*, **The European Physical Journal**, D 6 (1999), pp. 375-381.

- P91. M. Billardon, M. E. Couprie, G. Dattoli, L. Mezi, **M. Migliorati**, D. Nutarelli, A. Renieri, R. Roux, *Storage-ring free-electron-laser dynamics and head-tail instability*, **Physical Review**, E 58 (1998), pp. 6570-6574.
- P92. R. Boni, A. Drago, A. Gallo, A. Ghigo, F. Marcellini, **M. Migliorati**, F. Sannibale, M. Serio, A. Stella, G. Vignola, M. Zobov, *DAΦNE accumulator ring coupling impedance measurements*, **Nuclear Instruments and Methods in Physics Research**, A 418 (1998), pp. 241-248.
- P93. G. Dattoli, L. Mezi, **M. Migliorati**, P. L. Ottaviani, A. Renieri, *Storage-ring free electron laser interaction and longitudinal phase-space dynamics*, **Nuclear Instruments and Methods in Physics Research**, A 407 (1998), pp. 221-223.
- P94. A. Gallo, **M. Migliorati**, L. Palumbo, *Efficiency of the broadband RF cavity longitudinal kicker in DAΦNE*, **Nuclear Instruments and Methods in Physics Research**, A 404 (1998), pp. 223-230.
- P95. S. De Santis, **M. Migliorati**, L. Palumbo, M. Zobov, *Coupling impedance of a hole in a coaxial beam pipe*, **Physical Review**, E 54 (1996), pp. 800-805, anche DAΦNE Technical note G-36, Frascati, December 18, 1995.
- P96. P. Arcioni, R. Boni, S. De Santis, A. Gallo, G. Gerosa, F. Marcellini, **M. Migliorati**, L. Palumbo, L. Perregrini, B. Spataro, *Evaluation of the beam-coupling impedances of the DAΦNE cavity: numerical and analytical results*, **Nuclear Instruments and Methods in Physics Research**, A 366 (1995), pp. 53-59.
- P97. A. Gallo, F. Marcellini, **M. Migliorati**, *Implementation of the fast RF feedback on the DAΦNE beam longitudinal dynamics simulation code*, **Nuclear Instruments and Methods in Physics Research**, A 359 (1995), pp. 445-450.
- P98. **M. Migliorati**, L. Palumbo, M. Zobov, *Bunch length control in DAΦNE by a higher harmonic cavity*, **Nuclear Instruments and Methods in Physics Research**, A 354 (1995), pp. 215-223.
- P99. S. Bartalucci, M. Bassetti, R. Boni, S. De Santis, A. Gallo, A. Ghigo, **M. Migliorati**, L. Palumbo, R. Parodi, M. Serio, B. Spataro, G. Vignola, M. Zobov, *Analysis of methods for controlling multi-bunch instabilities in DAΦNE*, **Particle Accelerators**, Vol. 48 (1995), pp. 213-237.