Curriculum Vitae di Mario Nicodemi

INFORMAZIONI ANAGRAFICHE

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Affiliazione: Dipartimento di Fisica *"E. Pancini"*, Università di Napoli *Federico II*, Complesso Universitario di Monte Sant'Angelo, Via Cintia 4, 80126 Napoli, Italia

Ruolo: Professore Ordinario di Fisica Teorica SC: 02/A2

CARRIERA

Presente

2017-2020 *Einstein BIH Visiting Professor*, Max Delbrück Centre, Berlin, DE
2017- *Prof. Ordinario* Fisica Teorica, Dip.to di Fisica, Univ. di Napoli *Federico II*, IT

Passato

2011-2017 *Prof. Associato* Fisica Teorica, Dip.to di Fisica, Univ. di Napoli *Federico II*, IT
2000-2011 *Ricercatore*, Dip.to di Fisica, Univ. di Naples *Federico II*, IT
1999-2000 *Research Associate*, Imperial College, London, UK
1996-1999 *PostDoc* INFM e *A.Della Riccia Research Fellow* ESPCI, Paris, FR

FORMAZIONE

1996 *Dottorato in Fisica Teorica*, Università di Napoli *Federico II*, IT
1992 *Laurea cum Laude in Fisica*, Università di Napoli *Federico II*, IT

ATTIVITA' DIDATTICA

Ho tenuto corsi e lezioni presso università italiane e all'estero. Alla *Federico II*, in particolare, tengo i corsi di *Sistemi Complessi* e di *Bioinformatica* delle Lauree Magistrali di Fisica e Informatica, e di *Fisica Moderna* presso la Triennale in Fisica.

Elenco principali corsi tenuti

1) 2018-20, "Fisica Moderna", Laurea Triennale in Fisica, Univ. Napoli *Federico II.*
2) 2004-20, "Sistemi Complessi", Laurea Magistrale in Fisica, Univ. di Napoli *Federico II*.
3) 2012-18, "Fisica Generale I", Laurea Triennale in Informatica, Univ. Napoli *Federico II*.
4) 2012-18, "Fisica Generale I", Triennale in Ingegneria, Univ. di Napoli *Federico II*.
5) 2009-18,19-20, "Bioinformatica", L. Magistrale in Informatica, Univ. Napoli *Federico II*.
6) 2002-09, "Meccanica Statistica e Informatica", Informatica, Univ. di Napoli *Federico II*.
7) 2003-07, "Abilità Informatiche", Facoltà di Giurisprudenza, Univ. di Napoli *Federico II*.
8) 2001-02, "Fisica Generale", Facoltà di Farmacia, Univ. di Napoli *Federico II*.

ATTIVITA' DI GESTIONE

Dal 2015 sono il Coordinatore Nazionale dell'*Iniziativa Specifica "Fisica Biologica"* dell'*INFN***.** Sono stato membro di diversi panel e progetti internazionali per la gestione della ricerca e delle sue risorse, incluso l'*Agence Nationale de la Recherche* in Francia, il consorzio *The 4D Nucleome* del National Institute of Health (*NIH*) negli USA, e il *Berlin Institute for Health* in Germania. Ho partecipato a progetti EU come *ITN Marie Curie* e nazionali, come *PRIN*. Presso la *Federico II* sono nel Collegio di Dottorato in Fisica.

ATTIVITA' DI RICERCA

Il mio gruppo di ricerca lavora nel campo della *Meccanica Statistica dei Sistemi Complessi in Fisica*, in particolare su sistemi vetrosi e materiali granulari, e delle sue applicazioni alla *Biologia Molecolare*, sulla regolazione e organizzazione del genoma dei mammiferi, combinando modelli di fisica, simulazioni al computer e analisi di dati sperimentali. Ho pubblicato su riviste internazionali (incluso *Nature*, *PNAS*, *PRL*) circa 140 *articoli* scientifici con circa 4000 *citazioni* (*h-index*=35).

ELENCO PUBBLICAZIONI SCIENTIFICHE

Principali articoli su rivista

143 G.I. Dellino, F. Palluzzi, R. Piccioni, A.M. Chiariello, S. Bianco, L. Furia, G. De Conti, B. Bouwman, G. Melloni, D. Guido, L. Giacò, L. Luzi, D. Cittaro, M.Faretta, M. Nicodemi, N. Crosetto and P.G. Pelicci, *Release of stalled RNA-Polymerase II at specific loci and chromatin domains favors spontaneous DNA double strand breaks formation and predicts cancer translocations*. **Nature Gen.** 51, 1011 (2019).

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138 A.M. Oudelaar, J.O.J. Davies, L.P. Hanssen, J.M. Telenius, R. Schwessinger, Y. Liu, J.M. Brown, D.J. Downes, A.M. Chiariello, S. Bianco, M. Nicodemi, V.J. Buckle, J. Dekker, D.R. Higgs, J.R. Hughes, *Single-allele chromatin interactions reveal regulatory hubs in dynamic compartmentalized domains*. **Nature Gen.** 50, 1744 (2018).

137 S. Bianco, D.G. Lupiáñez, A.M. Chiariello, C. Annunziatella, K. Kraft, R. Schöpflin, L. Wittler, G. Andrey, M. Vingron, A. Pombo, S. Mundlos, M. Nicodemi, *Polymer Physics Predicts the Effects of Structural Variants on Chromatin Architecture*. **Nature Gen.** 50, 662 (2018).

136 M. Marti-Renom, et al.*, *Challenges and guidelines towards 4D nucleome data and model standards*. **Nature Gen.**, 50, 1352 (2018). (*members of the 4DN EU consortium)

135 C. Annunziatella, A.M. Chiariello, A. Esposito, S. Bianco, L. Fiorillo, M. Nicodemi, *Molecular Dynamics simulations of the Strings and Binders Switch Model of chromatin*, **Methods** 142, 81 (2018).

134 C.A. Brackley, J. Johnson, D. Michieletto, A.N. Morozov, M. Nicodemi, P.R. Cook, D. Marenduzzo, ``*Extrusion without a motor: a new take on the loop extrusion model of genome organization*". **Nucleus** 9, 95 (2018).

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132 J. Dekker, et al.*, *The 4D nucleome project*. **Nature** 549, 219 (2017). (*members of the 4DN consortium)

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