CURRICULUM VITAE OF GIOVANNI AMELINO-CAMELIA

born 14.12.1965 in Napoli; married; a 7-year-old daughter and a 5-year-old son;
Ph.D. in physics, Boston University (1993), **Laurea** Universitá di Napoli (1990)

Tenured Researcher and "Professore Aggregato", Dipartimento di Fisica, Universitá di **Roma**

National Coordinator ("Responsabile Nazionale") for Iniziativa Specifica "GS51: Planck-scale phenomenology", Istituto Nazionale di Fisica Nucleare (sites of GS51-IS: Rome, Trieste, Cagliari, Gran Sasso)

nominated member of **Accademia Pontaniana** (Napoli, Italy)

nominated member of **FQXi Foundation** (New York, USA)

nominated member of **Consiglio Scientifico del Festival della Scienza di Genova**

funding recently administered as PI/coordinator (in addition to GS51-IS funding)

2012: research grant of 250k dollars from John Templeton Foundation (West Conshohocken, USA)

2011: grant of 100k euros from European Union (for the "integration" of Michele Arzano)

2009: grant of 45k euros from European Union (for the "integration" of Pierre Martinetti)

2008: research grant of 65k dollars from FQXi Foundation (New York, USA)

some honors

2011 awarded **second-place prize in the annual selection by the Gravity Research Foundation**

2009 awarded the **Premio Sapienza Ricerca** (selected by an international committee to be one of the 3 scientists "representing the excellence of Sapienza University of Rome" at a public cerimony; awarded by the Presidente della Repubblica Italiana, Giorgio Napolitano)

2004-2006 served as nominated member of "**ESA's topical team on fundamental physics in space**"

2003 nominated **James C. Maxwell Fellow of the King's College, London**

1999 awarded the **Haenny Prize** ("best young researcher"; *Association Vaudoise de chercheur en physique*)

a tentative list of "highlights" of my research CV

- more than 100 refereed publications
- 66 publications in journals with impact factor greater than 4
  (9 publications in Nature, 1 in Nature Physics, 3 in Physical Review Letters, 18 in Physical Review, 24 in Physics Letters, 5 in Nuclear Physics, 5 in JCAP, 1 in JHEP)
- more than **6000 citations** [SPIRES/google-scholar]
- **h=41** ["Hirsch index"; SPIRES/google-scholar]
- my paper IntJournModPhysD11,35 is **8th overall**, for number of citations, among the ∼21000 papers published in the area SPIRES-GRQC over the last 15 years
- my paper Nature393,763 is **94th overall**, for number of citations, among the ∼106000 papers published in the area SPIRES-ASTROPH over the last 15 years
- I am single author of 15 papers with more than 50 citations [SPIRES] (my total number of papers with more than 50 citations [SPIRES] is 35)
- I was placed 98th overall (worldwide) in the latest SPIRES study of the "most cited theory authors over the last 5 years" (available at www.slac.stanford.edu/spires/ play/authors/2004/top_5_rank.shtml)

press related

- on two occasions when I had a publication in Nature, the paper was highlighted on the cover of Nature
- my research of the fate of relativistic symmetries in quantum spacetime has been a "cover feature" on New Scientist and was the focus of articles by journalists at Physics World and Scientific American
- my research of quantum-gravity phenomenology has been a "cover feature" on Physics World and was the focus of articles by journalists at the New York Times, New Scientist and Discover Magazine.

Meetings
Each year I am invited as plenary speaker at 7 or 8 conferences. I tend to go to 4 or 5 of them.
I list here a few meetings where my contribution was particularly significant:

- **Director** of the "40th Karpacz Winter School of Theoretical Physics: Quantum Gravity Phenomenology" (Ladek, Poland, 2004)
- **Chairman** and organizer of the "Quantum Gravity Phenomenology session" at the 12th Marcell Grossmann Meeting (paris, France, 2009), at the 11th Marcell Grossmann Meeting (Berlin, Germany, 2006), and at the 10th Marcell Grossmann Meeting (Rio de Janeiro, Brasile, 2003)
- **opening lecture** at the meeting "Fundamental Physics Laws: Gravity and Quantum Gravity" (Paris, France, 2010)
- **opening lecture** of the "Quantum-Gravity-Phenomenology session" at the meeting "IV Mexican Meeting on Mathematical and Experimental Physics" (Mexico City, 2010)
- **opening lecture** at the meeting "Noncommutative Deformations of Special Relativity" (Edinburgo, 2008)
- **closing lecture** at the meeting "From Quantum to Cosmos III" (Airlie Canter, Virginia, USA, 2008)
- **opening lecture** at the meeting "Effective Models of Quantum Gravity" (Waterloo, Canada, 2007)
- **closing lecture** at the meeting "Fisica 2005" (Porto, Portogallo, 2005)
- **Lecturer** (2 lectures) at the "339th WE Heraeus Seminar: Special Relativity" (Potsdam, Germania, 2005)
- **Lecturer** (3 lectures) at the "1st International Summer School on Particle Physics with Cosmic Accelerators", (Bad Honnef, Germania, 2004)
- **Lecturer** (2 lectures) at the "4th International School Bruno Pontecorvo" (Capri, Italy, 2003)
- **Lecturer** (2 lectures) at the "2nd Huntsville Meeting on Particle Acceleration in Astrophysical Plasmas" (Chattanooga, USA, 2002)
- **Lecturer** (2 lectures) alla "35th Karpacz Winter School" (Polanica, Polonia, 1999)

Theses supervision

since 2000 Supervisor of several PhD research theses (G. Mandanici, R. Bruno, N. Loret, F. Briscese, F. Mercati, A. Agostini, A. Marcianó, G. Rosati) and several undergraduate/master research theses (M. Arzano, D. Benedetti, F. D'Andrea, L. Doplicher, A. Procaccini, G. Gubitosi, A. Spinelli, M. Matassa)

Teaching

since 2000 at Universitá di Roma "**La Sapienza**" I teach regularly an advanced course of "Introduction to Quantum Gravity" plus a first-year or second-year undergraduate course (mainly Electrodynamics and Classical Mechanics)

1997 at **Oxford** University I gave once a series of lectures on "Finite-temperature field theory" as part of the graduate course on astroparticle physics primarily held by Subir Sarkar.

9/90-4/92 Teaching Assistant at **Boston University**

Some other professional activities

- **Referee** for nearly all major physics journals, including *Nature*, *Physics Letters B*, *Physical Review D*, *Physical Review Letters*, *Classical and Quantum Gravity*, *Modern Physics Letters A*, *International Journal of Modern Physics A*, *Annals of Physics*, *Europhysics Letters*, *Journal of Mathematical Physics*
- Over these last 6 or 7 years I have also been **Visiting Scholar** in several research institutes, and with a particularly high frequency of visits at the Perimeter Institute, University of North Carolina, MIT, Penn State, Rutherford Laboratory, King's College.

LIST OF PUBLICATIONS

My 20 publications of highest impact:

[A1] **Int. Journ. of Modern Physics D11, 35-60 (2002)**,
G. Amelino-Camelia,
Relativity in space-times with short-distance structure governed by an observer-independent length scale
[This article has received more than 500 citations and is **8th overall**, for number of citations, among the ∼21000 papers published in the area SPIRES-GRQC over the last 15 years]

[A2] **Nature 393, 763-765 (1998)**,
G.Amelino-Camelia,J.Ellis,N.E.Mavromatos,D.V.Nanopoulos,S.Sarkar,
Tests of quantum gravity from observations of gamma-ray bursts
[This article has received ∼600 citations (SPIRES)]

[A3] **Physics Letters B510, 255-263 (2001)**,
G. Amelino-Camelia,
Testable scenario for Relativity with minimum length
[This article has received ∼350 citations (SPIRES)]

[A4] **Physical Review D64, 036005 (2001)**
G.Amelino-Camelia, T.Piran,
Planck-scale Deformation of Lorentz symmetry as a solution to the UHECR and the TeV-gamma paradoxes
[This article has received ∼250 citations (SPIRES)]

[A5] **Nature 398, 216-218 (1999)**,
G. Amelino-Camelia,
Gravity-wave interferometers as quantum-gravity detectors
[This article has received ∼150 citations(SPIRES)]

[A6] **Physics Letters B522, 133-138 (2001)**,
N.R. Bruno, G. Amelino-Camelia, J. Kowalski-Glikman,
Deformed Boost Transformations That Saturate at the Planck Scale
[This article has received ∼200 citations(SPIRES)]

[A7] **Classical and Quantum Gravity 21, 3095-3110 (2004)**,
G. Amelino-Camelia, L. Smolin, A. Starodubtsev,
Quantum symmetry, the cosmological constant and Planck scale phenomenology
[This article has received ∼120 citations(SPIRES)]

[A8] **Int. Journ. of Modern Physics A14, 4301-4324 (2000)**,
G. Amelino-Camelia, S. Majid,
Waves on non-commutative space-time and gamma-ray bursts
[This article has received ∼100 citations(SPIRES)]

[A9] **Physical Review D65, 084044 (2002)**,
G.Amelino-Camelia, M.Arzano,
Coproduct and star product in field theories on Lie-algebra non-commutative space-times
[This article has received ∼100 citations(SPIRES)]

[A10] **Nature 418, 34-35 (2002)**,
G. Amelino-Camelia,
Relativity: Special Treatment
[This article has received ∼130 citations(SPIRES)]

A selection of 10 other high-impact papers concerning the "phenomenology of quantum-gravity theories of not everything":

[B1] **Int. Journ. of Modern Physics D11, 1643-1669 (2002)**,
G. Amelino-Camelia
Doubly Special Relativity: first results and key open problems
[This article has received some 100 citations.]

[B2] **Int. Journ. of Modern Physics A12, 607-624 (1997)**,
G.Amelino-Camelia,J.Ellis,N.E.Mavromatos,D.V.Nanopoulos,
Distance Measurement and Wave Dispersion in a Liouville-String Approach to Quantum Gravity
[This article has received some 150 citations.]

[B3] **Physics Letters B497, 265-270 (2001)**,
G.Amelino-Camelia, T.Piran,
Cosmic rays and TeV photons as probes of quantum properties of space-time
[This article has received some 60 citations.]

[B4] **Physics Letters B528, 181-187 (2002)**,
G. Amelino-Camelia,
Space-time quantum solves three experimental paradoxes
[This article has received some 60 citations.]

[B5] **Modern Physics Letters A9, 3415-3422 (1994)**,
G. Amelino-Camelia,
Limits on the Measurability of Space-time Distances in (the Semi-classical Approximation of) Quantum Gravity
[This article has received some 90 citations.]

[B6] **Lecture Notes in Physics 541, 1-49 (2000)**,
G. Amelino-Camelia,
Are we at the dawn of quantum-gravity phenomenology?
[This article has received some 110 citations.]

[B7] **Modern Physics Letters A17, 899-922 (2002)**,
G. Amelino-Camelia,
Quantum Gravity Phenomenology: Status and Prospects
[This article has received some 90 citations.]

[B8] **Nature 408, 661-664 (2000)**,
G. Amelino-Camelia,
Quantum Theory's last challenge
[This article has received some 50 citations.]

[B9] **Classical and Quantum Gravity 23, 2585-2606 (2006)**,
G. Amelino-Camelia, M. Arzano, Y. Ling, G. Mandanici
Black-hole thermodynamics with modified dispersion relations and generalized uncertainty principles
[This article has received some 60 citations.]

[B10] **Physical Review D62, 024015 (2000)**
G. Amelino-Camelia
Gravity wave interferometers as probes of a low-energy effective quantum gravity
[This article has received some 60 citations.]

A selection of 10 recent publications:

[N1] **Physical Review D80, 084017 (2009)**,
G. Amelino-Camelia, L. Smolin
Prospects for constraining quantum gravity dispersion with near term observations
[This article has received ∼50 citations(SPIRES)]

[N2] **Modern Physics Letters A22, 1779 (2007)**
A. Agostini, G. Amelino-Camelia, M. Arzano, A. Marciano,
Generalizing the Noether theorem for Hopf-algebra spacetime symmetries
[This article has received ∼50 citations(SPIRES)]

[N3] **Nature 468, 40-41 (2010)**
G. Amelino-Camelia
Gravity's weight on unification

[N4] **Nature 462, 291-292 (2009)**
G. Amelino-Camelia
Burst of support for relativity

[N5] **Nature 450, 801-803 (2007)**
G. Amelino-Camelia
Relativity: Still special

[N6] **Nature 448, 257 (2007)**
G. Amelino-Camelia
Walk the Planck

[N7] **Nature Physics 3, 81-83 (2007)**
G. Amelino-Camelia
Neutrinos and quantum spacetime

[N8] **Physical Review Letters 103, 171302 (2009)**
G. Amelino-Camelia, C. Lammerzahl, F. Mercati, G.M. Tino
Constraining the Energy-Momentum Dispersion Relation with Planck-Scale Sensitivity Using Cold Atoms

[N9] **Physical Review Letters 106, 071301 (2011)**
G. Amelino-Camelia, M. Matassa, F. Mercati, G. Rosati
Taming Nonlocality in Theories with Planck-Scale Deformed Lorentz Symmetry

[N10] **Physical Review D82, 084021 (2010)**
U. Jacob, F. Mercati, G. Amelino-Camelia, T. Piran
Modifications to Lorentz invariant dispersion in relatively boosted frames

My most recent work on "frontier subjects" is in part rooted in my previous expertise on more traditional research topics, which also produced some appreciated contributions to main-stream subjects.
On this page I list some publications that are relevant from this perspective.

A selection of 5 papers on traditional quantum-field-theory topics:

[FT1] **Physical Review D47, 2356-2362 (1993)**,
G. Amelino-Camelia, S.-Y. Pi,
Self-consistent improvement of the finite temperature effective potential
[This article has received some 100 citations.]

[FT2] **Physical Review D49, 2740-2751 (1994)**,
G. Amelino-Camelia,
Self-consistently improved finite temperature effective potential for gauge theories

[FT3] **Nuclear Physics B480, 413-456 (1996)**,
G.Amelino-Camelia, I.Kogan, R.Szabo,
Conformal Dimensions from Topologically Massive Quantum Field Theory

[FT4] **Physical Review D54, 6193-6201 (1996)**,
G. Amelino-Camelia, D. Bak, D. Seminara,
String-Inspired Gravity Coupled to Yang-Mills Fields

[FT5] **Physics Letters B407, 268-274 (1997)**,
G.Amelino-Camelia,
Thermal Effective Potential of the O(N) Linear Sigma Model

A selection of 5 papers on traditional particle-physics-phenomenology topics:

[PP1] **Physical Review D56, 6942-6956 (1997)**,
G.Amelino-Camelia, J.D.Bjorken, S.Larsson,
Pion production from baked-Alaska disoriented chiral condensate
[This article has received some 60 citations.]

[PP2] **Nuclear Physics B528, 35-58 (1998)**,
G.Amelino-Camelia,D.Ghilencea,G.G.Ross,
The Effect of Yukawa Couplings on Unification Predictions and the Nonperturbative Limit

[PP3] **Il Nuovo Cimento 108A, 375-393 (1995)**,
F.Acampora, G.Amelino-Camelia, F.Buccella, O.Pisanti, L.Rosa,
Proton decay and neutrino masses in SO(10)

[PP4] **Nuclear Physics B537, 32-46 (1999)**,
B.Allanach,G.Amelino-Camelia,O.Philipsen,O.Pisanti,L.Rosa,
Renormalization Group Naturalness of GUT Higgs Potentials

[PP5] **Physics Letters B465, 291-296 (1999)**,
G. Amelino-Camelia, J. Kapusta,
Neutral kaon system in dense matter and heavy-ion collisions

ABOUT 70 PUBLICATIONS NOT LISTED HERE.
The average number of citations of the 40 papers I have explicitly listed above is ∼110. I have also written, but do not list here, about 70 more papers (see inspirebeta.net/search?p1=Amelino-Camelia&f1=exactauthor). The average number of citations of these other 70 papers is ∼25, which in my research area still indicates a nonnegligible impact