Roberto Di Leonardo

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Personal information

BORN Pescara, 25 July 1973

NATIONALITY Italian

Unique author identifiers

RESEARCHER ID http://www.researcherid.com/rid/B-5831-2012

GOOGLE SCHOLAR ID http://scholar.google.it/citations?user=OXOznKQAAAAJ

Education

2002 University of L'Aquila, Italy - PhD in Physics (excellent)

1998 University of L'Aquila, Italy - Masters Degree in Physics (110/110 cum laude)

1997 Stager at BM29 X-Ray Absorption Spectroscopy Beamline, ESRF, Grenoble, France

Employment history

2020- Full Professor, Physics Department, Sapienza University of Rome

2016-2020 Associate Professor, Physics Department, Sapienza University of Rome

2008-2016 Researcher, National Research Council (CNR)

2004-2008 Tenure Track Researcher, National Institute for Condensed Matter Physics (INFM)

2002-2004 TD Researcher, National Institute for Condensed Matter Physics (INFM)

2001-2002 Post doctoral fellow, Physics Department, Sapienza University of Rome

Visiting positions

2010 Visiting Professor, Kasetsart University, Bangkok, Thailand

2005 Honorary Research Associate, University of Glasgow, UK

2002 Visiting researcher, European Laboratory for Non-Linear Spectroscopies, Florence, IT

Citation metrics

ISI WEB OF SCIENCE total articles in publication list: 117
source titles: 24 PRL, 6 Nat. Comm., 1 PNAS, 1 PRX, 1 Rev. Mod. Phys, 1 Small, ...
times cited: 7104
average citations per article: 61
h-index: 43

GOOGLE SCHOLAR times cited: 9746
h-index: 48

National and international grants as PI

year	acronym	funding agency	call	budget
2022-2025	LOGIC	Ministry of University and Research, IT	Fare 2022	287.000 €
2019-2020	PROTEUS	European Commission H2020	Attract.eu	100.000 €
2020-2025	SYGMA	European Research Council, EU	Advanced Grant	2.397.500 €
2019-2020	Synthetic photobiology for light controllable active matter	Sapienza University	Bando Progetti H2020 - ERC	27.000 €
2018-2021	3DGATE - Sviluppo di un microscopio olografico digitale per l'esplorazione immersiva di microsistemi dinamici in 3D	Regione Lazio, IT	Prot 85-2017-15246 - Avviso Pubblico "Progetti di Gruppi di Ricerca - Conoscenza e Cooperazione per un nuovo modello di Sviluppo" Legge 13/2008 - art.4 - CUP B86C18000970002	149.829 €
2017-2019	ADMIRE	European Research Council, EU	Proof of Concept Grant	150.000 €
2012-2017	SMART	European Research Council, EU	Starting Grant (consolidator profile[1])	1.448.400 €
2010-2014	Microdispositivi a propulsione batterica	Ministry of University, Education and Research, IT	FIRB - Futuro in Ricerca	460.000 €
2008-2009	HOLOMANTRA	National Institute for the Physics of Matter, IT	"Seed" Projects	33.000 €
			total	5.052.729 €

Board membership

2017- Scientific Advisory Board, Institute of Nanotechnology, CNR, IT
2014-2020 Liquid Matter Board, European Physical Society
2012- Editorial Board Member, Scientific Reports, Nature Publishing Group

National and international acknowledgements and awards

2013-2019 Junior Fellow of the School for Advanced Studies Sapienza (SASS)
2010 SMART Future Minds Award, awarded by Mercedes-Benz
2009 Invited Lecture at the Inauguration Ceremony for Academic Year 2009-2010 Sapienza University of Rome
2007 Le Scienze[2] Award for innovative studies in physics
Medal for scientific merits awarded by the President of Italian Republic

[1] The 2012 Starting Grant call had two sub-streams ("starters" and "consolidators"), which corresponded to the current division

[2] Scientific American, Italian Ed.

Organization of scientific meetings

2021	International Programme Committee, 11th Liquid Matter Conference, Prague
2017	International Programme Committee, 10th Liquid Matter Conference, Ljubljana
2017	Scientific Committee, 8th International Discussion Meeting on Relaxations in Complex Systems, Wisla, Poland
2009-2016	Program Committee, SPIE - Optical Trapping and Optical Micromanipulation VI, VII, VIII, IX, X, XI, XII, XIII, XIV, San Diego, USA (2009-2016)
2009	Scientific Committee, 6th International Discussion Meeting on Relaxations in Complex Systems, Rome, Italy

Invited talks, seminars and lectures

SEMINARS	22 invited seminars and colloquia in foreign institution (including NYU, UCSB, Cambridge, Oxford, Ecole Normale Paris)
LECTURES	8 invited lectures at International summer schools
TALKS	49 invited talks at international conferences: including 3 keynote.

Supervision of students and post doctoral fellows

- 10 Postdocs
- 14 PhD Students
- 23 Master Students (laurea magistrale)
- 30 BSc Students (laurea triennale)

Teaching activities

PHYSICS SAPIENZA	2019-	Biophysics, Masters Degree in Physics
	2017-	Thermodynamics, Bachelors Degree in Physics
	2004-	Lab activities for Condensed Matter Physics and Physics of Biosystems
	2008/2010	Electromagnetism (exercises), Bachelors Degree in Physics
	2005/2006	Classical Mechanics (exercises), Bachelors Degree in Physics
	2004/2005	Thermodynamics (exercises), Bachelors Degree in Physics
	2002/2003	Electromagnetism (exercises), Bachelors Degree in Physics
BIOLOGY SAPIENZA	2016-2019	Data Analysis, Masters Degree in Genetics and Molecular Biology
SSAS SAPIENZA	2016/2017	Physics models for biological phenomena
	2015/2016	Microphysics: physical phenomena at the micron scale
	2012/2013	Laboratory on experimentation: theory and inventions

Referee activity

INTL GRANTS	Starting Grant, Consolidator Grant, Advanced Grant - European Research Council
	Fund for Scientific Research – FNRS, Belgium
	Vici Grant, Netherlands Organisation for Scientific Research
	FNP-HOMING: Foundation for Polish Science
	FNP-FIRST Foundation for Polish Science
	Start Programme, Austrian Science Fund (FWF)

Individual Research Grant, Israel Science Foundation

National Research Funding Competition, FONDECYT, Chile

SCIENTIFIC JOURNALS Nature, Nature Physics, Nature Materials, Nature Photonics, Nature Communications
Science Advances, PNAS, Scientific Reports, PRL, PRX, PRE, PRB,
Soft Matter, Lab on Chip, Langmuir, New Journal of Physics,
Optics Express, Optics Letters, Optics Communications,
eLife, Current Opinion in Systems Biology,
PLOS One, Applied Physics Letter, and more

PhD COMMITTEE Université Lyon 1 (2013)
Université Pierre et Marie Curie, Paris, FR (2015)
Université Paris-Diderot, Paris, FR (2017)
Università della Calabria, IT (2017)
Università Roma 3, IT (2019)

Full publication list

110. Rectification and confinement of photokinetic bacteria in an optical feedback loop.
Helena Massana-Cid, Claudio Maggi, Giacomo Frangipane, Roberto Di Leonardo,
Nature Communications **13**, 2740, (2022).

109. Flagellar elasticity and the multiple swimming modes of interfacial bacteria.
S. Bianchi, F. Saglimbeni, G. Frangipane, R. Di Leonardo,
Phys. Rev. Research **4**, L022044, (2022).

108. Optical diffraction tomography of 3D microstructures using a low coherence source.
S Bianchi, F Brasili, F Saglimbeni, B Cortese, R Di Leonardo,
Optics Express **30**, 22321-22332, (2022).

107. Optical diffraction tomography of 3D microstructures using a low coherence source.
S Bianchi, F Brasili, F Saglimbeni, B Cortese, R Di Leonardo,
Optics Express **30**, 22321-22332, (2022).

106. A virtual reality interface for the immersive manipulation of live microscopic systems
S Ferretti, S Bianchi, G Frangipane, R Di Leonardo
Scientific reports **11**, 1-9, (2021).

105. A transition to stable 1D swimming enhances *E.coli* motility through narrow channels,
G.Vizsnyiczai, G.Frangipane, S.Bianchi, F.Saglimbeni, D.Dell'Arciprete, R. Di Leonardo,
Nature Communications, **11**, 2340, (2020).

104. Brownian fluctuations, hydrodynamics and elasticity of a microhelix,
S.Bianchi, V. Carmona Sosa, G.Vizsnyiczai, R. Di Leonardo,
Scientific Reports, **10**, 1-8, (2020).

103. Invariance properties of bacterial random walks in complex structures,
G. Frangipane, G. Vizsnyiczai, C. Maggi, R. Savo, A. Sciortino, S. Gigan, R. Di Leonardo,
Nature Communications, **10**, 2442, (2019).

102. "3D dynamics of bacteria wall entrapment at a water–air interface",
S. Bianchi, F. Saglimbeni, G. Frangipane, D. Dell'Arciprete, R. Di Leonardo,
Soft Matter, **15**, 3397-3406, (2019).

101. "An optical reaction micro-turbine",
S. Bianchi, G. Vizsnyiczai, S. Ferretti, C. Maggi, R. Di Leonardo,
Nature Communications, **9**, 4476, (2018)

100. "Dynamic density shaping of photokinetic *E.coli*"
G. Frangipane, D. Dell'Arciprete, S. Petracchini, C. Maggi, F. Saglimbeni, S. Bianchi,
G. Vizsnyiczai, M. L. Bernardini, R. Di Leonardo,
eLife, **7**, e36608, (2018).

99. "Microrheology of DNA hydrogel gelling and melting on cooling"
J. Fernandez-Castanon, S. Bianchi, F. Saglimbeni, R. Di Leonardo, F. Sciortino,
Soft Matter, **14**, 6431-6438, (2018).

98. "Currents and flux-inversion in photokinetic active particles"
C. Maggi, L. Angelani, G. Frangipane, R. Di Leonardo,
Soft Matter, **14**, 4958-4962, (2018).

97. "Memory-less response and violation of the fluctuation-dissipation theorem in colloids suspended in an active bath"
C. Maggi, M. Paoluzzi, L. Angelani, R. Di Leonardo,
Scientific Reports, **7**, 17588, (2017).

96. "Light controlled 3D micromotors powered by bacteria"
G. Vizsnyiczai, G. Frangipane, C. Maggi, F. Saglimbeni, S. Bianchi, R. Di Leonardo,
Nature Communications, **8**, 15974, (2017).

95. "Holographic Imaging Reveals the Mechanism of Wall Entrapment in Swimming Bacteria"
S. Bianchi, F. Saglimbeni, R. Di Leonardo,
Phys. Rev. X, 7, 011010 (2017)

94. "Mechanism of self-propulsion in 3D-printed active granular particles"
N. Koumakis, A. Gnoli, C. Maggi, A. Puglisi, R. Di Leonardo,
New Journal of Physics, **18**, 113046 (2016)

93. "Holographic tracking and sizing of optically trapped microprobes in diamond anvil cells"
F. Saglimbeni, S. Bianchi, G. Gibson, R. Bowman, M. Padgett, R. Di Leonardo,
Optics Express, **24**, 27009–27015 (2016)

92. "Active Particles in Complex and Crowded Environments"
C. Bechinger, R. Di Leonardo, H. Löwen, C. Reichhardt, G. Volpe, G. Volpe,
Rev. Mod. Phys., **88**, 045006 (2016)

91. "Shape and Displacement Fluctuations in Soft Vesicles Filled by Active Particles"
M. Paoluzzi, R. Di Leonardo, M. Cristina Marchetti, L. Angelani
Scientific Reports, **6**, 34146 (2016)

90. "Active colloids: Controlled collective motions"
R. Di Leonardo,
Nature Materials, **15**, 1057–1058 (2016)

89. "Active dynamics of colloidal particles in time-varying laser speckle patterns"
S. Bianchi, R. Pruner, G. Vizsnyiczai, C. Maggi, R. Di Leonardo,
Scientific Reports, **6**, 27681 (2016)

88. "Velocity distribution in active particles systems"
U. Marini Bettolo Marconi, N. Gnan, M. Paoluzzi, C. Maggi, R. Di Leonardo,
Scientific Reports, **6**, 23297, (2016)

87. "Self-Assembly of Micromachining Systems Powered by Janus Micromotors"
C. Maggi, J. Simmchen, F. Saglimbeni, J. Katuri, M. Dipalo, F. De Angelis,
S. Sanchez, R. Di Leonardo,
Small, **12**, 446–451, (2016)

86. "Self-Sustained Density Oscillations of Swimming Bacteria Confined in Microchambers"
M. Paoluzzi, R. Di Leonardo, L. Angelani,
Phys. Rev. Lett., **115**, 188303 (2015)

85. "Micromotors with asymmetric shape that efficiently convert light into work by thermocapillary effects"
C. Maggi, F. Saglimbeni, M. Dipalo, F. De Angelis, R. Di Leonardo,
Nat. Commun., **6**, 7855 (2015)

84. "Hydrodynamic Trapping of Swimming Bacteria by Convex Walls"
O. Sipos, K. Nagy, R. Di Leonardo, P. Galajda,
Phys. Rev. Lett., **114**, 258104 (2015)

83. "Multidimensional stationary probability distribution for interacting active particles"
C. Maggi, U. Marini Bettolo Marconi, N. Gnan, R. Di Leonardo
Scientific Reports, **5**, 10742 (2015)

82. "Polar features in the flagellar propulsion of E. coli bacteria"
S. Bianchi, F. Saglimbeni, A. Lepore, R. Di Leonardo,
Phys. Rev. E, **91**, 062705, (2015)

81. "Generalized Energy Equipartition in Harmonic Oscillators Driven by Active Baths"
C. Maggi, M. Paoluzzi, N. Pellicciotta, A. Lepore, L. Angelani, R. Di Leonardo
Phys. Rev. Lett., **113**, 238303, (2014)

80. "First-passage time of run-and-tumble particles"
L. Angelani, R. Di Leonardo, M. Paoluzzi,
The European Physical Journal E, **37**, 59 (2014)

79. "Directed transport of active particles over asymmetric energy barriers"
N. Koumakis, C. Maggi, R. Di Leonardo,
Soft Matter, **10**, 5695-5701, (2014)

78. "Run-and-tumble particles in speckle fields"
M. Paoluzzi, R. Di Leonardo, L. Angelani,
Journal of Physics: Condensed Matter, **26**, 375101 (2014)

77. "Three-axis digital holographic microscopy for high speed volumetric imaging"
F. Saglimbeni, S. Bianchi, A. Lepore, R. Di Leonardo,
Opt. Express, **22**, 13710–13718, (2014)

76. "High numerical aperture imaging by using multimode fibers with micro-fabricated optics"
S. Bianchi, V.P. Rajamanickam, L. Ferrara, et al.
2014 Conference on Lasers and Electro-Optics (2014)

75. "Focusing and imaging with increased numerical apertures through
multimode fibers with micro- fabricated optics"
S. Bianchi, V.P. Rajamanickam, L. Ferrara, E. Di Fabrizio, C. Liberale, R. Di Leonardo,
Optics Letters, **38**, 4935–4938, (2013)

74. "Targeted delivery of colloids by swimming bacteria"
N. Koumakis, A. Lepore, C. Maggi, R. Di Leonardo,
Nature Communications, **4**, 2588 (2013)

73. "Motility fractionation of bacteria by centrifugation"
C. Maggi, A. Lepore, J. Solari, A. Rizzo, R. Di Leonardo,
Soft Matter, **9**, 10885-10890 (2013)

72. "Effective run-and-tumble dynamics of bacteria baths"
M. Paoluzzi, R. Di Leonardo, L. Angelani,
Journal of Physics: Condensed Matter, **25**, 415102 (2013)

71. "Stochastic Hydrodynamic Synchronization in Rotating Energy Landscapes"
N. Koumakis, R. Di Leonardo,
Phys. Rev. Lett., **110**, 174103, (2013)

70. "Optical Trapping at Gigapascal Pressures"
R.W. Bowman, G.M. Gibson, M.J. Padgett, F. Saglimbeni, R. Di Leonardo,
Phys. Rev. Lett., **110**, 095902 (2013)

69. "Implementing Optical Tweezers at High Pressure in a Diamond Anvil Cell"
R.W. Bowman, F. Saglimbeni, G.M. Gibson, et al.
Complex Light and Optical Forces VII, **8637** (2013)

68. "Probability distributions for the run-and-tumble bacterial dynamics:
An analogy to the Lorentz model"
K. Martens, L. Angelani, R. Leonardo, L. Bocquet,
The European Physical Journal E, **35**, 1-6 (2012)

67. "Optical characterization of an individual polymer-shelled microbubble
structure via digital holog- raphy"
F. Saglimbeni, S. Bianchi, G. Bolognesi, G. Paradossi, R. Di Leonardo,
Soft Matter, **8**, 8822-8825 (2012)

66. "Measurement of the Four-Point Susceptibility of an Out-of-Equilibrium Colloidal Solution
of Nanoparticles Using Time-Resolved Light Scattering"
C. Maggi, R. Di Leonardo, G. Ruocco, J. C. Dyre,
Phys. Rev. Lett., **109**, 097401, (2012)

65. "Hydrodynamic Synchronization of Light Driven Microrotors"
R. Di Leonardo, A. Buzas, L. Kelemen, G. Vizsnyiczai, L. Oroszi, P. Ormos,
Phys. Rev. Lett., 109, 034104, (2012)

64. "Partial Synchronization of Stochastic Oscillators through Hydrodynamic Coupling"
A. Curran, M.P. Lee, M.J. Padgett, J.M. Cooper, R. Di Leonardo,
Phys. Rev. Lett., **108**, 240601, (2012)

63. "Transport of self-propelling bacteria in micro-channel flow"
A. Costanzo, R. Di Leonardo, G. Ruocco, L. Angelani,
Journal of Physics: Condensed Matter, **24**, 065101, (2012)

62. "A multi-mode fiber probe for holographic micromanipulation and microscopy"
S. Bianchi, R. Di Leonardo,
Lab Chip, **12**, 635-639, (2012)

61. "Active ratchets"
L. Angelani, A. Costanzo, R. Di Leonardo,
Europhysics Letters, **96**, 68002, (2011)

60. "Effective Interactions between Colloidal Particles Suspended in
a Bath of Swimming Cells"
L. Angelani, C. Maggi, M. L. Bernardini, A. Rizzo, R. Di Leonardo,
Phys. Rev. Lett., **107**, 138302, (2011)

59. "Real-time digital holographic microscopy of multiple and arbitrarily oriented planes"
L. Cavallini, G. Bolognesi, R. Di Leonardo,
Opt. Lett., **36**, 3491–3493, (2011)

58. "Digital holographic tracking of microprobes for multipoint viscosity measurements"
G. Bolognesi, S. Bianchi, R. Di Leonardo,
Opt. Express, **19**, 19245, (2011)

57. "Three-Dimensional to Two-Dimensional Crossover in the
Hydrodynamic Interactions between Micron-Scale Rods"
R. Di Leonardo, E. Cammarota, G. Bolognesi, H. Schafer, M. Steinhart,
Phys. Rev. Lett., **107**, 044501, (2011)

56. "Numerical modeling of bacteria propelled micromotors"
L. Angelani, R. Di Leonardo,
Computer Physics Communications, **182**, 1970 (2011)

55. "Holographic optical tweezers and their relevance to lab on chip devices"
M.J. Padgett, R. Di Leonardo,
Lab Chip, **11**, 1196 (2011)

54. "Swimming with an image"
R. Di Leonardo, D. Dell'Arciprete, L. Angelani, V. Iebba,
Phys. Rev. Lett., **106**, 038101 (2011)

53. "Hologram transmission through multi-mode optical fibers"
R. Di Leonardo, S. Bianchi,
Optics Express, **19**, 247-254 (2011)

52. "Hydrodynamic assisted barrier escape"
A. Curran, M.P. Lee, R. Di Leonardo, et al.
Optical Trapping and Optical Micromanipulation VIII, **8097** (2011)

51. "Geometrically biased random walks in bacteria-driven micro-shuttles"
L. Angelani, R. Di Leonardo,
New Journal of Physics, **12**, 113017 (2010)

50. "Bacterial ratchet motors"
R. Di Leonardo, L. Angelani, D. Dell'Arciprete, G. Ruocco, V. Iebba, S. Schippa,
M.P. Conte, F. Mecarini, F. De Angelis, E. Di Fabrizio,
PNAS, **107**, 9541 (2010)

49. "Generalized fluctuation-dissipation relation and effective temperature in
off-equilibrium colloids"
C. Maggi, R. Di Leonardo, J. C. Dyre, G. Ruocco,
Phys. Rev. B, **81**, 104201 (2010)

48. "Real-time optical micro-manipulation using optimized holograms generated on the GPU"
S. Bianchi, R. Di Leonardo,
Comp. Phys. Comm., **181**, 1444, (2010)

47. "Kinetics of formation of supramolecular tubules of a sodium cholate derivative"
L. Galantini, C. Leggio, A. Jover, F. Meijide, N. Viorel Pavel, V. H. Soto Tellini,
J. Vazquez Tato, R. Di Leonardo, G. Ruocco,
Soft Matter, **5**, 3018-3025 (2009)

46. "Multipoint viscosity measurements in microfluidic channels using optical tweezers"
S. Keen, A. Yao, J. Leach, R. Di Leonardo, C. Saunter, G. Love, J. Cooper, M. Padgett,
Lab on a Chip, **9**, 2059-2062 (2009)

45. "Underdamped modes in a hydrodynamically coupled microparticle system"
A.M. Yao, S. Keen, D.R. Burnham, J. Leach, R. Di Leonardo, D. McGloin, M.J. Padgett,
New J. Phys., **11**, 053007 (2009)

44. "Optical trapping studies of colloidal interactions in liquid films"
R. Di Leonardo, F. Ianni, F. Saglimbeni, G. Ruocco, S. Keen, J. Leach, M. J. Padgett,
ColloidsSurf.A: Physicochem. Eng. Aspects, **343**, 133, (2009)

43. "Comparison of Faxen's correction for a microsphere translating or rotating near a surface"
J. Leach, H. Mushfique, S. Keen, R. Di Leonardo, G. Ruocco, J.M. Cooper, M.J. Padgett,
Physical Review E, **79**, 026301, (2009)

42. "Self-starting micromotors in a bacterial bath"
L. Angelani, R. Di Leonardo, G. Ruocco,
Phys. Rev. Lett., **102**, 048104, (2009)

41. "Colloidal attraction induced by a temperature gradient"
R. Di Leonardo, F. Ianni, Ruocco G.,
Langmuir, **25**, 4247, (2009)

40. "Optically driven pumps and flow sensors for microfluidic systems"
H. Mushfique, J. Leach, R. Di Leonardo, M.J. Padgett, J.M. Cooper,
Proc. Inst. Mech. Eng. C, **222**, 829-837 (2008)

39. "Hydrodynamic Interactions in Two Dimensions"
R. Di Leonardo, S. Keen, F. Ianni, J. Leach, M. Padgett, G. Ruocco,
Phys. Rev. E, **78**, 031406 (2008)

38. "3D Mapping of Microfluidic Flow in Lab-on-a-Chip Structures using Optical Tweezers"
J. Leach, H. Mushfique, R. Di Leonardo, M. Padgett, J. Cooper,
Analytical Chemistry, **80**, 4237 (2008)

37. "Shear-banding phenomena and dynamical behavior in a Laponite suspension"
F. Ianni, R. Di Leonardo, S. Gentilini, G. Ruocco,
Phys. Rev. E, **77** (2008)

36. "Very Long Range Nature of Capillary Interactions in Liquid Films"
R. Di Leonardo, F. Saglimbeni, G. Ruocco,
Phys. Rev. Lett., **100**, 106103, (2008)

35. "Holographic Optical Tweezers"
G. Spalding, J. Courtial, R. Di Leonardo,
in *Structured light and its applications*, edited by D. Andrews, Elsevier, (2008)

34. "Parametric excitation of optically trapped aerosols"
R. Di Leonardo, G. Ruocco, J. Leach, M. J. Padgett, A. J. Wright, J. M. Girkin,
D. R. Burnham, D. McGloin
Optical Trapping and Optical Micromanipulation IV, 6644, 66441J, (2007)

33. "Eigenmodes of a hydrodynamically coupled micron-size multiple-particle ring"
R. Di Leonardo, S. Keen, J. Leach, C.D. Saunter, G.D. Love, G. Ruocco, M. Padgett,
Phys. Rev. E, **76**, 061402, (2007)

32. "Computer generation of optimal holograms for optical trap arrays"
R. Di Leonardo, F. Ianni, G. Ruocco,
Optics Express, **15**, 1913, (2007)

31. "Aging after shear rejuvenation in a soft glassy colloidal suspension: Evidence for two different regimes"
F. Ianni, R. Di Leonardo, S. Gentilini, Ruocco G.,
Phys. Rev. E, **75**, 011408, (2007)

30. "Parametric Resonance of Optically Trapped Aerosols"
R. Di Leonardo, G. Ruocco, J. Leach, M. J. Padgett, A. J. Wright,
J. M. Girkin, D. R. Burnham, D. McGloin,
Physical Review Letters, **99**, 010601, (2007)

29. "Ageing of the nonlinear optical susceptibility in soft matter"
N. Gofraniha, C. Conti, R. Di Leonardo, B. Ruzicka, G. Ruocco,
J. Phys. Cond. Matt., **19**, 205129, (2007)

28. "Aging and Flow in a Complex Fluid"
R. Di Leonardo, S. Gentilini, F. Ianni, G. Ruocco,
J. Non-Cryst. Sol., **352**, 4928, (2006)

27. "Aberration correction in holographic optical tweezers"
K.D. Wulff, D.G. Cole, R.L. Clark, Di Leonardo, J. Leach, J. Cooper,
G. Gibson, M.J. Padgett,
Optics Express, **14**, 4169, (2006)

26. "An optically driven pump for microfluidics"
J. Leach, H. Mushfique, R. Di Leonardo, Padgett M., J. Cooper,
Lab on a Chip, **6**, 735, (2006)

25. "Multipoint Holographic Optical Velocimetry in Microfluidic Systems"
R. Di Leonardo, J. Leach, H. Mushfique, J. M. Cooper, G. Ruocco, M. J. Padgett,
Physical Review Letters, **96**, 134502, (2006)

24. Optical pumps and sensors for micro-fluidic devices
M. Padgett, R. Di Leonardo, J. Leach, et al.
Nanomanipulation with Light II, **6131** (2006)

23. "Hard-Sphere-like Dynamics in a Non-Hard-Sphere Liquid"
T. Scopigno, R. Di Leonardo, L. Comez, A. Q. R. Baron, D. Fioretto, G. Ruocco,
Physical Review Letters, **94**, 155301, (2005)

22. "Comment on - Hard-sphere-like dynamics in a non-hard-sphere liquid - Reply"
T. Scopigno, R. Di Leonardo, L. Comez, A. Baron, D. Fioretto, G. Ruocco, W. Montfrooij,
Physical Review Letters, **95**, 269602, (2005)

21. "Aging under shear: Structural relaxation of a non-Newtonian fluid"
R. Di Leonardo, F. Ianni, G. Ruocco,
Phys. Rev. E, **71**, 011505, (2005)

20. "Flow between rotating finite disks with a closed end condition studied by heterodyne photon- correlation"
R. Di Leonardo, F. Ianni, G. Ruocco,
Journal of Fluid Mechanics, **525**, 27, (2005)

19. "A Spectroscopic Cell for Fast Pressure Jumps Across the Glass Transition Line"
R. Di Leonardo, T. Scopigno, G. Ruocco, U. Buontempo,
Rev. Sci. Instr., **75**, 2631, (2004)

18. "High Frequency transverse-like excitations in glassy glycerol"
T. Scopigno, E. Pontecorvo, R. Di Leonardo, M. Krish, G. Monaco,
G. Ruocco, B. Ruzicka, F. Sette,
Philos. Mag., **84**, 1453, (2004)

17. "Inelastic x-ray scattering and the high frequency dynamics of molecular liquids"
E. Pontecorvo, R. Di Leonardo, C. Masciovecchio, G. Ruocco, B. Ruzicka,
T. Scopigno, F. Sette,
Pure and Applied Chemistry, **76**, 79, (2004)

16. "High Frequency Dynamics in a Monatomic Glass"
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