



CENTER FOR
COMPLEXITY
& BIOSYSTEMS

University of Milan

COMPLEXITYBIOSYSTEMS.IT
COMPLEXITY@UNIMI.IT

ACTIVITY REPORT

OCTOBER, 2017

SUMMARY

From April 2015 to October 2017, CC&B researchers have published 70 papers in international journals (including high impact journals such as 3 papers in PNAS, 1 in Nature Communications, 2 in Nano Letters and 2 in Phys. Rev. Lett.), 28 conference proceedings and delivered 67 invited talks. CC&B has organized three workshops in Milano and contributed to the organization of 2 international summer schools and 9 other workshop/conferences. CC&B hosted 35 seminars by renowned international guests, 2 tutorial session and 4 journal clubs. The results and activities of CC&B were featured more than 50 times in the press and in other media. We provide below the detailed list of all these results and activities.

Publications	— 02
Conference proceedings/presentations	— 05
Books	— 06
CC&B Workshops	— 07
Conferences/Workshops/Schools organization	— 07
Talks by CC&B members	— 07
CC&B seminars	— 09
CC&B journal club	— 12
CC&B tutorials	— 12
Press/media coverage	— 12
Grants	— 14
Awards and Prizes	— 14

1. Alessandro Taloni, Elena Kardash, Oguz Umut Salman, Lev Truskinovsky, Stefano Zapperi, and Caterina A.M. La Porta, **Volume Changes During Active Shape Fluctuations in Cells**, *Phys. Rev. Lett.* 114, 208101 (2015)
<https://doi.org/10.1103/PhysRevLett.114.208101>
2. Contini, A. and Tiana, G., **A many-body term improves the accuracy of effective potentials based on protein coevolutionary data**, *The Journal of Chemical Physics*, 143, 025103 (2015)
<https://doi.org/10.1063/1.4926665>
3. G. Tiana, **Effect of disorder on the contact probability of elongated conformations of biopolymers**, *Physical Review E* 92, 010702(R) (2015)
<https://doi.org/10.1103/PhysRevE.92.010702>
4. Alessandro Luigi Sellerio, Alessandro Taloni, and Stefano Zapperi, **Fracture Size Effects in Nanoscale Materials: The Case of Graphene**, *Phys. Rev. Applied* 4, 024011 (2015)
<https://doi.org/10.1103/PhysRevApplied.4.024011>
5. Y. J. Chen, Stefano Zapperi, and James P. Sethna, **Crossover behavior in interface depinning**, *Phys. Rev. E* 92, 022146 (2015)
<https://doi.org/10.1103/PhysRevE.92.022146>
6. Z. Bertalan, Z. Budrikis, C. A. M. La Porta, S. Zapperi, **Navigation Strategies of Motor Proteins on Decorated Tracks**, *PLoS ONE* 10(8): e0136945 (2015)
<https://doi.org/10.1371/journal.pone.0136945>
7. A. Sanzeni, A. Celani, G. Tiana, M. Vergassola, **Theory of feedback controlled brain stimulations for Parkinson's disease**, *Physica A* 441, 121 (2015)
<https://doi.org/10.1016/j.physa.2015.08.019>
8. Valentina Coccè, Alessandro Vitale, Silvia Colombo, Arianna Bonomi, Emilio Ciusani, Loredana Cavicchini, Francesca Sisto, Giulio Alessandri, Eugenio Parati, Paolo Brambilla, Maura Brambilla, Caterina AM La Porta, Augusto Pessina, **Human skin derived fibroblasts as trojan horse of drug delivery**, *Clinical and Experimental Dermatology* 41, 417 (2016)
<https://doi.org/10.1111/ced.12811>
9. Zsolt Bertalan, Zoe Budrikis, Caterina A. M. La Porta, Stefano Zapperi, **Role of the Number of Microtubules in Chromosome Segregation during Cell Division**, *PLoS One*, 10, e0141305 (2015)
<https://doi.org/10.1371/journal.pone.0141305>
10. Carlotta Negri, Alessandro L. Sellerio, Stefano Zapperi, M. Carmen Miguel, **Deformation and failure of curved colloidal crystal shell**, *PNAS*, 47, 14545 (2015)
<https://doi.org/10.1073/pnas.1518258112>
11. Alessandro L. Sellerio, Emilio Ciusani, Noa Bossel Ben-Moshe, Stefania Coco, Andrea Piccinini, Christopher R. Myers, James P. Sethna, Costanza Giampietro, Stefano Zapperi & Caterina A. M. La Porta, **Overshoot during phenotypic switching of cancer cell populations**, *Scientific Report*, 5, 15464 (2015)
<https://doi.org/10.1038/srep15464>
12. Alessandro Taloni, Yasmine Meroz, Adrian Huerta, **Collisional statistics and dynamics of two-dimensional hard-disk systems: From fluid to solid**, *Phys. Rev. E* 92, 2, 022131 (2015)
<https://doi.org/10.1103/PhysRevE.92.022131>
13. Alessandro Taloni, Martine Ben Amar, Stefano Zapperi and Caterina A.M. La Porta, **The role of pressure in cancer growth**, *EPJ Plus*, 130 11 224 (2015)
<https://doi.org/10.1140/epjp/i2015-15224-0>
14. Zoe Budrikis and Stefano Zapperi, **Temperature-Dependent Adhesion of Graphene Suspended on a Trench**, *Nano Lett.*, 16 (1), pp 387–391 (2016)
<https://doi.org/10.1021/acs.nanolett.5b03958>
15. Riccardo Capelli, Francois Villemot, Elisabetta Moroni, Guido Tiana, Arjan van der Vaart, and Giorgio Colombo, **Assessment of Mutational Effects on Peptide Stability through Confinement Simulations**, *J. Phys. Chem. Lett.*, 2016, 7 (1), pp 126–130
<https://doi.org/10.1021/acs.jpcllett.5b02221>
16. A. Sanzeni, V. Balasubramanian, G. Tiana and M. Vergassola, **Complete coverage of space favors modularity of the grid system in the brain**, *Phys. Rev. E* 94, 062409 (2016)
<https://doi.org/10.1103/PhysRevE.94.062409>
17. J. Marangon, M. S. Christodoulou, F. Casagrande, G. Tiana, L. Dalla Via, A. Aliverti, D. Passarella, G. Cappelletti, S. Ricagno, **Tools for the rational design of bivalent microtubule-targeting drugs**, *Biochem. Biophys. Res. Comm.* 479, 48 (2016)
<https://doi.org/10.1016/j.bbrc.2016.09.022>
18. Y. Zhan, L. Giorgetti, G. Tiana, **Looping probability of random heteropolymers helps to understand the scaling properties of biopolymers**, *Phys. Rev. E* 94, 032402 (2016)
<https://doi.org/10.1103/PhysRevE.94.032402>
19. F. Vasile, M. Civera, L. Belvisi, D. Potenza, G. Tiana, **Thermodynamically-Weighted Conformational Ensemble of Cyclic RGD Peptidomimetics From NOE Data**, *J. Phys. Chem. B* 120, 7098 (2016)
<https://doi.org/10.1021/acs.jpccb.6b04941>

20. G. Tiana, A. Amitai, T. Pollex, T. Pilot, D. Holcman, E. Heard, L. Giorgetti, **Structural fluctuations of the chromatin fiber within topological associating domains**, *Biophys. J.* 110, 1234 (2016)
<https://doi.org/10.1016/j.bpj.2016.02.003>
21. Paolo Boldi and Sebastiano Vigna, **Efficient optimally lazy algorithms for minimal-interval semantics**, *Theoretical Computer Science*, 648:8–25, (2016)
<https://doi.org/10.1016/j.tcs.2016.07.036>
22. Robert Meusel, Sebastiano Vigna, Oliver Lehmborg, and Christian Bizer, **The graph structure in the web—Analyzed on different aggregation levels**, *The Journal of Web Science*, 1(1):33–47, (2015)
<https://doi.org/10.1561/106.00000003>
23. Sebastiano Vigna, **An experimental exploration of Marsaglia's xorshift generators, scrambled**, *ACM Trans. Math. Software*, 42(4), (2016)
<https://doi.org/10.1145/2845077>
24. Young Ho Eom, Pablo Aragón, David Laniado, Andreas Kaltenbrunner, Sebastiano Vigna, and Dima L. Shepelyansky, **Interactions of cultures and top people of Wikipedia from ranking of 24 language editions**, *PLoS ONE*, 10(3), (2015)
<https://doi.org/10.1371/journal.pone.0114825>
25. Paolo Boldi, Irene Crimaldi, Corrado Monti, **A network model characterized by a latent attribute structure with competition**, *Inf. Sci.* 354: 236–256, (2016)
<https://doi.org/10.1016/j.ins.2016.02.057>
26. C. A. M. La Porta, S. Zapperi, **Biophysical processes in fibrosis**, *Physics of Life Reviews* 17, 103 (2016)
<https://doi.org/10.1016/j.plrev.2016.04.007>
27. Giulio Costantini, Zoe Budrikis, Alessandro Taloni, Alexander K. Buell, Stefano Zapperi, and Caterina A. M. La Porta, **Fluctuations in Protein Aggregation: Design of Preclinical Screening for Early Diagnosis of Neurodegenerative Disease**, *Phys. Rev. Applied* 6, 034012 (2016)
<https://doi.org/10.1103/PhysRevApplied.6.034012>
28. O. Chepizhko, C. Giampietro, E. Mastrapasqua, M. Nourazar, M. Ascagni, M. Sugni, U. Fascio, L. Leggio, C. Malinverno, G. Scita, S. Santucci, M. J. Alava, S. Zapperi, C. A. M. La Porta, **Bursts of activity in collective cell migration**, *PNAS* 113, 11408 (2016)
<https://doi.org/10.1073/pnas.1600503113>
29. A. Lehtinen, G. Costantini, M. J. Alava, S. Zapperi, and L. Laurson, **Glassy features of crystal plasticity**, *Phys. Rev. B* 94, 064101 (2016)
<https://doi.org/10.1103/PhysRevB.94.064101>
30. M. Ovaska, Z. Bertalan, A. Miksic, M. Sugni, C. Di Benedetto, C. Ferrario, L. Leggio, L. Guidetti, M. J. Alava, C. A. M. La Porta, S. Zapperi, **Deformation and fracture of echinoderm collagen networks**, *Journal of the Mechanical Behavior of Biomedical Materials*, 65, 42 (2017)
<https://doi.org/10.1016/j.jmbbm.2016.07.035>
31. Ben Khadra Y., Sugni M., Ferrario C., Bonasoro F., Varela Coelho A., Martinez P., Candia Carnevali M. D., **An integrated view of asteroid regeneration: tissues, cells and molecules**, [Review] *Cell and Tissue Research* 370, 13 (2017)
<https://doi.org/10.1007/s00441-017-2589-9>
32. Czarkwiani A., Dylus D.V., Ferrario C., Sugni M., Oliveri P., **Skeletal regeneration in the brittle star *Amphiura filiformis***, *Frontiers in zoology*, 22;13–18 (2016)
<https://doi.org/10.1186/s12983-016-0149-x>
33. Ferrario C., Leggio L., Leone R., Di Benedetto C., Coccè V., Ascagni M., Bonasoro F., La Porta C. A. M., Candia Carnevali M. D., Sugni M., **Marine-derived collagen biomaterials from echinoderm connective tissues**, *Marine Environmental Research*, 128, 46 (2016)
<https://doi.org/10.1016/j.marenvres.2016.03.007>
34. Mercurio S. and Sugni M., **Comparing in vivo and in vitro approaches in the study of the hormonal regulation of sea urchin reproduction**, *Journal of the Marine Biological Association of UK*, 96 (6), 1363–1372 (2016)
<https://doi.org/10.1017/S0025315415002088>
35. Ben Khadra Y. Ferrario C., Bonasoro F., Candia Carnevali M. D., Sugni M., **Regrowth, morphogenesis and differentiation during starfish arm regeneration**, *Wound repair and regeneration*, 23(4), pp.623–634 (2015)
<https://doi.org/10.1111/wrr.12336>
36. Ben Khadra Y. Ferrario C., Bonasoro F., Candia Carnevali M. D., Sugni M., **Wound repair during arm regeneration in the red starfish *Echinaster sepositus***, *Wound repair and regeneration*, 23(4), pp.611–622 (2015)
<https://doi.org/10.1111/wrr.12333>
37. Mercurio S., Fernandes D., Tremolada P. and Sugni M., **Unraveling estradiol metabolism and involvement in the reproductive cycle of non-vertebrate animals: the sea urchin model**, *Steroids*, 104:25–36 (2015)
<https://doi.org/10.1016/j.steroids.2015.08.008>
38. Wilkie I.C., Fassini D., Cullorà E., Barbaglio A., Tricarico S., Sugni M., Del Giacco L., Candia Carnevali M. D., **Mechanical properties of the compass depressors of the sea-urchin *Paracentrotus lividus* (Echinodermata, Echinoidea) and the effects of enzymes, neurotransmitters and synthetic tensilin-like protein**, *PlosOne*, 10 (3), n. e0120339 (2015)
<https://doi.org/10.1371/journal.pone.0120339>

39. Barbaglio A., S. Tricarico, A. Ribeiro, C. Di Benedetto, M. Barbato, D. Dessì, V. Fugnanesi, S. Magni, F. Mosca, M. Sugni, F. Bonasoro, I. C. Wilkie, M. Barbosa, M. D. Candia Carnevali, **Ultrastructural and biochemical characterization of mechanically adaptable collagenous structures in the edible sea urchin *Paracentrotus lividus***, *Zoology*, 118, 147–160 (2015)
<https://doi.org/10.1016/j.zool.2014.10.003>
40. P. Boldi, A. Luongo, and S. Vigna, **Rank monotonicity in centrality measures**, *Network Science* (2017)
<https://doi.org/10.1017/nws.2017.21>
41. P. Boldi and S. Vigna, **On the lattice of antichains of finite intervals**, *Order* (2016)
<https://doi.org/10.1007/s11083-016-9418-8>
42. S. Vigna, **Spectral ranking**, *Network Science*, 4(4):433–445 (2016)
<https://doi.org/10.1017/nws.2016.21>
43. S. Vigna, **Further scramblings of Marsaglia's xorshift generators**, *Journal of Computational and Applied Mathematics*, 315:175–181, (2016)
<https://doi.org/10.1016/j.cam.2016.11.006>
44. R. Blanco, P. Boldi, Andrea Marino, **Using graph distances for named-entity linking**, *Sci. Comput. Program.* 130: 24–36 (2016)
<https://doi.org/10.1016/j.scico.2015.10.013>
45. F. Cola, F. Marchetti and G. Tiana, **How likely are oscillations in a genetic feedback loop with delay?**, *Europ. Phys. J. E* 40, 74 (2017)
<https://doi.org/10.1140/epje/i2017-11563-y>
46. S. A. Ghadami, F. Bemporad, B. M. Sala, G. Tiana, S. Ricagno and F. Chiti, **FRET studies of the conformational states adopted by transthyretin for amyloid fibril formation**, *Cell. Mol. Life Sci.* 74, 3577 (2017)
<https://doi.org/10.1007/s00018-017-2533-x>
47. R. Meloni and G. Tiana, **Thermodynamic and Structural Effect of Urea and Guanidine Chloride on the Helical and on a Hairpin fragment of GB1 from Molecular Simulations**, *Proteins* 85, 753 (2017)
<https://doi.org/10.1002/prot.25255>
48. H. I. Rösner, M. Caldarini, A. Prestel, M. A. Vanoni, R. A. Broglia, A. Aliverti, G. Tiana and B. B. Kragelund, **Cold denaturation of the HIV-1 protease monomer**, *Biochemistry* 56, 1029 (2017)
<https://doi.org/10.1021/acs.biochem.6b01141>
49. Y. Zhan, L. Mariani, I. Barozzi, E. G. Shultz, N. Bluthgen, M. Stadler, G. Tiana and L. Giorgetti, **Reciprocal insulation analysis of Hi-C data shows that TADs represent a functionally but not structurally privileged scale in the hierarchical folding of chromosomes**, *Genome Res.* 27, 479 (2017)
<https://doi.org/10.1101/gr.212803.116>
50. Y. Zhan, L. Giorgetti and G. Tiana, **Modelling Genome-wide Topological Associating Domains of Mouse Embryonic Stem Cells**, *Chromosome Res.* 25, 5 (2017)
<https://doi.org/10.1007/s10577-016-9544-6>
51. R. Capelli, F. Marchetti, G. Tiana and G. Colombo, **SAGE: a Fast Computational Tool for Linear Epitope Grafting onto a Foreign Protein Scaffold**, *J. Chem. Inf. Model.* 57, 6–10 (2017)
<https://doi.org/10.1021/acs.jcim.6b00584>
52. R. Meloni, C. Camilloni and G. Tiana, **Properties of low-dimensional collective variables in the molecular dynamics of biopolymers**, *Phys. Rev. E* 94, 052406 (2016)
<https://doi.org/10.1103/PhysRevE.94.052406>
53. A. Sanzeni, V. Balasubramanian, G. Tiana and M. Vergassola, **Complete coverage of space favors modularity of the grid system in the brain**, *Phys. Rev. E* 94, 062409 (2016)
<https://doi.org/10.1103/PhysRevE.94.062409>
54. A. Ghosh, Z. Budrikis, V. Chikkadi, A. L. Sellerio, S. Zapperi, and P. Schall, **Direct Observation of Percolation in the Yielding Transition of Colloidal Glasses**, *Phys. Rev. Lett.* 118, 148001 (2017)
<https://doi.org/10.1103/PhysRevLett.118.148001>
55. C. Giampietro, M. C. Lionetti, G. Costantini, F. Mutti, S. Zapperi & C. A. M. La Porta, **Cholesterol impairment contributes to neuroserpin aggregation**, *Scientific Reports* 7, Article number: 43669 (2017)
<https://doi.org/10.1038/srep43669>
56. P. K. Jana, M. J. Alava and S. Zapperi, **Irreversible behaviour of colloidal polycrystals following cyclic deformation**, *Scientific Reports* 7, Article number: 45550 (2017)
<https://doi.org/10.1038/srep45550>
57. Bertalan Z, Zapperi S, La Porta C. A., **Modeling mechanical control of spindle orientation of intestinal crypt stem cells**, *Journal of Theoretical Biology.* 2017 Oct 7;430:103–8
<https://doi.org/10.1016/j.jtbi.2017.07.012>
58. Font-Clos F, Zapperi S., La Porta C. A., **Integrative analysis of pathway deregulation in obesity**, *NPJ Systems Biology and Applications.* 3, 18 (2017)
<https://doi.org/10.1038/s41540-017-0018-z>
59. Taloni A., Font-Clos F., Guidetti L., Milan S., Ascagni M., Vasco C., Pasini M. E., Giora M.R., Ciusani E., Zapperi S., La Porta C.A., **Probing spermiogenesis: a digital strategy for mouse acrosome classification**, *Scientific Reports.* 2017;7
<https://doi.org/10.1038/s41598-017-03867-7>

60. Della Torre C., Parolini M., Del Giacco L., Ghilardi A., Ascagni M., Santo N., Maggioni D., Magni S., Madaschi L., Prosperi L., La Porta C., **Adsorption of B (α) P on carbon nanopowder affects accumulation and toxicity in zebrafish (*Danio rerio*) embryos**, *Environmental Science: Nano*. 2017;4(5):1132-46
<https://doi.org/10.1039/C7EN00154A>
61. C. A.M. La Porta, S. Zapperi, **Complexity in cancer stem cells and tumor evolution: Toward precision medicine**, *In Seminars in Cancer Biology, Volume 44, 2017, Pages 3-9*
<https://doi.org/10.1016/j.semcancer.2017.02.007>
62. Budrikis Z., Castellanos D. F., Sandfeld S., Zaiser M., Zapperi S., **Universal features of amorphous plasticity**, *Nature Communications*. 8 15928 (2017)
<https://doi.org/10.1038/ncomms15928>
63. James P. Sethna, Matthew K. Bierbaum, Karin A. Dahmen, Carl P. Goodrich, Julia R. Greer, Lorien X. Hayden, Jaron P. Kent-Dobias, Edward D. Lee, Danilo B. Liarte, Xiaoyue Ni, Katherine N. Quinn, Archishman Raju, D. Zeb Rocklin, Ashivni Shekhawat, Stefano Zapperi, **Deformation of Crystals: Connections with Statistical Physics**, *Annual Review of Materials Research* 2017 47:1, 217-246
<https://doi.org/10.1146/annurev-matsci-070115-032036>
64. R. Guerra, I. Leven, A Vanossi, O Hod, E. Tosatti, **Smallest Archimedean Screw: Facet Dynamics and Friction in Multiwalled Nanotubes**, *Nano Letters* 17 (9), 5321-5328 (2017)
<https://doi.org/10.1021/acs.nanolett.7b01718>
65. E Panizon, R Guerra, E Tosatti, **Ballistic thermophoresis of adsorbates on free-standing graphene**, *Proceedings of the National Academy of Sciences* 114 (34), E7035-E7044 (2017)
<https://doi.org/10.1073/pnas.1708098114>
66. J. Blass, M Albrecht, G. Wenz, R. Guerra, M. Urbakh, R. Bennewitz, **Multivalent Adhesion and Friction Dynamics Depend on Attachment Flexibility**, *The Journal of Physical Chemistry C* 121 (29), 15888-15896 (2017)
<https://doi.org/10.1021/acs.jpcc.7b05412>
67. R. Guerra, M. van Wijk, A Vanossi, A. Fasolino, E. Tosatti, **Graphene on h-BN: to align or not to align?**, *Nanoscale* 9, 8799-8804 (2017)
<https://doi.org/10.1039/C7NR02352A>
68. Schumer, R., A. Taloni, and D. J. Furbish, **Theory connecting nonlocal sediment transport, earth surface roughness, and the Sadler effect**, *Geophys. Res. Lett.*, 44, 2281-2289 (2017)
<https://doi.org/10.1002/2016GL072134>
69. A. Taloni, **From the Underdamped Generalized Elastic Model to the Single Particle Langevin Description**, *Mathematics* 5 (1), 3 (2017)
<https://doi.org/10.3390/math5010003>
70. A. Taloni, O. Flomenbom, R. Castañeda-Priego, F. Marchesoni, **Single file dynamics in soft materials**, *Soft matter* 13 (6), 1096-1106 (2017)
<https://doi.org/10.1039/C6SM02570F>

CONFERENCE PROCEEDINGS/PRESENTATIONS

1. Cinzia Ferrario, Roberta Leone, Silvia Colombo, Cristiano Di Benedetto, Livio Leggio, Valentina Coccè, Francesco Bonasoro, M. Daniela Candia Carnevali, Caterina La Porta, Michela Sugni, **Human fibroblast behavior on echinoderm-derived fibrillar collagen substrates** *15th International Echinoderm Conference* Playa del Carmen Mexico, 25-29 May 2015
2. Michela Sugni, Cinzia Ferrario, Livio Leggio, Cristiano Di Benedetto, Roberta Leone, Silvia Colombo, Valentina Coccè, Miriam Ascagni, Francesco Bonasoro, Caterina La Porta, Maria Daniela Candia Carnevali, **Biotechnological applications of echinoderm mutable collagenous tissues** *76^o National Congress UZI (Unione Zoologica Italiana)* Viterbo, September 15-18, 2015
3. Caterina La Porta, **Volume fluctuations during bleb formation in zebrafish primordial germ cells** *EMBO Meeting 2015* Birmingham on 5-8 September, 2015
4. Marco Genuzio, Giuseppe Ottaviano, and Sebastiano Vigna, **Fast scalable construction of (minimal perfect hash) functions**. *In Experimental Algorithms: 15th International Symposium, SEA 2016, St. Petersburg, Russia, June 5-8, 2016, Proceedings, number 9685 in Lecture Notes in Computer Science, pages 339-352. Springer, 2016*
5. Jimmy Lin, Matt Crane, Andrew Trotman, Jamie Callan, Ishan Chattopadhyaya, John Foley, Grant Ingersoll, Craig Macdonald, and Sebastiano Vigna, **Toward reproducible baselines: The open-source IR reproducibility challenge**. *In Advances in Information Retrieval: 38th European Conference on IR Research, ECIR 2016, pages 408-420. Springer, 2016*
6. Sebastiano Vigna, **A weighted correlation index for rankings with ties**. *In Proceedings of the 24th international conference on World Wide Web, 1166-1176. ACM, 2015*
7. Paolo Boldi, Corrado Monti, **LlamaFur: learning latent category matrix to find unexpected relations in Wikipedia**. *WebSci 2016, pages 218-222. ACM, 2016*

8. Michele Trevisiol, Luca Maria Aiello, Paolo Boldi, Roi Blanco, **Local Ranking Problem on the BrowseGraph**. *SIGIR 2015*, pages 173-182. ACM, 2015
9. Ricardo A. Baeza-Yates, Paolo Boldi, Flavio Chierichetti, **Essential Web Pages Are Easy to Find**. In *Proceedings of the 24th international conference on World Wide Web*, pages 97-107. ACM, 2015
10. Paolo Boldi, Corrado Monti, **Cleansing Wikipedia Categories using Centrality**. *WWW (Companion Volume) 2016*: 969-974
11. Paolo Boldi, **Minimal and Monotone Minimal Perfect Hash Functions**. Volume 9234 of the series *Lecture Notes in Computer Science*, pages 3-17, Springer, 2015
12. Katharina Kinder-Kurlanda, Paolo Boldi, **The Ethics of Doing Web Science Research: Panel Abstract**. *WebSci 2017*
13. Sebastiano Vigna, **Rank Monotonicity in Centrality Measures**. *NetSCI-X 2017, Tel Aviv, January 2017*
14. Guatelli S., Daviddi A., Ferrario C., Bonasoro F., Candia Carnevali M. D., Varela Coelho A. and Sugni M., **The coelomic epithelium and coelomocytes of the starfish *Marthasterias glacialis* (LINNEUS, 1758) in non-regenerating arm-tip: microscopic anatomy and proteomics characterization**. *LXXVIII Congresso Nazionale dell'Unione Zoologica Italiana, Torino, 18-23 settembre 2017*
15. Ferrario C., Ben Khadra Y., Czarkwiani A., Zakrzewski A., Ascagni M., Bonasoro F., Candia Carnevali M. D., Oliveri P. and Sugni M., **Exploring echinoderm repair events after arm injury**. *LXXVIII Congresso Nazionale dell'Unione Zoologica Italiana, Torino, 18-23 settembre 2017*
16. Rusconi F., Ferrario C., Martinello T., Gomiero C., Bonasoro F., Ferro F., Vindigni V., Candia Carnevali M. D., Patruno M., Sugni M., **New Frontiers In Applied Zoology: Innovative 3d Marine-Derived Collagen Scaffolds For Regenerative Medicine**. *LXXVIII Congresso Nazionale dell'Unione Zoologica Italiana, Torino, 18-23 settembre 2017*
17. Cambiaghi B., Dylus D., Sugni M., Oliveri P., **Skeletogenesis in the brittlestar *Amphiura filiformis* and in the feather star *Antedon mediterranea* embryos and larvae**. *UK Evo Devo Symposium, London, 8 settembre 2017*
18. Piovani L., Czarkwiani A., Dylus D., Cambiaghi B., Ferrario C., Sugni M., Oliveri P., **Re-building the skeleton in the arm of the brittle star *Amphiura filiformis***. *UK Evo Devo Symposium, London, 8 settembre 2017*
19. Ferrario C., Ben Khadra Y., Czarkwiani A., Zakrzewski A., Ascagni M., Bonasoro F., Candia Carnevali M. D., Oliveri P. and Sugni M., **New insights into the repair phase of echinoderm arm regeneration**. *63^o Convegno del Gruppo Embriologico Italiano, 12-15 giugno 2017, Roma*
20. Ferrario C., Czarkwiani A., Candia Carnevali M. D., Sugni M. and Oliveri P., **Extracellular matrix gene expression patterns in *amphiura filiformis* arm regeneration**. *9th European Conference on Echinoderm, 17-19 september 2016, Sopot, Poland*
21. Sugni M., Ferrario C., Ben Khadra Y., Daviddi A., Bonasoro F., and Candia Carnevali M. D., **Cell and tissue patterning in starfish arm regeneration: a microscopic overview**. *EMBO Conference on the molecular and cellular basis of regeneration, 17-21 settembre 2016 Paestum*
22. Candia Carnevali M. D., Ferrario C., Ben Khadra Y., Bonasoro F., and Sugni M., **Re-exploring epimorphosis vs morphallaxis in echinoderm regeneration**. *LXXVII Congresso Nazionale dell'Unione Zoologica Italiana, Milano, 29 agosto-3 settembre 2016*
23. Daviddi A., Guatelli S., Ferrario C., Bonasoro F., Varela Coelho A., Candia Carnevali M. D., Sugni M., **Arm-tip regeneration in the starfish *Marthasterias glacialis*: an integrated approach**. *LXXVII Congresso Nazionale dell'Unione Zoologica Italiana, Milano, 29 agosto-3 settembre 2016*
24. Aleotti A., Elphick M. R., Candia Carnevali M. D., Sugni M., Semmens D. C., Odekunle E. A., Cai W., Wademan R., Egertová, M., Ferrario C., Bonasoro F., **Nervous system and arm regeneration in crinoids**. *LXXVII Congresso Nazionale dell'Unione Zoologica Italiana, Milano, 29 agosto-3 settembre 2016*
25. Piovani L., Ferrario C., Czarkwiani A., Bonasoro F., Candia Carnevali M. D., Oliveri P., Sugni M., **An integrated view on the regeneration of the different skeletal elements in the arm of *Amphiura filiformis***. *LXXVII Congresso Nazionale dell'Unione Zoologica Italiana, Milano, 29 agosto-3 settembre 2016*
26. Ferrario C., Czarkwiani A., Ben Khadra Y., Bonasoro F., Candia Carnevali M. D., Oliveri P. and Sugni M., **A microscopic and molecular overview of collagen during echinoderm arm regeneration**. *LXXVII Congresso Nazionale dell'Unione Zoologica Italiana, Milano, 29 agosto-3 settembre 2016*
27. Ferrario C., Czarkwiani A., Candia Carnevali M. D., Sugni M. and Oliveri P., **Expression pattern of extracellular matrix genes during arm regeneration in the brittle star *Amphiura filiformis* (O.F. Müller, 1776)**. *LXXVII Congresso Nazionale dell'Unione Zoologica Italiana, Milano, 29 agosto-3 settembre 2016*
28. Sugni M., Mercurio S., Colombo A., Gianpietro C., Quartapelle Procopio E., Ascagni M., Candia Carnevali M. D., Panigati M.3, Pennati R.1, **Discovering the lost estrogen receptor in invertebrate deuterostomes**. *LXXVII Congresso Nazionale dell'Unione Zoologica Italiana, Milano, 29 agosto-3 settembre 2016*

BOOKS

1. C. A. M. La Porta and S. Zapperi, **The Physics of Cancer**, Cambridge University Press, 2017

1. **First CC&B Workshop**, *University of Milan, 21 September 2015*
2. **Second CC&B Workshop**, *University of Milan, 5 October 2016*
3. **Third CC&B Workshop**, *University of Milan, 9 October 2017*

CONFERENCES/WORKSHOPS/SCHOOLS ORGANIZATION

1. **Advances in Complex Systems**
Como Lake School of Advanced Studies, Como Italy, 29 June–3 July 2015
(C. La Porta, S. Zapperi Directors)
2. **CCS'15**
Tempe, Arizona (USA) 28 September 2015–2 October 2015
(S. Zapperi Chair of the steering committee)
3. **Italian Information Retrieval Workshop (IIR)**
May, 25–26 Cagliari, Italy
(Boldi P. co-chairman)
4. **FISMAT15**
Palermo 28 September–2 October 2015
(G. Tiana chairman parallel section)
5. **4th Workshop Physics of biomolecules: structure, dynamics and function**
Bressanone, 3–6 February 2016
(G. Tiana co-organizer)
6. **24th international conference on World Wide Web, “Social Networks and Graph Analysis” track**
(Sebastiano Vigna, program co-chair)
7. **CCS'16**
Amsterdam 19–22 September 2016
(S. Zapperi Chair of the steering committee)
8. **Workshop on Statistical Physics of Materials**
Satellite meeting of the Statphys26 conference in Aussois, France on 29 June–1 July, 2016
(S. Zapperi, organizer)
9. **Second school in Advances in Complex Systems**
Como Lake School of Advanced Studies, Como Italy, 3–7 July 2017
(C. La Porta, S. Zapperi Directors)
10. **CCS'17**
Cancun, Mexico, 19–23 September 2017
(S. Zapperi Chair of the steering committee)
11. **ACM WebScience 2017**
Troy NY, USA, June 26–28, 2017
(P. Boldi: Program co-chair)
12. **IQIS2017**
Conference in Florence, 13 September 2017
(G. Tiana: Co-organizer of the Q-Tech Panel)

TALKS BY CC&B MEMBERS

1. P. Boldi, **MaxCover and Essential Web Pages**, ISI, 19 January 2016, Turin
2. P. Boldi, **(Monotone) Minimal Perfect Hash Functions**, 25 August 2015. 40th International Symposium on Mathematical Foundations of Computer Science Milan, Italy
3. P. Boldi, **Large-scale Network Analytics: Diffusion-based Computation of Distances and Geometric Centralities**, 18 May 2015. BIG 2015: BigData Innovators Gathering. Florence, Italy

4. P. Boldi, **Sei Gradi Di Separazione: dall'Esperimento di Milgram a Facebook**, 21 April 2016. Lezioni Lincee di Scienze Informatiche. Palermo, Italy
5. P. Boldi, **Large-Scale Data Analytics: Diffusion-Based Computation of Distances and Geometric Centralities**, 15 June 2015. Google NY, New York, USA
6. P. Boldi, **MaxCover and Essential Web Pages**, 20 April 2016. Dipartimento di Matematica, Università di Palermo, Italy
7. P. Boldi, **Link Analysis, ranking, centralities, and large graphs**, International school on mathematics "Guido Stampacchia", Graph Theory, Algorithms and Applications 4th Edition. Erice, maggio 2017
8. P. Boldi, **Feature-Rich Networks: Models and Applications**, IIR 2017. Lugano, giugno 2017
9. P. Boldi, **Feeding the Beast: Hands-On Tutorial on a Suite of Tools for Extracting Network Features Efficiently**, WAL-E 2017, Workshop on Approximating and Learning Efficiently. Rocca Sinibalda, settembre 2017
10. C. La Porta, Colloquium at University of Liverpool: **Cancer stem cells in melanoma, a complex problem**, 18 November 2015
11. C. La Porta, seminar at University of Montpellier: **Volume Fluctuation during blebbing in zebrafish primordial germ cells**, 8 June 2015
12. C. La Porta, summer school on Advances in Complex System, **Volume fluctuations in active cell deformation**, 2-07-2015 Como
13. C. La Porta, **Population dynamics of Cancer Stem Cells: Physics of Cancer**, Bristol 19-20 May 2015, Physics of Cancer 2015
14. C. La Porta, Nordita Workshop Statistical mechanics of forms and shapes, **Volume Fluctuations in active cell deformations**, 27-30 May 2015 Marienhamn, Åland, Finland
15. C. La Porta, EMBO meeting, **Volume fluctuations during bleb formation in zebrafish primordial germ cells**, 6 September 2015, Birmingham, UK
16. C. La Porta, Conference in Complex Systems CCS'15: **Cancer Stem cells in melanoma: a complex problem**, 28 September-2 October Tempe Arizona
17. C. La Porta, APS meeting 2016 Session A35: Active Matter: Collective Phenomena in Living Systems I Baltimore USA **Volume change during active cell fluctuation**
18. C. La Porta, Bristol Center of Complexity Sciences (CSS) University of Bristol: **Cancer Stem cells in melanoma: a complex problem**, 26 April 2016
19. C. La Porta, School of Medicine, University of North Carolina 3 August 2016, **Cancer stem cells and melanoma: a complex problem**
20. C. La Porta, Cornell University, Ithaca, USA 11 August, **Cancer Stem cells and melanoma: a complex problem**, 12.20pm
21. C. La Porta, **Cancer Stem Cells Impact on Treatment** (December 7-11, 2016) Obergurgl, Tyrol, Austria (<http://transidee-conference.uibk.ac.at/CSC2016/index.php/registration>), **Cancer stem cells in melanoma: a complex problem**
22. C. La Porta, Urbana-Champaign University, CompGen meeting Wednesday 8/31 from 9-10 am in 612 IGB: **Cancer Stem Cells and melanoma: a complex problem**
24. C. La Porta, American Physics Society: **Physics of cellular organization: Burst of activity in collective cell migration**, 2.30pm 16 March room 264, 13-17 March, New Orleans, USA 2017
25. C. La Porta, First International Summer Institute on Network Physiology (ISINP), 24-29 July 2017, Como, Italy, **Pathway deregulation is obesity**
26. M. Sugni and C. Ferrario, **Stem cell recruitment versus adult cell dedifferentiation in echinoderm regeneration**, Workshop of the Muenster Graduate School of Evolution (MGSE), **Stem cells of invertebrates: Their role in development, reproduction & regeneration**, 12th July 2017. Muenster, Germany
27. G. Tiana, **The Complex Structure of chromatin** (invited talk), Workshop Excursions in Complexity, The Royal Academy of Science Copenhagen, 4 June 2015
28. G. Tiana, **Structure and function in chromatin domains** (invited talk), Summer School "Models of life", Krogerup (Denmark) 2-8 August 2015
29. G. Tiana, **Structure and function in chromatin domains** (invited talk), Conference "Living systems: from interaction patterns to critical behaviour", San Servolo, Venice, 16-19 September 2015
30. G. Tiana, **Structure and function in chromatin domains** (invited talk), Conference FisMat 2015, Palermo 28/9-2/10 2015
31. G. Tiana, **Structure and function in chromatin domains** (invited talk), Mini-Workshop on Statistical and Molecular Physics, SISSA Trieste, 12-13 October 2015
32. G. Tiana, **The Complex Structure of chromatin** (invited talk), Workshop Excursions in Complexity, The Royal Academy of Science Copenhagen, 4 June 2015
33. G. Tiana, **Structure and function in chromatin domains** (invited talk), Summer School "Models of life", Krogerup (Denmark) 2-8 August 2015
34. G. Tiana, **Structure and function in chromatin domains** (invited talk), Conference "Living systems: from interaction patterns to critical behaviour", San Servolo, Venice, 16-19 September 2015
35. G. Tiana, **Structure and function in chromatin domains** (invited talk), Conference FisMat 2015, Palermo 28/9-2/10 2015
36. G. Tiana, **Structure and function in chromatin domains** (invited talk), Mini-Workshop on Statistical and Molecular Physics, SISSA Trieste, 12-13 October 2015
37. G. Tiana, **The complex structure of chromatin** (invited talk), EPFL Lausanne, 15 March 2016
38. G. Tiana, **The complex structure of chromatin** (invited talk), Conference "Quantitative Laws II", Como 16 June 2016
39. G. Tiana, **Physical models highlight a strong correlation between chromosome structure and transcription** (invited talk), qBio Workshop, IFOM Milano 20-21 February 2017

40. G. Tiana, **Modelling data with the Maximum Entropy Principle** (invited talk), University of Torino, 15 March 2017
41. G. Tiana, **Maximum-entropy techniques to model complex biological molecules and The complex structure of chromatin** (invited lectures) at Lake Como School of Advanced Studies "Advances in Complex Systems", 7 and 9 July 2017
42. G. Tiana, **Maximum-entropy modelling of biomolecules** (contributed talk) at Congress of the Department of Physics, 29 June 2017
43. S. Vigna, **Quasi-succinct indices**, 8 September 2015, Google NY, New York, USA
44. S. Vigna, **Quasi-succinct indices**, 10 September 2015, Yahoo! NY, New York, USA
45. S. Vigna, **Scrambling Marsaglia's xorshift generators**, 21 December 2015, UCSB, California, USA
46. S. Vigna, **A weighted correlation index for rankings with ties**, ISI, 18 January 2016, Turin
47. S. Vigna, **Rank monotonicity in centrality measures**, SINS 2016, 9 June 2016, Venice, Italy
48. S. Vigna, **In-core computation of geometric centralities with HyperBall: A hundred billion nodes and beyond**, MMDS 2016, 23 June 2016, Berkeley, CA, USA
49. S. Vigna, **In-core computation of geometric centralities with HyperBall: A hundred billion nodes and beyond**, Télécom ParisTech, 28 January 2016, Paris, France
50. S. Vigna, **Fast scalable construction of (minimal perfect hash) functions**, 20 June 2016, Facebook, Menlo Park, USA
51. S. Vigna, **Quasi-Succinct Indices**, Qatar Research Foundation, Doha, gennaio 2017
52. S. Vigna, **In-core computation of geometric centralities with HyperBall: A hundred billion nodes and beyond**, Dipartimento di Informatica, Università di Torino, marzo 2017
53. S. Vigna, **Four degrees of separation**, Telecom ParisTech University, marzo 2017
54. S. Vigna, **Rank Monotonicity in Centrality Measures**, Complex networks: from socio-economic systems to biology and brain, Lipari, settembre 2017
55. S. Zapperi, Nordita Workshop Statistical mechanics of forms and shapes, **Deformation and fracture of graphene**, 27-30 May 2015 Marienhamn, Åland Nordita 2015
56. S. Zapperi, van der Waals colloquium Leiden University, **Size effects in fracture and plasticity**, 5 June 2015
57. S. Zapperi, seminar at University of Montpellier, **Size effects in fracture and plasticity**, 9 June 2015
58. S. Zapperi, summer school on Advances in Complex System, **Size effects in fracture and plasticity**, 2-07-2015 Como
59. S. Zapperi, Conference in Complex Systems CCS'15, **Complexity in Fracture**, 28 September–2 October Tempe Arizona
60. S. Zapperi, Statphys 26, Lyon, July 18-22 2016, invited talk: **Size effects in fracture and plasticity**
61. S. Zapperi, Multiscale Materials Modeling October 9-14 2016, Dijon, France, plenary talk: **Size effects in fracture and plasticity**
62. S. Zapperi, School of Medicine, University of North Carolina 1 August 2016, **Fluctuations in protein aggregation**
63. S. Zapperi, North Carolina State University, Physics Department, 4 August 2016, **Mechanics of graphene**
64. S. Zapperi, Cornell University, Ithaca, USA 16 August 2016, **Size effects in fracture and plasticity**
65. S. Zapperi, University of Illinois Urbana Champaign, 25 August 2016, **Size effects in fracture and plasticity**
66. S. Zapperi, 4th Mini-Symposium on Bioimage Informatics, Rennes, France, 27 June 2017, **Bursts of activity in collective cell migration**
67. S. Zapperi, Congresso Nazionale SIF, Trento 13 September 2017, **Bursts of activity in collective cell migration**

CC&B SEMINARS

1. Guillaume Charras
(*University College London, UK*)
Cellular Control of cortical actin nucleation
5 October 2015 at 14.30
2. Karoline Wiesner
(*School of Mathematics, University of Bristol, UK*)
The mathematics of information in complex systems
19 October 2015 at 12.30
3. Rhoda Hawkins
(*Department of Physics & Astronomy, University of Sheffield, UK*)
Mathematical modelling of cell migration
13 November 2015 at 12.30
4. Rivka Isaacson
(*King's College London, UK*)
Molecular mechanisms for cellular quality control
14 December 2015 at 12.30

5. Alexandre Dufour
(*Institut Pasteur, France*)
Deciphering cellular morpho-dynamics using Bioimage Informatics
17 December 2015 at 10.30
6. Maurizio Casiraghi
(*Università degli Studi di Milano Bicocca, Italy*)
When size matters: genome shrinkage in bacterial intracellular symbionts
22 December 2015 at 9.30
7. Michele Caselle
(*Università di Torino*)
Quantitative methods in gene regulation
21 January 2016 at 12:30
8. Stéphane Santucci
(*ENS, CNRS, Lyon, France*)
Turbulent-like dynamics of slow imbibition fronts
5 February 2016 at 12.30
9. Bakhtier Vasiev
(*University of Liverpool, UK*)
Modelling chemotactic motion of cells in biological tissues
29 January 2016 at 12.30
10. Nikolay Dokholyan
(*UNC Chapel Hill, USA*)
From etiology to therapeutics of the Lou Gehrig's disease
23 February 2016 at 12.30
11. Mikko J. Alava
(*Aalto University, Finland*)
Woodquakes and why avalanche waiting times do not follow Poisson statistics
8 March 2016 at 12.30
12. Andrea Mattevi
(*Department of Biology and Biotechnology, University of Pavia, Italy*)
On the molecular mechanisms of chromatin modification
12 April 2016 at 12.30
13. Xavier Trepas
(*Integrative Cell and Tissue Dynamics, Institut de Bioenginyeria de Catalunya, Spain*)
Mechanical guidance of collective cell migration and invasion
27 May 2016 at 12.30
14. Luca Gattinoni
(*Center for Cancer Research, National Cancer Institute, National Institutes of Health*)
T memory stem cells in health and disease: new insights and therapeutic opportunities
15 September 2016 at 12.00
15. Herbert Levine
(*Center for Theoretical Biological Physics, Rice University*)
Can theory help us understand cancer metastasis?
18 November 2016 h. 12.30
16. Daniel Rayneau-Kirkhope
(*Aalto University*)
Functionality through failure: analysis of elastic instability in 2-d lattices
14 December 2016 h. 12.30
17. Alessandro Laio
(*SISSA*)
Automatic topography of complex and multidimensional probability distributions
19 January 2017 h 14.00
18. Antonio Trovato
(*Università di Padova*)
Bacterial communication games: talking at open boundaries
19 January 2017 h 15.00
19. Roberto Meloni
(*Università di Milano*)
Computational and theoretical studies of the conformational properties of peptides in their denatured state
19 January 2017 h 16.00

20. Michael Pusch
(*Istituto di Biofisica, Genova*)
CLC chloride channels and transporters - from biophysics to human genetic diseases
February 2, 2017 h. 12.30
21. Vincenzo Vitelli
(*Instituut-Lorentz for Theoretical Physics, Leiden University*)
Topological sound and odd viscosity in chiral active matter
February 27, 2017 h. 12.00
22. Elena Bianca Donetti
(*Laboratorio di Morfologia Strutturale e Ultrastrutturale Dipartimento Scienze Biomediche per la Salute UniMi*)
Inside out – outside in the skin: different experimental approaches to evaluate the epidermal response to different exogenous stimuli
February 14, 2017 h. 12.30
23. Valentina Bollati
(*EPIGET - Epidemiology, Epigenetics and Toxicology Lab, Department of Clinical Sciences and Community Health, University of Milan*)
Susceptibility to Particle Health Effects, miRNA and Extracellular vesicles: Results of the SPHERE Study
March 6, 2017 h. 12.30
24. Yuval Tabach
(*Department of Developmental Biology and Cancer Research, The Institute For Medical Research-Israel-Canada, The Hebrew University-Hadassah Medical School Jerusalem*)
Comparative genomics of 500 species reveal new insights about superpowers, drugs and human diseases
March 10, 2017 h. 12.30
25. Luca Cipelletti
(*Laboratoire Charles Coulomb, Université Montpellier*)
Microscopic dynamics and mechanical behavior of amorphous solids
April 3, 2017 h. 12.30
26. Andrea Ciliberto
(*IFOM, Milan*)
Molecular determinants of cell-to-cell variability in the cellular response to anti-mitotic drugs
April 6, 2017 h. 12.30
27. Simone Sarasso
(*Department of Biomedical and Clinical Sciences "L. Sacco", Università degli Studi di Milano*)
Consciousness and complexity: from theory to practice
May 11, 2017 h. 12.30
28. Nicola Fusco
(*IRCCS Ca' Granda - Ospedale Maggiore Policlinico & University of Milan*)
The translational impact of molecular pathology for healthcare providers: what can we learn from breast cancer genomics?
May 24, 2017 h. 12.30
29. Michele Bellesi
(*Università Politecnica delle Marche*)
Sleep and synapses
June 21, 2017 h. 12.30
30. Alejandro B. Kolton
(*Condensed Matter Theory Group, Centro Atómico Bariloche and Instituto Balseiro, Bariloche, Argentina*)
Localisation of soft modes at the depinning transition
31. Costanza Rovida
(*CAAT Europe, Konstanz University, Germany*)
New Approach Methodologies (NAM) for biomedical research
September 13, 2017 h. 12.30
32. Giovanni Bussi
(*SISSA, Trieste, Italy*)
RNA structure and dynamics: combining molecular dynamics, solution experiments, and coevolutionary information
September 19, 2017 h. 14.30
33. Leonid Schneider
(*Independent science journalist. Forbetterscience.com*)
Research misconduct: science's self-administered poison
September 26, 2017 h. 12.00
34. Maurizio Maugeri
(*Department of Environmental Science and Policy, Università degli Studi di Milano*)
Climate variability and change in Italy in the last two centuries
October 3, 2017 h. 12.30

35. Thierry Nieuws
(Dept. of Biomedical and Clinical Sciences "Luigi Sacco", Università di Milano, Italy)
Insights from computational investigations of 2D & 3D cell culture recordings
October 6, 2017 h. 12.30

CC&B JOURNAL CLUB

1. Maria Chiara Lionetti
(CC&B and Department of Biosciences)
The CRISP-CAS9 system
9 May 2016 at 12.30
2. Enrico Ragni
(Istituto Nazionale di Genetica Molecolare (INGM), Milan, Italy)
Human mesenchymal stem cells: from potency definition to clinical applications
18 May 2016 at 12.30
3. Roberto Buccione
(Scientific Editor EMBO Molecular Medicine | EMBO Press)
The transparent editorial process, data reproducibility and research integrity at EMBO Press
23 May 2016 at 12.30
4. Mario Beretta
(Department of Biosciences, University of Milan)
The amazing world of carnivorous plants
30 May 2016 at 12.30

CC&B TUTORIALS

1. Alexandre Dufour
(Institut Pasteur, France)
Quantitative image analysis with Icy
18 December 2015 10.00–17.00
2. Roberto Buccione
(Scientific Editor EMBO Molecular Medicine | EMBO Press)
Meeting with PhD students and postdocs to discuss about publishing and alternative careers
23 May 2016 at 14.30

PRESS/MEDIA COVERAGE

1. 30 09 2016 Catena La Porta interviewed at "Le Oche" — Radio Popolare
2. 26 09 2016 Allnews24.eu, Malattie neurodegenerative, individuarle prima che si manifestino
3. 26 09 2016 Edicola24.com, Malattie neurodegenerative, individuarle prima che si manifestino
4. 26 09 2016 Galileonet.it, Malattie neurodegenerative, individuarle prima che si manifestino
5. 27 09 2016 Scienzainrete.it, La medicina scandaglia il genoma per diventare più precisa
6. 20 09 2016 Ilfattoquotidiano.it, Alzheimer, nei prossimi vent'anni una famiglia italiana su quattro avrà un parente malato
7. 20 09 2016 Askaneews.it, Malattie neurologiche, da test preclinico nuove prospettive, studio italiano: individuare la malattia
8. 20 09 2016 Edicola24.com, Alzheimer, nei prossimi vent'anni una famiglia italiana su quattro avrà un parente malato
9. 20 09 2016 Le-Ultime-Notizie.eu, Malattie neurologiche, da test preclinico nuove prospettive
10. 20 09 2016 Meteoweb.eu, Ricerca, Alzheimer e Parkinson: da Milano il test per svelarli prima dei sintomi
11. 04 03 2016 L. Carra, A rischio di SLA se la proteina si fa in tre. Scienzainrete

12. 25 02 2016 Int. a N. Dokholyan: "Così arriveremo a sconfiggere la sla" (F.Loizito) È Vita (Avvenire) pag. 2
13. 15 01 2016 Sebastiano Vigna interviewed at "Le Oche" — RadioPopolare
14. 15 01 2016 Il prof della Statale conquista la Silicon Valley con un algoritmo — Il Giorno
15. 15 01 2016 Il web 2.0 'parla' italiano su pc, tablet e smartphone — ANSA
16. 15 01 2016 Un matematico italiano ha 'salvato' i vostri acquisti online — La Repubblica
17. 21 12 2015 Un centro per lo studio della complessità, Pietro Greco intervista Stefano Zapperi — Scienzainrete
18. 20 11 2015 Carlotta Negri, Caterina La Porta and Stefano Zapperi interviewed at "Le Oche" — RadioPopolare
19. 10 11 2015 Scienziati Interdisciplinari, non Supereroi — OggiScienza
20. 28 10 2015 S. Coyaud, "Bufala": DBlog — La Repubblica
21. 27 10 2015 S. Coyaud, "Condizionatori": DBlog — La Repubblica
22. 02 09 2015 S. Coyaud, "Fatti vostri cont.": DBlog — La Repubblica
23. 25 05 2015 D. Bilancetti, La fisica per spiegare come cambiano forma le staminali — Le Scienze
24. 20 05 2015 Scoperto come le Staminali cambiano forma. Web: ADUC, MeteoWeb, AGI, Ilfont
25. 18 05 2015 S. Coyaud, Come un pesce nell'acqua — Oggiscienza
26. 15 05 2015 Catena La Porta and Stefano Zapperi interviewed at "Le Oche" — RadioPopolare
27. 15 05 2015 S. Coyaud "Le Oche e il Danio" DBlog — La Repubblica
28. 08 11 2016 Wise Society: Un test clinico per prevenire le malattie neurodegenerative Andrea Balocchi
29. 26 10 2016 ArcipelagoMilano: L'AGENZIA EUROPEA DEL FARMACO (EMA)
30. 02 11 2016 100 Donne contro gli stereotipi — Vanity fair
31. 02 11 2016 100 Donne contro gli stereotipi — Io Donna, Corriere della Sera
32. 16 02 2017 Radio Magazine, Report interview on gender in media
<http://www.reporternuovo.it/2017/02/16/replay-del-16-febbraio-2017>
33. 27 03 2017 M. Bellone, L. Carra, Rotture
<http://www.scienzainrete.it/articolo/rotture/michele-bellone-luca-carra/2017-03-27>
34. 24 03 2017 Interview Radio Popolare, Le Oche, 11am
<http://www.radiopopolare.it/podcast/le-ocche-di-ven-2403>
35. 10 03 2017 Oggiscienza: Colesterolo e malattie neurodegenerative: una possibile correlazione? Cristina Da Rold
https://oggiscienza.files.wordpress.com/2017/03/21086425615_b9d8c3caaa_b.jpg
36. 06 03 2017 www.meteoweb.it, Filomea Fotia: Ricerca: Rischi per il cervello dal calo drastico del colesterolo
<http://www.meteoweb.eu/2017/03/ricerca-rischi-per-il-cervello-dal-calo-drastico-delcolesterolo/866100/#4JJM3VUx1HG6jrM.99>
37. 06 03 2017 Italiasalute.it, Andrea Sperelli: Un colesterolo troppo basso non va bene
38. 06 03 2017 Insalutenews.it, Una drastica riduzione del colesterolo potrebbe causare malattie
39. 06 03 2017 Salute Domani, Una drastica riduzione del colesterolo nelle membrane cellulari potrebbe causare malattie neurodegenerative
http://www.salutedomani.com/article/una_drastica_riduzione_del_colesterolo_nelle_membrane_cellulari_potrebbe_causare_malattie_neurodegenerat...
40. 06 03 2017 TG24.sky.it, Rischio malattie neurodegenerative con calo drastico di colesterolo
41. 07 03 2017 Milanonline.com, Una drastica riduzione del colesterolo nelle membrane cellulari potrebbe causare malattie neurodegenerative
<http://www.publicnow.com/view/423365F489EDB271B9C066B15D74918E85A51450>
42. 07 03 2017 www.italiannetwork.it, Ricerca Scientifica Italiana nel mondo — Dall'università di Milano: abbassare i livelli di colesterolo per contrastare malattie cardiovascolari potrebbe innescare malattie neurodegenerative
43. 07 03 2017 Trasferimentotec.wordpress.com, Il possibile legame fra colesterolo e malattie neurodegenerative
44. 07 03 2017 www.sanihelp.it, Quando il calo del colesterolo non è un buon segno
45. 07 03 2017 improntaunika.it, Un nuovo studio su colesterolo e malattie neurodegenerative
46. 10 03 2017 oggiscienza.wordpress.com, Colesterolo e malattie neurodegenerative: una possibile correlazione?
47. 15 03 2017 APS press conference, 2.30pm
<http://apswebcasting.com/webcast/archive/aps/march2017/mar15-17-4.php>
48. 23 06 2017 RADIO POPOLARE — LE OCHE, 10.35 — Un prototipo di software per valutare la qualità degli spermatozoi
49. 08 06 2017 Scienza in Rete: La Fisica del cancro, recensione del libro The Physics of cancer, Cambridge University Press (autori CAM La Porta and Stefano Zapperi) scritto da Giorgio Scita e Assunta Croce
<http://www.scienzainrete.it/articolo/fisica-del-cancro/giorgio-scita-assunta-croce/2017-06-28>
50. 17 07 2017 Oggiscienza: Obesità, diabete e cancro: scoperte le ragioni genetiche della loro correlazione
51. 24 07 2017 Interview at Scienza in Rete for the Second Summer school in Advanced in Complex System Como
<https://www.youtube.com/watch?v=PRAJjNOxng&feature=youtu.be>
52. 29 09 2017 Meet Me tonight 2017 (Milano), Museo Scienza e tecnica. Tavola rotonda: Ringiovanire il cervello: Mito o sfida per il futuro?

GRANTS

Research activities within CC&B is supported by the following grants:

1. ERC Advanced Grant SIZEFFECTS 2012–2018 (S. Zapperi)
2. Fondazione Cariplo 2014–2016 (C. La Porta)
3. Nadine FET Project 2012–2015 (P. Boldi, S. Vigna)
4. Google Focused Award “Algorithms and Mathematical Optimization”, subproject “Large-scale Graph Sketching” (P. Boldi, S. Vigna)
5. Young Researcher Grant 2017 (UNIMI). Innovative solutions from the seas: development of marine-derived and eco-friendly skin-substitutes (M. Sugni)
6. Metamaterials research for a new physical interaction, Research grant from Samsung Electronics (S. Zapperi)

AWARDS AND PRIZES

1. S. Zapperi, elected fellow of the American Physical Society (9/2015)
2. C. La Porta, best oral awards, 44th Annual Meetings of the SCUR, Milano, Italy (6/2017)
3. S. Bonfanti, best poster award, Trends in Nanotribology, Trieste, Italy (7/2017)