



Tommaso Bellini

Birth: August 12th, 1961

Full Professor of Applied Physics

Department of Medical Biotechnologies and Translational Medicine (BIOMETRA), Faculty of Medicine.

Married, two children

- Coordinator of the “Complex Fluids and Molecular Biophysics” Group
- President of ProXentia, spin-off company of the University of Milano
- Delegate of the Chancellor of the University of Milano for the Doctoral programs.
- Member of the direction council of the BIOMETRA Dpt.
- Member of the direction council of the PhD School in Physics, Astrophysics and Applied Physics.
- Visiting Faculty and international investigator in the Material Research Center of the University of Colorado at Boulder.
- Member of the scientific and/or program committees of the international conferences ECIS2013, ECLC2013, ICSM2013.
- Member of the direction council of the Euresis association for the diffusion of the scientific culture. Promoter and/or speaker in events such as Festa di Scienza e Filosofia (Foligno, Italy), Bergamoscienza (Bergamo, Italy) and San Marino Symposia (San Marino)

Career:

Previously Faculty member of the University of Colorado, of the University of Pavia, of the Politecnico di Milano.

Interests and activity:

The research activity is in the field of bio-soft matter and complex molecular fluids and includes studies of DNA nanotechnology, DNA supramolecular ordering, liquid crystals, protein folding, polymer solutions, nanoparticles and colloids, micro and nanoconfined fluids. The activity also includes the development of new technologies in the fields of optical microscopy and optical biosensors.

Teaching:

Professor of physics and technologies - undergraduate and graduate level - for Medical Biotechnologies

Publications:

About 100 publications in international journals, 25 of which in high impact magazines (Science, Nature Physics, Nature Materials, PNAS, Physical Review Letters). About 3000 total citations, H-Index = 28 (Google Scholar). Inventor in 2 international patent applications.

Selected recent Publications:

F. Serra, K.C. Vishnubhatla, M. Buscaglia, R. Cerbino, R. Osellame, G. Cerullo and T. Bellini, *Topological defects of nematic liquid crystals confined in porous networks*, Soft Matter 22 (2011) 10945-10950, DOI: 10.1039/c1sm05813d

T. Araki, M. Buscaglia, T. Bellini, H. Tanaka, *Memory and topological frustration in nematic liquid crystals confined in porous materials*, Nature Materials, 10 (2011) 303-309, DOI: 10.1038/NMAT2982

F. Serra, M. Buscaglia and T. Bellini, *The emergence of memory in liquid crystals*, Materials Today 14 (2011) 488-494, DOI: 10.1016/S1369-7021(11)70213-9

- T. Bellini, G. Zanchetta, T. Fraccia, R. Cerbino, E. Tsai, G.P. Smith, M.J. Moran, D.M. Walba, N.A. Clark, *Liquid Crystal Ordering as Evidence for the Structured Self-Assembly of Random-Sequence DNA Oligomers*, Proceedings of the National Academy of Sciences, 109 (2012) 1110-1115, DOI: 10.1073/pnas.1117463109
- M. Rossi, G. Zanchetta, S. Klussmann, N.A. Clark, and T. Bellini, *Propagation of Chirality in Mixtures of Natural and Enantiomeric DNA Oligomers*, Physical Review Letters, 110 (2013) 107801, DOI: 10.1103/PhysRevLett.110.107801
- F. Serra, S. M. Eaton, R. Cerbino, M. Buscaglia, G. Cerullo, R. Osellame, and T. Bellini, *Nematic Liquid Crystals Embedded in Cubic Microlattices: Memory Effects and Bistable Pixels*, Advanced Functional Materials, 23, (2013) 3990-3994, DOI: 10.1002/adfm.201370160
- F. Giavazzi, M. Salina, R. Cerbino, M. Bassi, D. Prospero, E. Ceccarello, F. Damine, L. Sola, M. Rusnati, M. Chiari, B. Chini, T. Bellini, M. Buscaglia, *Multispot, label-free biodetection at a phantom plastic-water interface*, Proceedings of the National Academy of Sciences USA, 110 (2013) 9350-9355, DOI: 10.1073/pnas.1214589110
- S. Biffi, R. Cerbino, F. Bomboi, E.M. Paraboschi, R. Asselta, F. Sciortino, T. Bellini, *Phase behavior and critical activated dynamics of limited-valence DNA nanostars*, Proceedings of the National Academy of Sciences USA, 110 (2013) 15633-15637, DOI: 10.1073/pnas.11304632110