

Prof. ADRIANO BARRA's Publication List

Lecce, 29/04/2023

108. F. Alemanno, M. Cavo, D. Delle Cave, E. D'amone, G. Gigli, E. Lonardo, A. Barra, L. Del Mercato, **Quantifying heterogeneity to drug response in cancer-stroma kinetics** *PNAS* 120(11) e2122352120 (2023). **Impact Factor = 12.78**
This article has a CNR press release ([webpage](#), [file](#)).
This article has been featured in several divulgative Italian newspapers (e.g. [LeScienze](#), [Salute](#), etc.)
107. F. Alemanno, M. Aquaro, I. Kanter, A. Barra, E. Agliari, **Supervised Hebbian Learning** *EPL Perspective* 141, 11001, (2023). **Impact Factor = 01.96**
106. A. Barra, G. Catania, A. Decelle, B. Seoane, **Thermodynamics of bidirectional associative memories** *J. Phys. A: Math. & Theor.* in press (2023). **Impact Factor = 02.33**
105. V. Onesto, S. Forniciti, F. Alemanno, K. Narajanankutty, A. Chandra, S. Prasad, A. Azzariti, G. Gigli, A. Barra, A. De Martino, D. De Martino, L. del Mercato, **Probing single cell fermentation flux and intercellular exchange networks via pH-microenvironment sensing and inverse modeling**, *ACS Nano* 17, 4, 3313, (2022). **Impact Factor = 18.02**
This article has a CNR press release ([webpage](#), [file](#)).
This article has been selected for the cover of the Journal volume ([link](#) or [file](#))
104. E. Agliari, M. Aquaro, A. Barra, A. Fachechi, C. Marullo, **From Pavlov Conditioning to Hebb Learning**, *Neural Computation MIT Press* a1, 28, (2023). **Impact Factor = 03.23**
103. A. Fachechi, E. Agliari, F. Alemanno, A. Barra, **Outperforming RBM feature-extraction capabilities by "dreaming" mechanisms**, *IEEE Trans. on Neural Nets and Learn Machines* 1, 10, 35724278, (2022). **Impact Factor = 14.25**
102. A. Chandra, S. Pandija, F. Alemanno, R. Rizzo, R. Romano, G. Gigli, C. Bucci, A. Barra, L. Del Mercato, **A fully automatic computational approach for precisely measuring organelle acidification**, *ACS Appl. Mat. & Interf.* 14(16),18133, (2022). **Impact Factor = 09.23**
This article has a CNR press release ([webpage](#), [file](#)) and a "Le Scienze" press release ([webpage](#), [file](#)).
101. L. Albanese, F. Alemanno, A. Alessandrelli, A. Barra, **Replica symmetry breaking in dense neural networks**, *Journal of Statistical Physics* 189, 24, (2022). **Impact Factor = 01.76**
100. E. Agliari, F. Alemanno, A. Barra, G. Di Marzio, **The emergence of a concept in shallow neural networks**, *Neural Networks*, 148, 232, (2022). **Impact Factor = 09.65**
99. E. Agliari, L. Albanese, A. Barra, F. Leonelli **On the effective initialization for Restricted Boltzmann machines via duality with Hopfield models**, *Neural Networks* 143, 314, (2021). **Impact Factor = 09.65**
98. E. Agliari, A. Barra, P. Sollich, L. Zdeborová (editors), **Machine Learning & Statistical Physics: preface of the special issue** *Journal of Physics A: math. & Theor.* 10.1088, (2020). **Impact Factor = 02.13**

97. A. Barra, et al.,
Microgel-based in vitro tumoroid platform for real time assessment of drug sensivity and resistance, *Cancer Research: exp. and mol. ther. AACR Proc.* (2020) **Proceedings**
96. E. Agliari, L. Albanese, A. Barra, G. Ottaviani,
Replica symmetry breaking in associative neural networks: a few steps toward rigorous results,
J. Phys. A: Math. & Theor. 53, 41, (2020). **Impact Factor = 02.13**
95. E. Agliari, A. Barra, O.A. Barra, A. Fachechi, L. Franceschi-Vento, L. Moretti,
Analysis of temporal correlation in heart rate variability through maximum entropy principle in a minimal pairwise glassy model,
Nature Scientific Reports 10, 15353, (2020). **Impact Factor = 04.99**
94. E. Agliari, F. Alemanno, A. Barra, O.A. Barra, A. Fachechi, L. Franceschi-Vento, L. Moretti
Detecting cardiac pathologies via machine learning on heart-rate variability time series and related markers,
Nature Scientific Reports 10, 8845, (2020). **Impact Factor = 04.99**
93. E. Agliari, F. Alemanno, A. Barra, A. Fachechi,
Generalized Guerra's interpolation scheme for dense associative neural networks,
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92. D. Alberigi, A. Barra, P. Contucci, E. Mingione,
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Journal of Statistical Physics 180, 665, (2020). **Impact Factor = 01.76**
91. E. Agliari, F. Alemanno, A. Barra, M. Centonze, A. Fachechi,
Neural networks with redundant representations: detecting the undetectable
Physical Review Letters 124, 028301, (2020). **Impact Factor = 09.16**
90. E. Agliari, A. Barra, M. Castellana, M. Piel, P. Saez, P. Vergas
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89. E. Agliari, F. Alemanno, A. Barra, A. Fachechi,
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88. E. Agliari, F. Alemanno, A. Barra, A. Fachechi,
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87. E. Agliari, A. Barra, M. Notarnicola,
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86. E. Agliari, A. Barra, B. Tirozzi,
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Journal of Statistical Mechanics P033301, (2019). **Impact Factor = 02.23**
85. A. Fachechi, E. Agliari, A. Barra,
Dreaming Neural Networks: forgetting spurious memories and reinforcing pure ones.
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This article has been featured in all the main Italian newspapers (e.g. [Repubblica](#), [ANSA](#), etc.)
84. A. Pollini, L. Del Mercato, A. Barra, Y. S. Zhang, F. Calabi, G. Gigli,
Towards the development of human Immune System-on-a-chip platform,
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83. A. Barra, M. Beccaria, A. Fachechi,
A new mechanical approach to handle generalized Hopfield neural networks,
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This article has been featured in ScienceTrends ([link here](#))
82. E. Agliari, A. Barra, P. Contucci, A. Pizzoferrato, C. Vernia
Interactions and fluctuations: a case study from Social Sciences,
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81. E. Alfinito, A. Barra, M. Beccaria, A. Fachechi, G. Macorini,
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80. E. Agliari, A. Barra, G. Landolfi, S. Murciano, S. Perrone,
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79. A. Barra, G. Genovese. P. Sollich, D. Tantari
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78. A. Barra, G. Genovese, P. Sollich, D. Tantari
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77. A. Barra, & al.
A novel protocol to evaluate the efficacy of chemotherapy induced human anticancer immunity in a microfluidic environment,
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76. E. Agliari, A. Barra, C. Longo, D. Tantari
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75. E. Agliari, A. Annibale, A. Barra, A.C.C. Coolen, D. Tantari,
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74. E. Agliari, A. Barra, L. Dello Schiavo, A. Moro,
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73. E. Agliari, A. Barra, A. Galluzzi, F. Requera-Silvente, D. Tantari,
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72. E. Agliari, A. Barra, A. Galluzzi, M. Javarone, D. Tantari, A. Pizzoferrato,
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71. E. Agliari, A. Barra, G. Del Ferraro, F. Guerra, D. Tantari,
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70. E. Agliari, A. Barra, F. Tavani, B. Tirozzi,
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69. A. Barra, A. Moro,
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68. E. Agliari, M. Altavilla, A. Barra, L. Dello Schiavo, E. Katz,
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67. E. Agliari, A. Barra, A. Galluzzi, F. Guerra, F. Tavani, D. Tantari,
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66. E. Agliari, A. Barra, A. Galluzzi, F. Guerra, F. Tavani, D. Tantari,
Hierarchical neural networks perform both serial and parallel processing,
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65. E. Agliari, A. Barra, A. Galluzzi, F. Guerra, D. Tantari, F. Tavani,
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64. E. Agliari, A. Barra, A. Galluzzi, F. Guerra, D. Tantari, F. Tavani,
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63. A. Barra, P. Contucci, E. Mingione, D. Tantari,
Multi-Species mean-field spin-glasses: Rigorous results,
Annales Henri Poincaré 16(3), 691, (2015). **Impact Factor = 02.06**
62. A. Annibale, A. Barra, P. Sollich, D. Tantari,
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61. A. Barra, A. Di Lorenzo, F. Guerra, A. Moro,
On quantum and relativistic mechanical analogues in mean field spin models,
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60. E. Agliari, E. Biselli, A. De Ninno, G. Schiavoni, L. Gabriele, A. Gerardino, F. Mattei, A. Barra, L. Businaro,
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59. E. Agliari, A. Barra, P. Contucci, R. Sandell, C. Vernia,
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58. E. Agliari, A. Barra, A. Galluzzi, D. Tantari, F. Tavani,
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57. E. Agliari, A. Annibale, A. Barra, A. Galluzzi, D. Tantari, F. Tavani,
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56. M. Castellana, A. Barra, F. Guerra,
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55. A. Barra, P. Contucci, R. Sandell, C. Vernia,
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54. E. Agliari, A. Barra, S. Franz, T. Thiago,
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53. A. Barra, A. Galluzzi, F. Guerra, A. Pizzoferrato, D. Tantari,
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52. E. Agliari, A. Barra, R. Burioni, A. Di Biasio, G. Uguzzoni,
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51. A. Barra, G. Genovese, F. Guerra, D. Tantari,
A solvable mean field model of a gaussian spin glass,
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49. E. Agliari, A. Annibale, A. Barra, A.C.C. Coolen, D. Tantari,
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48. E. Agliari, A. Annibale, A. Barra, A.C.C. Coolen, D. Tantari,
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47. E. Agliari, A. Barra, A. Galluzzi, M. Isopi,
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45. E. Agliari, A. Barra, A. D'Antoni, A. Galluzzi,
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40. A. Barra, F. Guerra, G. Genovese, D. Tantari,
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39. A. Barra, P. Sollich,
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36. E. Agliari, L. Asti, A. Barra, L. Ferrucci,
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33. A. Barra, F. Guerra, E. Mingione,
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28. E. Agliari, A. Barra,
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27. E. Agliari, A. Barra, F. Camboni,
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25. A. Barra, A. Di Biasio, F. Guerra,
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24. A. Barra, E. Agliari,
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23. E. Agliari, A. Barra, R. Burioni, P. Contucci,
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9. A. Barra, L. DeSanctis,
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7. A. Barra,
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6. E. Agliari, A. Barra, F. Camboni,
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5. A. Barra, L. DeSanctis,
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4. A. Barra, L. DeSanctis,
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3. A. Agostini, A. Barra, L. DeSanctis,
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2. A. Barra, L. DeSanctis,
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1. A. Barra,
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