

Matrix string theory

In physics, **matrix string theory** is a set of equations that describe superstring theory in a non-perturbative framework. Type IIA string theory can be shown to be equivalent to a maximally supersymmetric two-dimensional gauge theory, the gauge group of which is $U(N)$ for a large value of N . This matrix string theory was first proposed by Luboš Motl in 1997^[1] and later independently in a more complete paper by Robbert Dijkgraaf, Erik Verlinde, and Herman Verlinde.^[2] Another matrix string theory equivalent to Type IIB string theory was constructed in 1996 by Ishibashi, Kawai, Kitazawa and Tsuchiya.^[3]

See also

- Matrix theory (physics)

References

1. L. Motl, "Proposals on nonperturbative superstring interactions". arXiv:hep-th/9701025 (https://arxiv.org/abs/hep-th/9701025).
2. R. Dijkgraaf, E. Verlinde, H. Verlinde, "Matrix String Theory", *Nucl. Phys. B* **500**, p. 43 (1997) arXiv:hep-th/9703030 (https://arxiv.org/abs/hep-th/9703030).
3. N. Ishibashi, H. Kawai, Y.Kitazawa, A. Tsuchiya, "A large-N reduced model as superstriing", *Nucl. Phys. B* **498** p. 467 (1997) arXiv:hep-th/961211517521 (https://arxiv.org/abs/hep-th/961211517521).

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