

References and Notes

1. M. H. Polymeropoulos *et al.*, *Science* **276**, 2045 (1997).
2. ———, *ibid.* **274**, 1197 (1996).
3. L. I. Golbe *et al.*, *Ann. Neurol.* **40**, 767 (1996).
4. W. K. Scott *et al.*, *Science* **277**, 387 (1997); T. Gasser *et al.*, *ibid.*, p. 388; T. Lynch *et al.*, *ibid.* **278**, 1212 (1997), with co-authors listed in *ibid.*, p. 1696.
5. D. Campion *et al.*, *Genomics* **26**, 254 (1995).
6. J. R. Vaughan *et al.*, *Ann. Neurol.*, in press.
7. The French Parkinson's Disease Genetics Study Group: Johann Tassin, Alexandra Dürr, Nacer Abbas, Anne-Marie Bonnet, Marie Vidailhet, Soraya Medjebour, Christiane Penet, Yves Agid, and Alexis Brice, INSERM U289 and Fédération de Neurologie, Hôpital de la Salpêtrière, 75651 Paris Cedex 13, France; Michel Borg, Hôpital Pasteur, 06006 Nice Cedex, France; Emmanuel Broussolle, Hôpital Neurologique, 69003 Lyon, France; Alain Destée, Centre Hospitalier Régional (CHR), 59034 Lille Cedex, France; Frank Durif, Hôpital Fontmaure, Chamalières, France; Josué Feingold, INSERM U155, 75005 Paris; Gilles Fénelon, Hôpital Tenon, Paris; Jean-René Fève, Hôpital Laënnec, 4035 Nantes Cedex, France; Maria Martinez, INSERM U358, 75475 Paris; Pierre Pollak, Centre Hospitalier Universitaire (CHU), 38043 Grenoble Cedex 9, Switzerland; Olivier Rascol, Hôpital Purpan, 31073 Toulouse Cedex, France; François Tison, Hôpital Pellegrin-Tripode, 33076 Bordeaux Cedex, France; Christine Tranchant and Jean-Marie Warter, CHR, 67000 Strasbourg, France; Marc Vérin, Hôpital de Pontchaillou, 35033 Rennes Cedex, France; Francois Viallet, CHU, 13616 Aix-en-Provence Cedex, France.
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Universal Quantum Simulators: Correction

Several readers have pointed out an error in my Research Article "Universal quantum simulators" (23 Aug. 1996, p. 1073) (1). On page 1076, after equation (2), I incorrectly cited K. Kraus as showing that it is always possible to mimic the effect of an environment for an N -qubit quantum system by using a simulated environment consisting of N qubits (2, which is reference 39 in the article). In fact, the implication of Kraus's work (2) is that it is always possible to simulate such an environment using a simulated environment with $2N$ qubits, not N . An N -qubit simulated environment clearly suffices in some cases: that it always suffices should be considered to be a conjecture that the set of equations given by equation (2) always possesses a solution. However, the minimum size of a simulated environment sufficient to model any environmental interaction is not currently known. The conclusion of my article, that a quantum com-

puter can efficiently simulate any quantum system that evolves according to local interactions, remains unchanged.

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References

1. S. Lloyd, *Science* **273**, 1073 (1996).
2. K. Kraus, *States, Effects, and Operations: Fundamental Notions of Quantum Theory* (Spring-Verlag, Berlin, 1983).

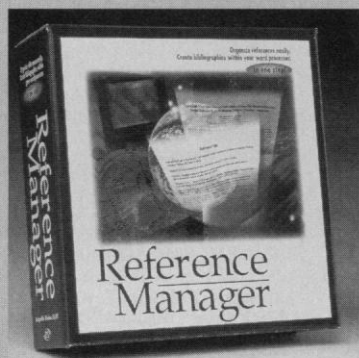
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