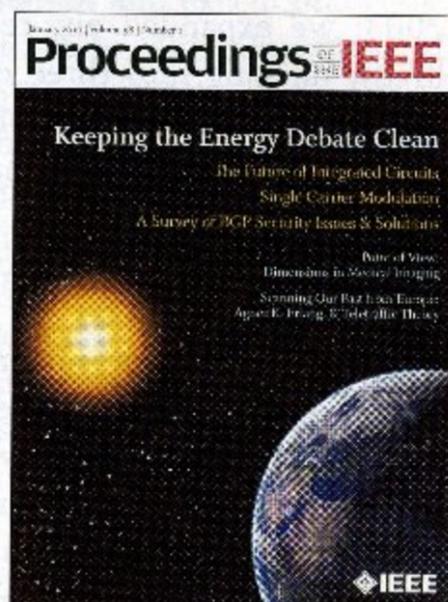


PAPERS

- 11 **The Future of Integrated Circuits: A Survey of Nanoelectronics**  
By M. Haselman and S. Hauck  
| CONTRIBUTED PAPER | Nano-devices, such as molecules that function as computer switches as well as silicon wires and carbon tube interconnections, have been fabricated and demonstrated, and further research is underway.
- 8 **Prolog, J. Esch**
- 42 **Keeping the Energy Debate Clean: How Do We Supply the World's Energy Needs?**  
By D. Abbott  
| CONTRIBUTED PAPER | Proposed solutions include: Sensible energy conservation; Solar thermal collection using parabolic reflectors; Hydrogen used as an energy carrier in combustion engines and for energy storage and transportation.
- 39 **Prolog, J. Esch**
- 69 **Single Carrier Modulation With Nonlinear Frequency Domain Equalization: An Idea Whose Time Has Come—Again**  
By N. Benvenuto, R. Dinis, D. Falconer, and S. Tomasin  
| CONTRIBUTED PAPER | In high-speed single-carrier digital communication systems, processing blocks of signals using Fast Fourier Transforms is an efficient way to equalize (compensate) for interference between transmitted symbols.
- 67 **Prolog, R. O'Donnell**
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By K. Butler, T. R. Farley, P. McDaniel, and J. Rexford  
| CONTRIBUTED PAPER | The Border Gateway Protocol (BGP) controls much of Internet traffic, but is vulnerable to communications interruptions and failures; finding suitable improved security measures with acceptable costs is difficult.
- 97 **Prolog, R. O'Donnell**

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**On the Cover:** Our cover this month, for this regular papers' issue, highlights the paper entitled "Keeping the Energy Debate Clean" by depicting the importance of the Sun's role in providing energy to the Earth in all of its diverse forms.