

# Re: design of analog circuits using genetic algorithm

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- *From:* John Larkin <[jjlarkin@xx](mailto:jjlarkin@xx)>
  - *Date:* Thu, 13 Mar 2008 07:13:04 -0700
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On Thu, 13 Mar 2008 01:31:02 -0700 (PDT), Martin Brown <[||||newspam|||@nezumi.demon.co.uk](mailto:||||newspam|||@nezumi.demon.co.uk)> wrote:

In message <04tdt319619ufhhuapfkum7dl6r0mdb4dq@xxxxxxx>, John Larkin <[jjlarkin@highNOTlan.dTHIStechnologyPART.com](mailto:jjlarkin@highNOTlan.dTHIStechnologyPART.com)> writes

On Tue, 11 Mar 2008 12:05:24 -0700, "Joel Koltner" <[zapwireDASHgroups@xxxxxxx](mailto:zapwireDASHgroups@xxxxxxx)> wrote:

"John Larkin" <[jjlarkin@xx](mailto:jjlarkin@xx)> wrote in message [news:0cldt3h19rrp0llh7hp7179lk58jibvna9@xxxxxxxxxx](mailto:news:0cldt3h19rrp0llh7hp7179lk58jibvna9@xxxxxxxxxx)

People, mostly academics, keep trying this. As far as I know, it doesn't work. Understanding electronics is still better than random fiddling; the solution spaces, first for a topology and then for values, is just too big.

I believe you were the one telling us you're personally much more than just a giant genetic algorithm yourself though, right, John? :-)

Somehow a few trillion neurons work better than a few thousand lines of code. Maybe some day computers will be better than people for circuit design, like they are now for chess. But chess has rules.

And so does circuit design.

## Re: design of analog circuits using genetic algorithm

Does it? What machine-executable rules would create the schematic of, say, a spectrum analyzer, or a cell phone, or a laser printer?

Although the intuitive creative step to define the overall circuit architecture is still well beyond modern computation power optimising component values in an existing design is now quite practicable even on a PC given enough time.

As far as I've heard, only trivial circuits can be optimized by evolutionary techniques, and some produce