

Re: request for ideas

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cafeinst@msn.com (Craig Feinstein) wrote in message news:<cgd62a\$no8\$1@news.ks.uiuc.edu>...

- > *I am planning to write a paper which surveys mathematical results that*
- > *show that the old "axiom->proof->theorem" way of doing mathematics*
- > *does not always yield complete information about mathematics. The*
- > *prime example of this (which started it all) is Godel's Incompleteness*
- > *Theorem, but there has been a lot of work in this area since then.*
- >
- > *For instance, Gregory Chaitin has an incompleteness theorem which*
- > *shows conclusively that a certain number which he calls Omega, which*
- > *is really the probability that a computer program halts (defined in a*
- > *way that makes sense), is a random number – which implies that there*
- > *is no finite axiom system that can yield all of the bits of Omega. He*
- > *concludes from all of his work that sometimes one has to simply*
- > *perform experiments in mathematics and form conclusions from the*
- > *experiments without being absolutely certain that the conclusions are*
- > *correct.*
- >
- > *It is these types of very original ideas that I am looking for to put*
- > *in my paper, that there are some problems out there that are so*
- > *difficult for us to get a grip on that we might have to approach them*
- > *like a chemist approaches chemistry, never being 100% sure that his or*
- > *her theories are always correct.*
- >
- > *Anyone who knows of results like these or has done work in this area*
- > *or has original ideas is welcome to respond to me on usenet or if you*
- > *want, you can email me directly.*

Have you looked into Super Omegas? Might be slightly relevant to your inquiry.

<http://www.idsia.ch/~juergen/kolmogorov.html>

Best Regards,

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Eray Ozkural