

Re: kung fu mereotopology

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- *From:* Denis Feldmann <denis.feldmann.sansspam@xxxxxxx>
 - *Date:* Mon, 22 Dec 2008 22:38:23 +0100
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Mariano Suárez-Alvarez a écrit :

On Dec 22, 6:54 pm, galathaea <galath...@xxxxxxxxxx> wrote:

On Dec 21, 7:44 pm, Mariano Suárez-Alvarez

<mariano.suarezalva...@xxxxxxxxxx> wrote:

On Dec 22, 1:01 am, galathaea <galath...@xxxxxxxxxx>
wrote:

i find that kontsevich is still working on his
own much
and has a number of "huge" possibilities
lurking
much of his stuff on operads
and graph theory
and combinatorial topology
is building some very powerful algebraic
tools
which could potentially crack $p = np$ among
other big questions

Can you point to a sentence of Kontsevich related to
 $P = NP$?

sure
but i wasn't claiming his actually mentioning such

i was thinking of
the algebraic approach to computational complexity

things like <http://www.math.ntu.edu.tw/talkdata/194/March10.ppt>

and from the development of operad theory
i've seen much of that computational theory
transform to the algebraic language

particularly the theory of props in rewriting theory

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has quite some start in such a formalisation

<http://sigfpe.blogspot.com/2008/10/operads-and-their-monads.html>

<http://blog.mikael.johanssons.org/archive/2008/02/props-and-patches/>

http://www.atlantis-press.com/php/download_paper.php?id=370

and particularly
the homological theory in computational complexity

kontsevich has been skirting algorithmic complexity
for some time now with his work on algebraic structures
over graphs and related combinatorial structures

probably the most suspicious to me is his
(loosely)

$H(\text{lie algebra}) = H(\text{graph complex}) = H(\text{group})$

* * *

because the homology of graph complexes
has some immediate consequences
for graph isomorphism and the complexity of such algorithms

i have strong suspicions
that much of the operad theory on which this is built
(cf. <http://arxiv.org/pdf/math/0211464>)
contains the kernel of the algebraic concepts
that could crack complexity questions like $p \stackrel{?}{=} np$

additionally
there is known complexity work
on poset homology
that ties their algebraics to more classical work on
matroids <http://www.springerlink.com/content/y60n827057m374n8/>

kontsevich has contributed quite a bit to matroid theory
and generally has been working in that netherworld
of the algebraics of discrete combinatorial structures
with all the complexity issues just over the horizon

anyway
my point was that kontsevich has done some major work
and there is the potential
for resolving some very big questions

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Well. Duh! Do you also see potential in, say, Serre's work?

Anyways... you are able to write with so little concreteness that it is impossible to tell whether you actually know anything about what you write or are simply a apt google user. You remind me distinctly of ELIZA.

It is possible to tell : nobody understanding all this material at the level she pretends to do would persist in major mistakes on radius of convergence of the log series for matrices even after it had been pointed to her...

-- m

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