From: SB (Serguei Beloussov) [redacted]
Sent: Tuesday, January 23, 2018 11:57 AM
To: jeffrey E.
Subject: Fwd: bio computing and algebraic topology

regards
sb@

Begin forwarded message:

From: Коняев Ан=#1076;рей [redacted]
Date: January 23, 2018 at 20:55:02 GMT+9
To: "SB (Serguei Beloussov)" [redacted]
Subject: Re: bio computing and algebraic topology

Ok.

Then we talking about topological pattern recognition (this is the same as =omputational (co-) homology) in data.

I saw article about that back in 2014 by guy named Gunnar Carlsson from Sta=ford
https://en.wikiped=a.org/wiki/Gunnar_Carlsson <http://www.ayasdi.com/wp-content/uploads/2015/02/ayasdi-top=logical-pattern-recognition-for-point-cloud-data.pdfIt>

and here is an article

http://www.ayasdi.co=/wp-content/uploads/2015/02/ayasdi-topological-pattern-recognition-for-poi=t-cloud-data.pdf <http://www.ayasdi.com/wp-content/uploads/2015/02/ayasdi-top=logical-pattern-recognition-for-point-cloud-data.pdf>

Carlsson is quite famous, he solved so called Burnside conjecture in t=e 80s. It is possible to write him and ask if there anything in this field= He knows for sure.

Regards,
Andrei Konayev

23.01.2018, 14:40, "SB (Serguei Beloussov)" [redacted]

regards
sb@

Begin forwarded message:

From: "jeffrey E." <jeevacation@gmail.com <mailto:je=vacation@gmail.com> >
Date: January 23, 2018 at 20:38:40 GMT+9
To: "SB (Serguei Beloussov)" [redacted]
Subject: Re: FW: bio computing and algebraic topol=gy

data , neurons , etc are all embedeed in a space. mo=t anaylysis igoores the location. topology .in&nbs=; its basic form and tramformations in more tha 2 dim allows similar=data sets to be recognzied. yes it is not ye= used. it will be , my guess. .

On Mon, Jan 22, 2018 at 9:02 PM, SB (Serguei Beloussov) [redacted] wrote:

-----Original Message-----
From: Коняев Анд=;ей [redacted]
]
Sent: Monday, January 22, 2018 10:44 PM
To: SB (Serguei Beloussov) [redacted]
Subject: bio computing and algebraic topology

Hi!

Looked over some articles, asked some fellow-mathematicians and this is wha= I have got (keep in mind that I don't fully understand what bio-computing=means in this context).

The algebraic topology is used in computational models of protein folding. =t's not new, but the progress in the field is quite slow. I believe there =s no effective computational models here yet.

The other use of topology is study of graphs of organic compounds, drugs in=particular. I have heard that there are some progress here, it is possible=to do calculations here with some non-trivial results. In Russia there's a=company called Biocad, that does that.

Finally the third topology use is neuroscience. It is something of this kin= https://arxiv.org/pdf/1605.01905.pdf <https://arxiv.org/pdf/1605.01905.pdf>

If there's a particular project, I think I can give more specific answer>=

Regards,
Andrei Konyaev

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please note