

THE HOPE AND DESPAIR OF SCIENCE AND TDM

@CHARTGERINK
(TWITTER AND GITHUB)

THE HOPE

DECREASED MORTALITY OF
THE PATIENTS SIGNIFICANTLY,
 $F(1, 39) = 2.43, P < .05$.



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DECREASED MORTALITY OF
THE PATIENTS SIGNIFICANTLY,

$$F(1, 39) = 2.43, P < .05.$$

USE THIS INFORMATION
TO RECALCULATE
P-VALUE



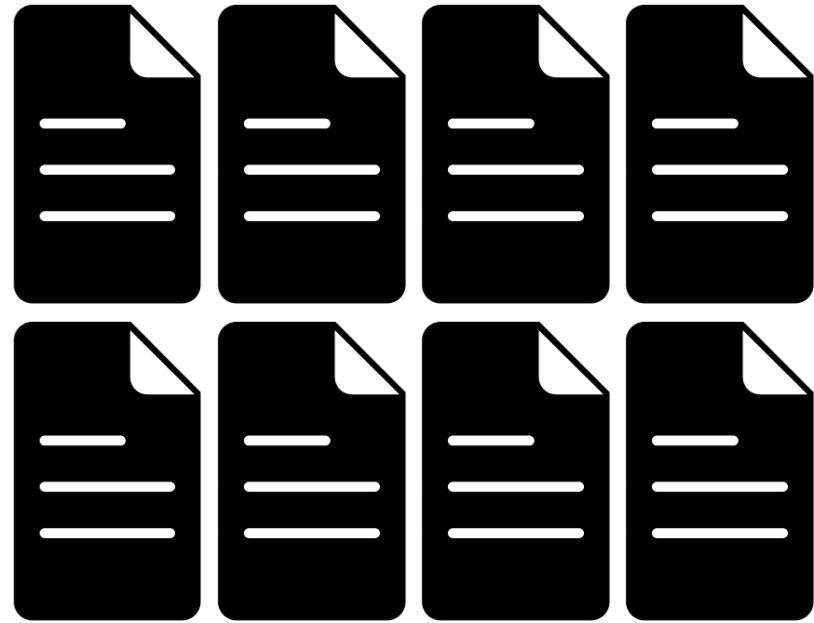


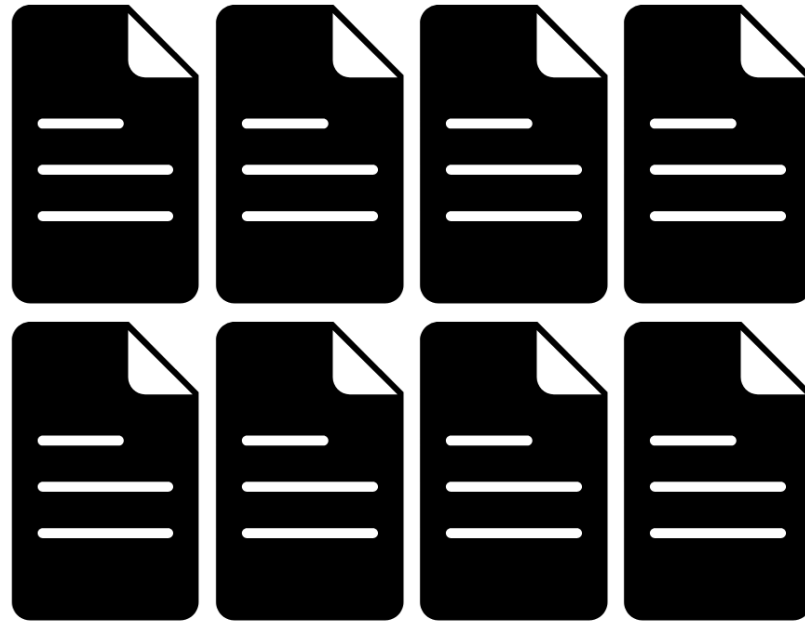
DECREASED MORTALITY OF
THE PATIENTS SIGNIFICANTLY,

$$F(1, 39) = 2.43, P < .05.$$

USE THIS INFORMATION
TO RECALCULATE
P-VALUE

P-VALUE NOT $< .05$
BUT 0.13! → NO EFFECT
WRONG CONCLUSION IN PAPER

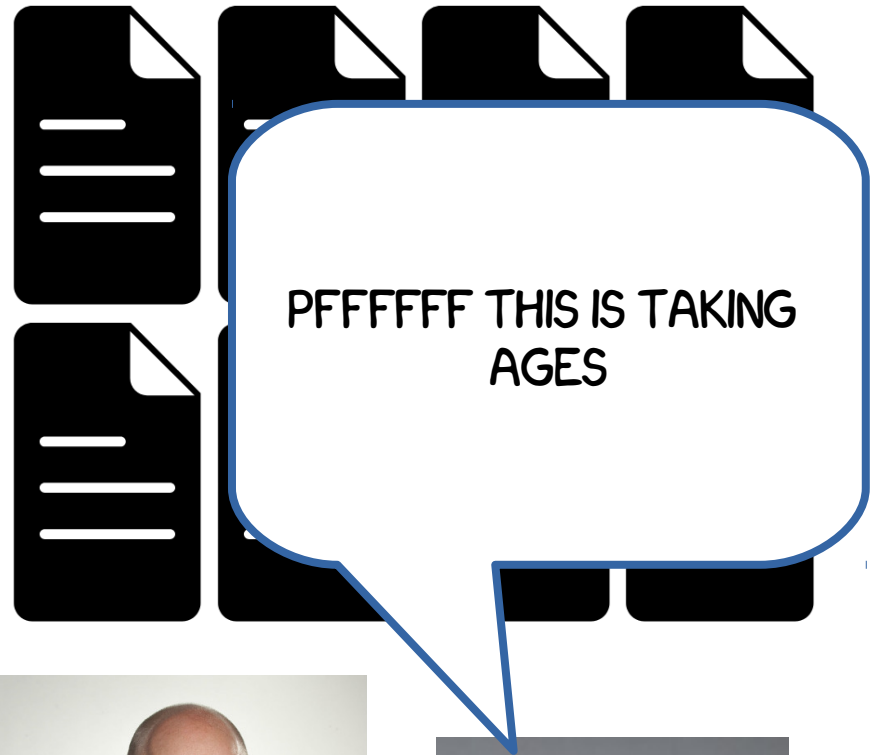




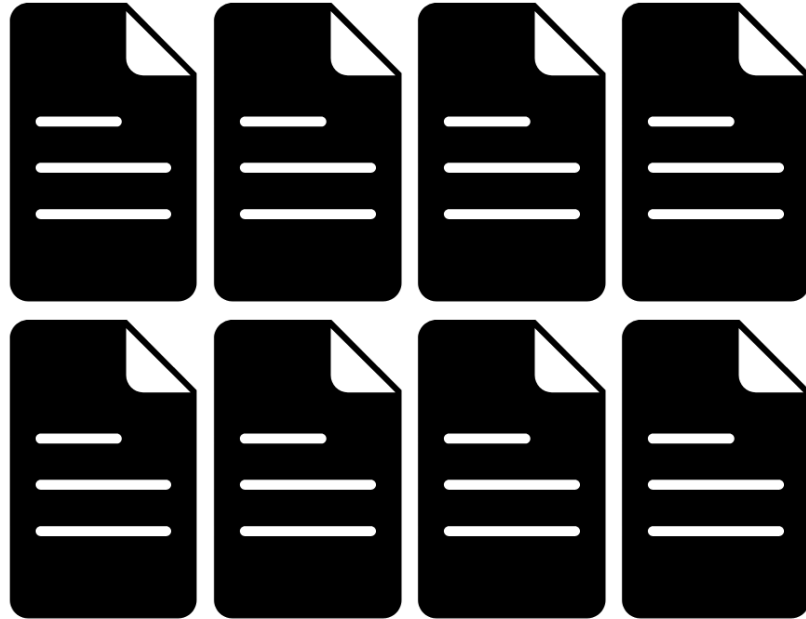
An illustration of a stack of four black papers with white horizontal lines representing text. A white speech bubble with a blue border is positioned in front of the papers, pointing towards the bottom right.

MARJAN, PLEASE CHECK ALL
THESE PAPERS MANUALLY

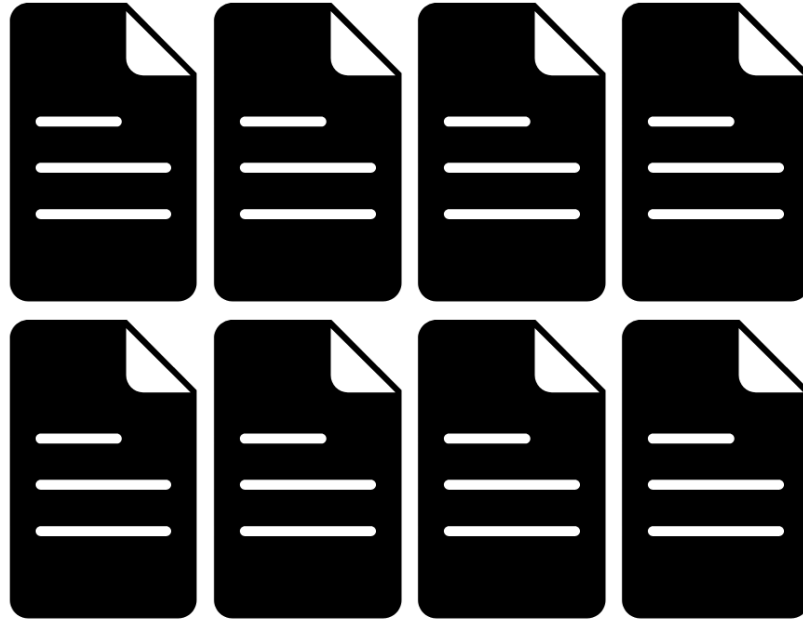




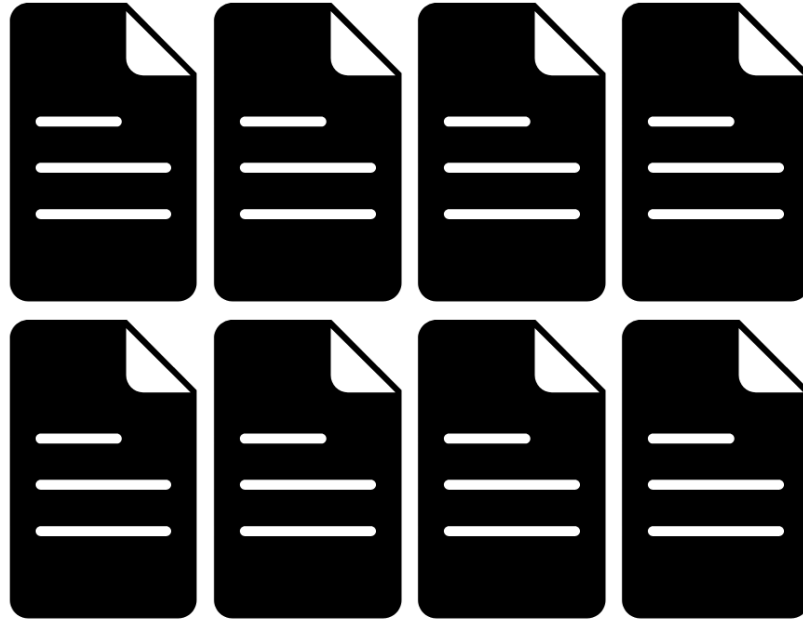
~2010



2012



2012



NOT TO WORRY! COMPUTERS CAN DO IT!



2013



2013



IT TAKES ONLY 10 SECONDS
FOR 100 PAPERS!



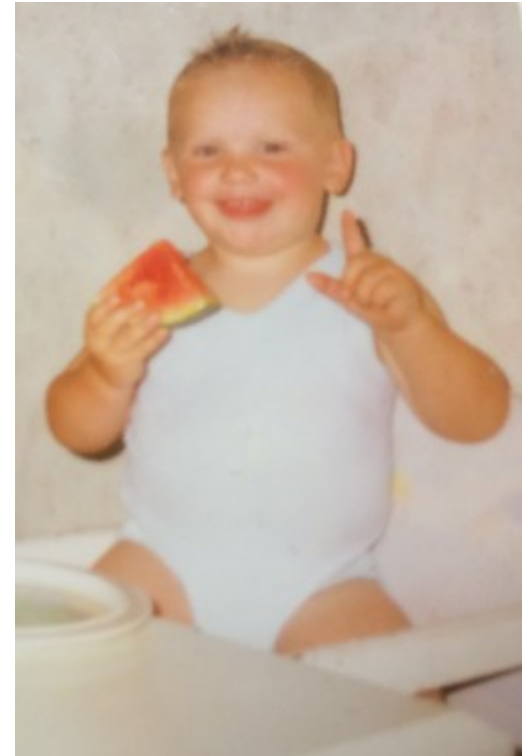
2013



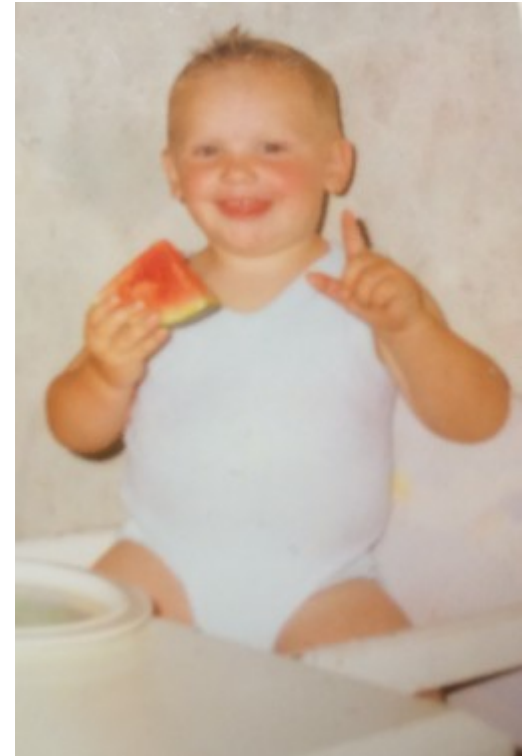
NOW WE JUST NEED MORE PAPERS!



2013



2014



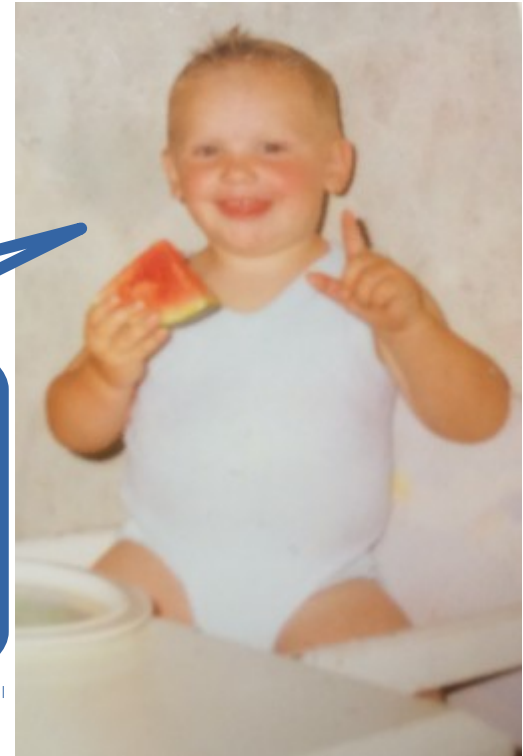
CHRIS, DOWNLOAD TENS OF THOUSAND
PAPERS, MANUALLY



2014

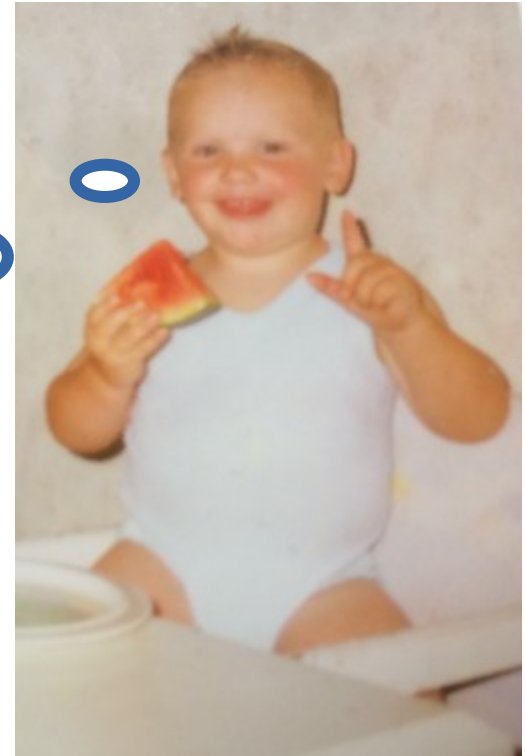


CLICK CLICK DOWNLOAD
TIMES 30,000



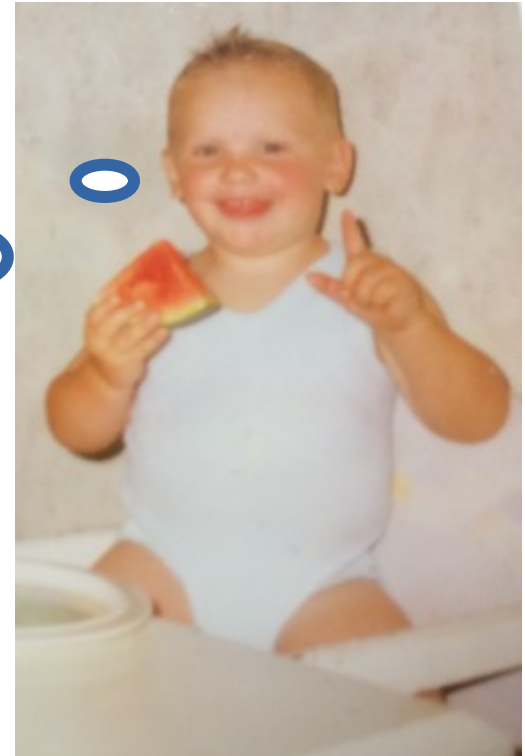
2014

THERE MUST BE AN EASIER WAY



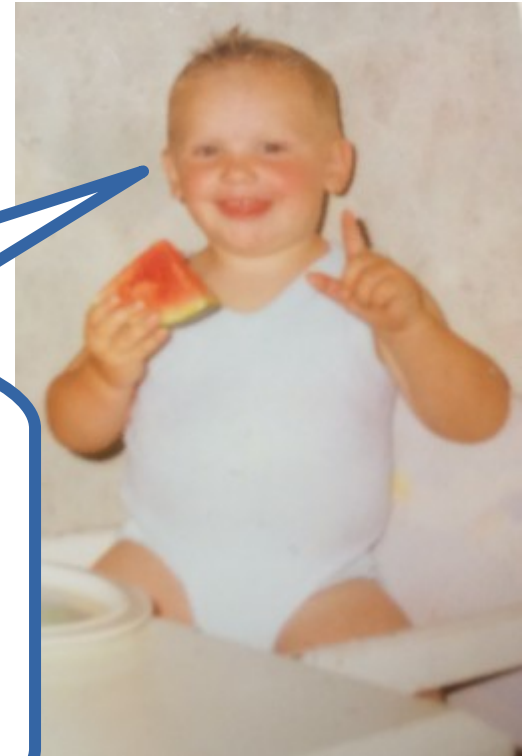
2014

AUTOMATED DOWNLOADING!



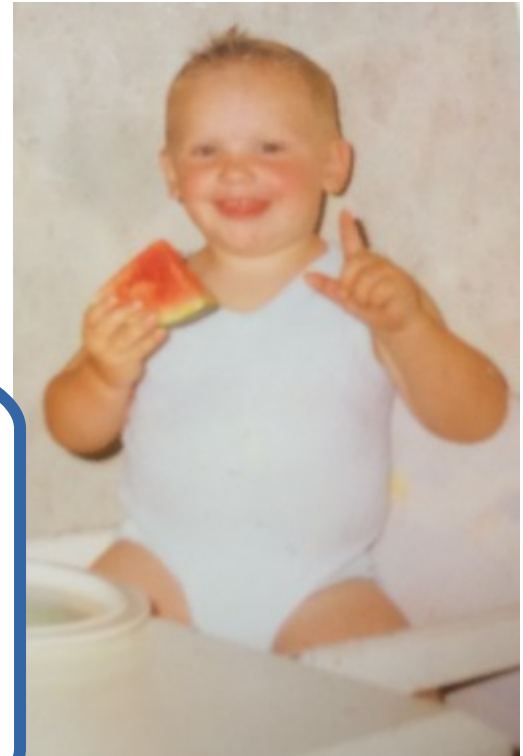
2015

JELTE, I LEARNED HOW TO SCRAPE ARTICLES
AND AM READY TO DOWNLOAD 900,000
ARTICLES FOR OUR RESEARCH



2015

THAT'S BEYOND A SCALE I EVER IMAGINED
POSSIBLE!



THE DESPAIR

Chris H.J. Hartgerink's Notebook

HOME

Elsevier stopped me doing my research

[92 Replies](#)

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I am a statistician interested in detecting potentially problematic research such as data fabrication, which results in unreliable findings and can harm policy-making, confound funding decisions, and hampers research progress.

Chris H.J. Hartgerink's Notebook

HOME

Wiley also stopped me doing my research

[9 Replies](#)

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In November, I wrote about how [Elsevier wanted me to stop downloading](#) scientific articles for my research. Today, Wiley also ordered me to stop downloading.

900,000
BECAME
300,000

UK HAS AN EXCEPTION SINCE 2014

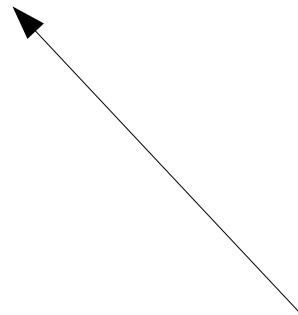
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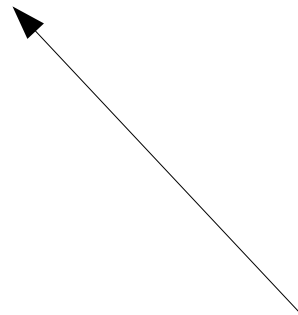


PROBLEM SOLVED?

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PROBLEM SOLVED?
I TRIED UK COLLABORATION
UK UNI SHUT US DOWN DESPITE EXCEPTION
(MANAGEMENT ALSO AVOIDS IMAGINED RISKS)

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RETURN OF THE HOPE

(THE CONDITIONAL)
RETURN OF THE HOPE

TDM NOT ONLY HAS
RESEARCH POTENTIAL

TDM CAN CREATE THE
MARKET FOR INFORMATION
CONSUMPTION

TDM CAN CREATE THE
MARKET FOR INFORMATION
CONSUMPTION

BUT ONLY WITH WIDE EXCEPTION
INCLUDES COMMERCIAL USE

TDM CAN CREATE THE
MARKET FOR INFORMATION
CONSUMPTION

BUILDING ON FREELY AVAILABLE
DATA HAS MASSIVE MARKET VALUE

REUSE OF
PUBLIC SECTOR DATA ALONE HAS
ESTIMATED MARKET CAP OF
> HALF A BILLION EUROS

WIDE EXCEPTION FOR TDM ALLOWS
EU TO BECOME HUB OF TDM
INNOVATION AND ECONOMIC GROWTH

BUSINESSES COULD BREAK DOWN
PUBLISHING MARKET BY SHOWING
THEM THE REVENUE STREAM THEY
NEED

THEY KNOW THEIRS IS DISSIPATING
DUE TO OPEN ACCESS

IN LONG RUN ENCOURAGES POOLING
OF RESOURCES INSTEAD OF
CURRENT MONOPOLIES/ISLANDS

TDM NO PROBLEM IN OPEN ACCESS

GIVES US A GLIMPSE INTO THE
FUTURE



OPEN KNOWLEDGE MAPS

A visual interface to the world's scientific knowledge



BETA

VISUALIZE A RESEARCH TOPIC

Choose a library:

- ☐ PubMed (biomedicine) ⓘ
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european commission|

GO

Options



OPEN KNOWLEDGE MAPS

A visual interface to the world's scientific knowledge

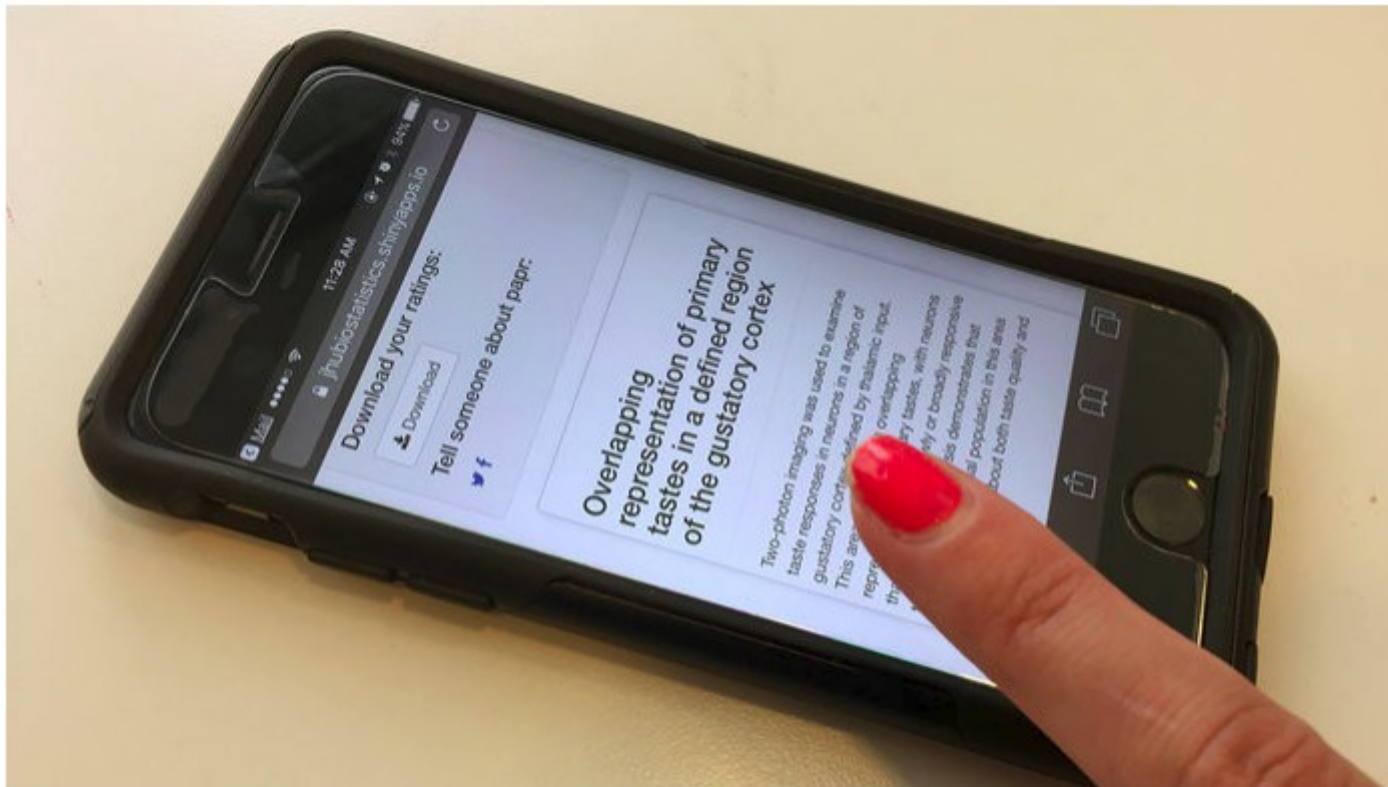
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Science/AAAS

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Exciting and Probable



Exciting and Questionable



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Inference of cell-cell interactions from population density characteristics and cell trajectories on static and growing domains

A key feature of cell migration is how cell movement is affected by cell-cell interactions. Furthermore, many cell migratory processes such as neural crest stem cell migration [1, 2] occur on growing domains or in the presence of a chemoattractant. Therefore, it is important to study interactions between migrating cells in the context of domain growth and directed motility. Here we compare discrete and continuum models describing the spatial and temporal evolution of a cell population for different types of cell-cell interactions on static and growing domains. We suggest that cell-cell interactions can be inferred from population density characteristics in the presence of motility bias, and these population density characteristics for different cell-cell interactions are conserved on both static and growing domains. We also study the expected displacement of a tagged cell, and show that different types of cell-cell interactions can give rise to cell trajectories with different characteristics. These characteristics are conserved in the presence of domain growth, however, they are diminished in the presence of motility bias. Our results are relevant for researchers who study the existence and role of cell-cell interactions in biological systems, so far as we suggest that different types of cell-cell interactions could be identified from cell density and trajectory data.

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