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### **About Frontiers**

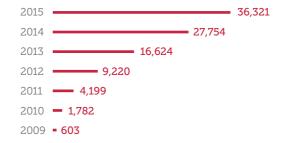
access publisher that has attracted 220'000 researchers as authors and editors.

By taking publishing entirely online, we drive innovation and develop new technologies to make peer review more efficient and transparent, provide impact metrics for articles and researchers, merge open access publishing with a research network platform to catalyze research dissemination and we popularize research to the public, including children. Our mission is to increase the reach and impact of research articles and their authors.

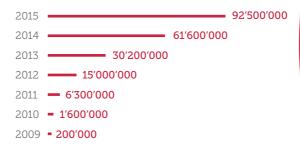
Founded by scientists in 2007, Frontiers is today one of the 5 largest open access publishers and has received the ALPSP Gold Award for Innovation in Publishing in 2014.

**CUMULATIVE GROWTH** (as of September 2015)

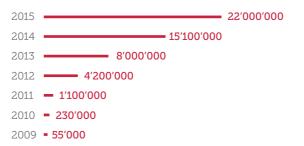
### **Published Articles**



### **Article Page Views**



### **Article Downloads**



### Over 80% of citations in OA Psychology journals

are generated from Frontiers in Psychology and Frontiers in Human Neuroscience

Frontiers in Human Neuroscience
is the #1 gold open-access
journal in the world
terms of volume and impact factor

Frontiers in Psychology is the world's largest journal in its JCR category

Frontiers in Plant Science is
#1 among open-access
journals in plant
science, both in volume and
impact factor.

### Our Innovations

### **Community Journals**

We cover more than 400 specialties across academia, with more than 60'000 world-renowned scientists and scholars as editors. "Gold" open access for all articles, under the CC-BY Creative Commons license.

### **Research Topics**

Spotlight the most specialized communities and enable leading researchers to manage the publication of article collections.

### **Collaborative Review**

Rigorous, fair, constructive, transparent and efficient. All enabled by our sophisticated "Review Forum" web software.

### Impact Metrics

Advanced analytics track the impact of your research.

### Tiering

High impact research articles are crowdsourced then "climb the tier" as "Focused Reviews" to reach a broader audience.

### Young Minds

A free scientific journal written for and reviewed by young people.

#### Loop

The open network that maximizes the impact of researchers and their discoveries, and the only research network that integrates into institutional websites and publishing platforms.

### Any questions please contact us: info@frontiersin.org

NUMBERS (as of September 2015)

54
Open access journals

Specialties across academia

62'000
Editors

Authors

4'000'000

37'000

Articles

published

Article views /month 1'000'000

Article downloads /month

### **Top 15 Editor Affiliations**

National Institutes of Health
Harvard University
The Max Planck Society
University College London
Stanford University
University of Michigan
UCLA
Consiglio Nazionale delle Ricerche
University of Florida
King's College London
INSERM
University of Oxford
University of Minnesota
University of Southern California



Our headquarters are located in the Innovation Park of the Swiss Federal Institute of Technology (EPFL) in Lausanne, Switzerland.

### Team Frontiers: the expertise of 200 strong

Frontiers has the best team in publishing and the most talented software engineers to advance the cause of open science. We benefit from a strong pool of local talent; in 2014 we received over 1000 applications, from among which **8% of the very best were hired**. We have over 200 employees from 38 countries based largely at our headquarters at the Innovation Park of the Swiss Federal Institute of Technology (EPFL) in Lausanne, with IT

development offices in Madrid and India, plus presence in London, San Francisco and Albany.

Together we are providing the support and building the tools and platforms that our authors, editors and reviewers count on to get their jobs done efficiently, and that will contribute to promoting the research and careers of scientists and clinicians from every country in the world.

### Where does the money go?

Frontiers was designed to empower the research community to shape the direction of research content. In 2014, we supported the community with \$1 million in honoraria and awards in acknowledgement of their dedication to this mission.

Frontiers innovates faster than any other publisher to provide cutting-edge publishing and networking solutions. When Frontiers started in 2007, we made the bold decision to build all our services in-house, integrated into one global platform – a first in the publishing industry. Almost 2/3 of our employees are IT experts, pioneering one innovation after

another. In 2014 alone, 32% of our expenditures were put towards innovations that included technological advances to our Collaborative Peer Review platform, enhanced impact metrics for articles and authors and Loop, the open network that aims to drive readership for your articles and increase your discoverability and impact.

The bottom line is that our dedication to community empowerment and innovation has driven Frontiers journals into the leading position in Gold Open Access Publishing in terms of both high impact and high article volumes.\*

\* based on a comparison of Gold Open Access journals listed in Thomson Reuters Journal Citation Reports 2014.

### 





# Frontiers publishing model: empowering communities

Frontiers in Psychiatry ur mission is to put publishing back Psychology into the hands of researchers. NO. 1 JOURNAL Being a community-rooted open IN PSYCHOLOGY access publisher means that our journals Neurology are run by more than 60'000 researchers Physiology from over 5'000 institutions world-wide. NO. 1 OPEN ACCESS JOURNAL IN PHYSIOLOGY\* Pharmacology \*Impact factors from the 2014 Web of Science Journal Citation Report. • Plant Science NO.1 OPEN ACCESS JOURNAL IN PLANT SCIENCE\* Microbiology **NO.2 OPEN ACCESS** JOURNAL IN MICROBIOLOGY\* Frontiers in • Human Immunology Frontiers in Neuroscience Endocrinology LARGEST OPEN ACCESS • Neuroscience JOURNAL IN NEUROSCIENCE Genetics

In our publishing model, active researchers take all editorial decisions regarding manuscripts and act as Chief, Associate and Review Editors on the editorial boards. In order to ensure the highest standards for our journals, we take great care in appointing only leading researchers and clinicians from each academic community to the editorial boards. They are enabled by our online Digital Editorial Office where they can manage their journals and community, can follow the progress of the review and interact directly with authors in our online Review Forum.

Frontiers' staff of PhDs and Postdocs, across all academic disciplines, support the day-to-day running of the Community Journals and ensure that the review process is conducted in line with Frontiers' Collaborative Review principles.

With over 37'000 papers published to date and 16 journals listed in the 2014 Journal Citation Report, several of our journals are already the **largest journals** in their respective fields and receive the **highest citation rates** amongst open access journals.

### Frontiers in

- Chemistry
- Public Health
- Bioengineering and Biotechnology
- Physics
- Energy Research
- Cell and
   Developmental Biology
- Earth Science
- Environmental Science
- Ecology and Evolution

### Frontiers in

- Marine Science
- Materials
- Nutrition
- Medicine
- Surgery
- Molecular Biosciences
- Robotics and AI
- Astronomy
- and Space Sciences
   Cardiovascular
- Medicine
   Veterinary Science
- Veterinary So
   ICT
- Digital Humanities

### Frontiers in

- Built Environment
- Mechanical Engineering
- Applied Mathematics and Statistics

#### COMING SOON:

- Management
- Sociology
- Communication
- Library and Information Science

2015 Frontiers | **13** 

AND MORE!

2012 ......2013 ......2014 ......2015

.....2011

Frontiers in

Pediatrics

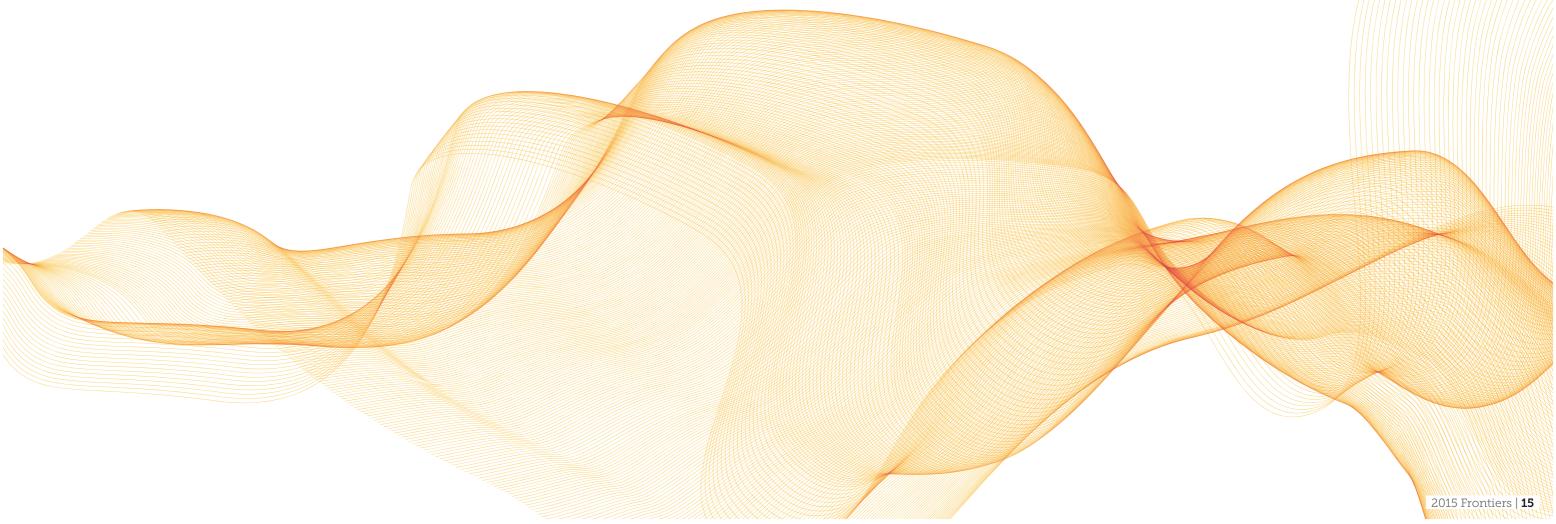
**12** | 2015 Frontiers

2010

Frontiers in

Oncology





# Spotlighting your research field and maximizing your impact

he Frontiers Research Topic is a unique concept where leading scientists manage the publication of a collection of peer reviewed articles around their own area of research. Frontiers has **custom-developed an IT platform to help you run your Research Topic**, spotlight your area, stimulate discussion, catalyze collaboration and maximize the impact of the articles published.

The Frontiers Research Topic is a collection of articles published around a theme of cutting-edge research. Over 2'800 topics have been posted to date. It is a platform proven to unite the world's experts around a topic, to stimulate dialogue and collaboration, and to accelerate science.

In 2014, we redesigned the Research Topic project pages in a way that optimizes the reach and impact of both the articles

and the people behind the research.

Very much like a "mini journal," the Research
Topic provides even the most specialized
areas of the scientific community with
a publishing environment suited to its needs.
But by putting the people behind the
Research Topic front and center, the Frontiers
platform also creates a social dynamic similar
to that of a workshop.

### HAVE AN IDEA FOR A RESEARCH TOPIC?

The launch and management of a Research Topic is easy and free.

Please contact us at:

researchtopics@frontiersin.org frontiersin.org/researchtopics



"What's special about Frontiers is that it is really designed for scientists to have a publishing medium for them"

Alex Thomson, University College London

NUMBERS (January 2015)



58'500'000

Total views on Research Topic articles



15'000'000

Total downloads on Research Topic articles



6'000

Researchers edited a Research Topic



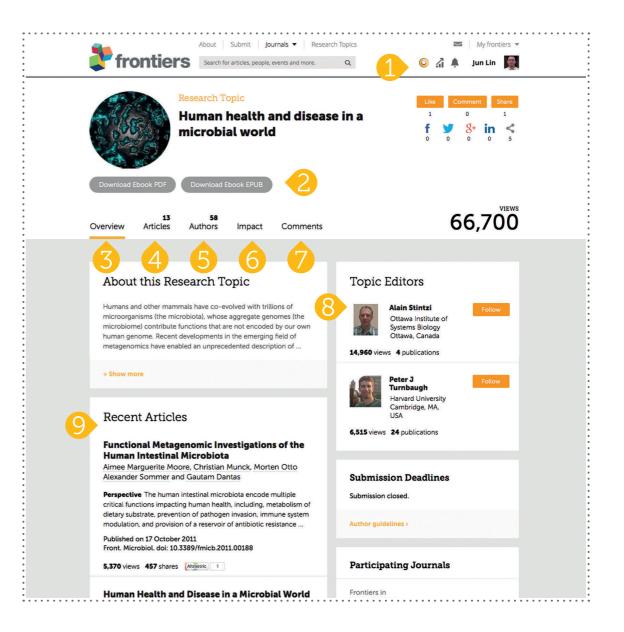
2'800

Research Topics organized

# Research Topics at a glance

- Full integration into
  LOOP, OUR RESEARCH NETWORK
  for scientists and scholars.
- 2 Freely downloadable **EBOOKS** of the entire article collection.
- OVERVIEW SECTION: provides the title, scope and objectives in one place.
- 4 ARTICLES TAB:
  highlights published articles,
  abstract and impact summary.
- 5 **CONTRIBUTORS TAB:** features authors and topic editors for maximum discoverability and impact.

- 6 POWERFUL IMPACT METRICS on the Research Topic and its articles, including views, downloads, social media buzz, geographic and demographic info.
- 7 DISCUSSION FORUM around this Research Topic and its articles.
- ONLINE ACADEMIC PROFILES for editors and authors.
- 9 ARTICLE IMPACT METRICS including views, downloads, citations, social media shares, social buzz via Altmetric, geographic and demographic info.





# Re-engineering peer review

eer review is at the heart of the publishing process, and improving peer review has always been a priority at Frontiers. Our unique system is engineered to be rigorous, yet at the same time efficient, collaborative, transparent and fair. These guiding principles were initially integrated into our sophisticated online review platform, the Frontiers Collaborative Review Forum, which was released in a new, completely redesigned version in early 2014.



### **OUR REVIEW PRINCIPLES**

### Collaborative

Our Collaborative Review Forum unites the authors and reviewers in a direct online dialogue, enabling quick iterations and facilitating consensus. Editors and reviewers work with you to improve your paper.

### Objective and Fair

The final decision is based on consensus about objective issues. We publish all papers judged unanimously to be technically sound and scientifically correct.

Unanimity is also required to reject a paper. Judgments regarding the importance of a paper can be made through open post-publication reviews and we use objective impact metrics to spotlight outstanding papers and invite them for "Focused Reviews".

### Transparent

All associate and review editors' names are made public upon the publication of articles, acknowledging their contribution. As a result reviewers are constructive, but also responsible for the paper and provide rigorous feedback that delivers the highest possible quality publication. Conflict-of interest, if present, is openly apparent.

### Rigorous

We implemented detailed review questionnaires to guide our reviewers through

the review process and provide in-depth review reports.

### Efficient

We offer one of the fastest reviews amongst academic publishers.
Our Review Forum guides authors, reviewers and editors smoothly through the steps and alerts you when any action is required. This has shortened the average time from submission to acceptance to 85 days.

COMMUNITY FEEDBACK (September 2015)



8

days from submission to acceptance



90%

of our authors feel our collaborative review has helped improve their paper



91%

of our authors rated our collaborative review forum as good or excellent

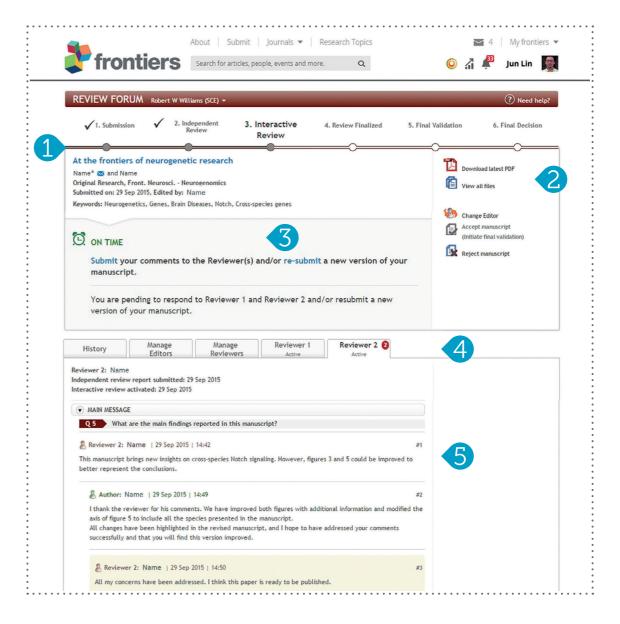


92%

of our authors were satisfied with the level of support received by Frontiers' staff during the publishing process

# Review Forum at a glance

- PROCESS BAR showing precise status of review
- Rapid access to SUBMITTED MATERIALS
- ACTION SUMMARY seen at first glance
- TABULAR ORGANISATION of all aspects of the process, including reviewer selection and full process history
- in which authors, editors and reviewers can communicate in real time





### Objective and democratic evaluation of research

ur Impact Metrics measure the **overall performance and reach of articles and authors** in an objective way. They
enable you to share the impact of your work
with collaborators, funders, institutions, and
the research community at large.

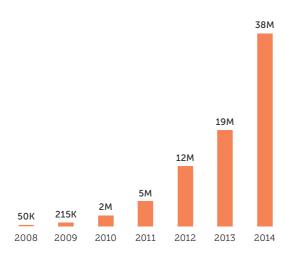
These metrics are **available immediately** for every article published by Frontiers and every other publication you added to your Loop profile, as well as their authors.

Our metrics offer a real-time view of:

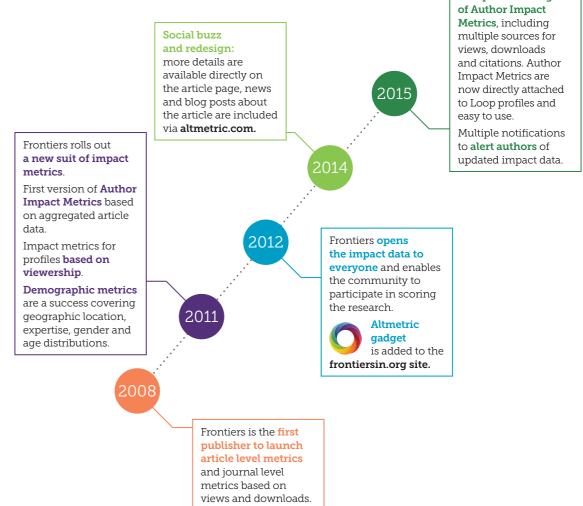
- Views & downloads
- Citations
- Social buzz (through altmetrics.com data)
- Visitor demographics including: age, region and field of interest
- Aggregated author impact metrics based on all of the above
- How your profile is viewed

These metrics also provide the basis for the selection of outstanding articles in what is known as Frontiers Tiering.

ARTICLE VIEWS AND DOWNLOADS PER YEAR .....



Complete re-design of Author Impact



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# Impact Metrics at a glance

- full HISTORY
  of the article views and downloads
- 2 TOGGLE between timeline and bar-chart views
- GEOGRAPHIC SUMMARY of international activity
- **COUNTRY RANKING**

- TOP REFERRING SITES
- 6 **DETAILED DEMOGRAPHICS**of the registered viewers, including area of expertise, position, age and gender
- 7 ALTMETRIC SUMMARY, showing social networking pick-up, with a link to the detailed Altmetric analysis





### Crowdsourcing the best discoveries

ollowing article publication, the impact metric data is collected, evaluated and used as a basis for our Chief Editors to invite authors of high impact articles to write the **prestigious "Focused Review"**, a free article type that puts the original discovery into a wider context, for a broader audience and a deeper impact. We invented this process and call it "Tiering."

Frontiers is so far the only publisher to design a system that semi-automatically

distills the most outstanding research in this crowdsourced way on the basis of impact metrics, evaluated democratically for its academic excellence and social relevance. While climbing up from Original Research to Focused Review, the research addresses a broader public and becomes more socially relevant.

In 2014, Tiering resulted in the publication of 33 Focused Reviews and 25 Frontiers Commentaries.

HOW TIERING WORKS .....









### **Focused Reviews**

are democratically voted high impact articles and address a broader audience



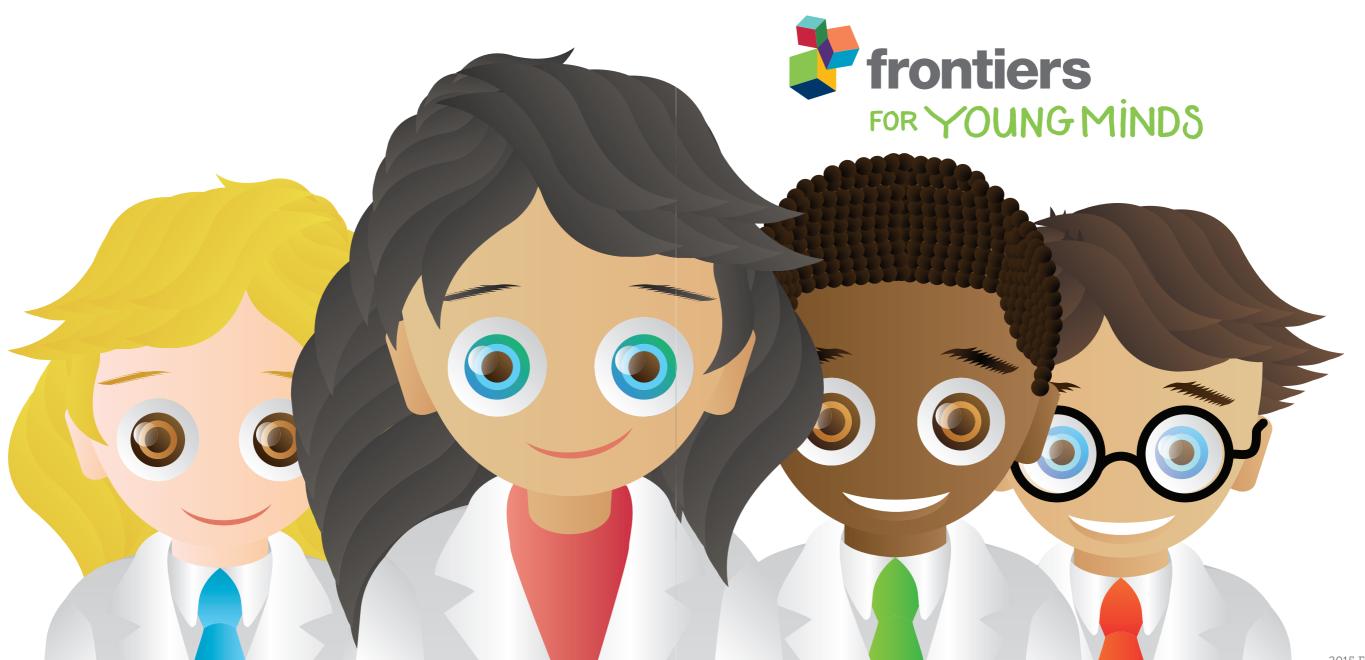
Best articles are suggested by our Author Impact Metrics and selected by our Chief Editors



Experts
read and download
the articles



Original research articles are published in the Frontiers journals



### Bringing cutting-edge research to the youth

### A BRIDGE TO THE YOUTH

Science and research are the fabric of modern society and we should all be able to understand what these discoveries mean and do for us. With Frontiers for Young Minds we build a bridge to young audiences, not only providing them with access to cutting- edge research in a form they can understand, but also involving and empowering them in a critical step of the scientific process itself.

Frontiers for Young Minds is an open-access scientific journal for written for and reviewed by 8-15 year olds. We connect a younger audience directly with scientists. Working together, they

review and assess some of the field's most cutting- edge research and develop rigorous yet accessible scientific articles that form a journal for the next generation of scientists.

### SUBJECT AREAS COVERED

- Understanding Neuroscience
- Understanding the Earth and its Resources
- Understanding Astronomy and Space Sciences
- Understanding Health

### WANT TO GET INVOLVED?

### kids@frontiersin.org

Frontiers for Young Minds is a web-based scientific journal with an editorial board of young people

MIIMPEDS (Juno 2015)



12 Classrooms



45 Articles



50 Scientific Editors



200

Young Minds



1'600 Twitter followers

15'000 Facebook likes



**150'000**Article views

SUPPORTED BY .....

THE PRESS

**FAST @MPANY** 



Smithsonian

THE DAILY CALIFORNIAN

CURRENT PARTNERS .....

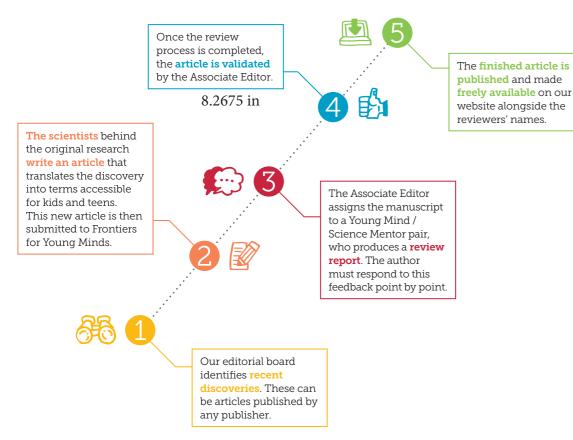
SCIENTIFIC AMERICAN\* frontiers



Named a GREAT WEBSITE FOR KIDS by the American Library Association

**38** | 2015 Frontiers | **39** 





We guarantee the protection of the younger reviewers' identity and only publish their first names.



### Twenty Tips for High-School Students Engaging in Research with

Ten high-school students from Catalunya and two neuroscientists from the Netherlands started a research collaboration in 2012 investigating how colors may influence learning abilities. This research question was defined and developed solely by the students, with researchers joining the project later through the guidance of a facilitator and a teacher. This rather radical approach to "citizen-science" involved research collaborations on citizen-generated questions and was extremely rewarding for both parties involved.

The Rainbow Investigators Guillaume Sescousse Livio Riboli-Sasco Timothée Flutre Mathilde Bonnefond



**READ MORE** 



Music is Good for Your Brain, but

Many of us enjoy listening to and even making music.

Music moves us, inspires us, and just makes us happy.

especially if you start young and stick with it. Musical

sounds, including speech, which can help with hearing

and communication, especially in noisy places. It can

vision, work together with hearing to paint a complete

picture of the world. It is important, however, to avoid

listening to music so loud that it damages your ears.

8.2675 in

also improve how other senses, such as touch and

training can improve the way the brain processes all

It can become an important part of who we are.

Making music is also good training for the brain,

Don't Blast it

### Name that tune: What parts of our brains do we use for naming songs?

Proper nouns refer to unique people, places, and things. One of those "things" can be songs, and famous songs have specific names like "Take Me Out to the Ballgame" and "Jingle Bells." We conducted a scientific study to determine which parts of the brain are important for the process of naming famous songs. We already had some clues-we knew from previous research that people with damage to the left temporal pole (LTP) lost their ability to name famous people and places (landmarks). These people had strokes or surgery that damaged the LTP, and were unable to come up with names such as "Barack Obama" or "the Grand Canyon."

Amy M. Belfi Daniel Tranel



READ MORE



### Are Adolescents Really Risk-Takers? Most Adults Say Yes, but the Science is Starting to Say No

Most adults firmly believe that as kids reach their teens, they start to take crazy risks that get them in



### The Reading Brain

Do you enjoy reading books? Reading is one of the unique activities that only humans do, and we haven't been doing it for that long! Humans have talked to each other using a language system with grammatical rules for at least 100,000 years, but we have been reading and writing only for a few thousand years! What happens in our brain when we read? Our brain has developed a region that is specialized in knowing what written words look like. It closely works together with other parts of the brain that help us understand words and speak. Importantly, as we learn to read, this region will become trained in recognizing word shapes used in whatever language we train it with.

Tanja Kassuba Sabine Kastner



READ MORE



#### Now You See it. Now You Don't: Interacting with Invisible Objects

What do you do when you are playing in the park on a hot day and your parents offer you an ice cream? Most probably, you go running to them, keep your eyes on the delicious ice cream cone, and reach out to take it from them. Although this feels like a very easy



### So You Think You Can't Dance? (The Mysterious Case of the Guy with Two Left Feet)

Got rhythm? Most of us do - at least a little bit. Believe it or not, even babies can feel the beat of a rhythm. However, science has documented the first case of a person who could not dance to the beat. His name is Mathieu, and he is an intelligent, talented - even musical - guy with no other known brain problems, except, he cannot find the beat in music.



**READ MORE** 



### Meg for Kids: Listening to Your Brain with Super-Cool SQUIDs

Inside your brain, you have over 80 billion neurons tiny brain cells, all working together to make you the person you are.

Jon Brock Paul Sowman

**READ MORE** 



### Hitting a Baseball Needs the Brain

We tend to think about sports and games as if they were physical activities that depend on strength and speed, and reading and math problems as if they were mental activities that depend on being brainy and smart.

Dan Brook



**READ MORE** 



while talking? Carrie Niziolek

READ MORE

Helena 7 years old



#### Scientific Significance of Sleep Talking

Did one of your parents, siblings, or friends ever tell you that you were talking in your sleep? Nothing to be ashamed of! A recent study found that more than half of all people have had the experience of speaking out loud while being asleep. This might even be underestimated, because often people do not notice that they are sleep talking, unless somebody wakes them up or tells them the next day. Most neuroscientists, linguists, and psychologists studying language are interested in our language production and language comprehension skills during the day. In this study, we will explore what is known about the production of overt speech during the night. We suggest that the study of sleep talking may be just as interesting and informative as the study of wakeful speech.

David Peeters Martin Dresler

Mika



**READ MORE** 



#### White Matter Counts: Brain Connections Help Us Do 2 + 2

The brain is made of many millions of cells, and different kinds of cells have different functions. The part of the brain that looks darker in pictures is called gray matter (Figure 1). The cells in this part of the brain help us do things like think and process information. White matter looks lighter and has different kinds of cells that have a fatty laver of insulation around them called myelin. This layer helps

Anna Matejko



Nikola

READ MORE





# The open network that maximizes the impact of researchers and their discoveries

oop is our open research network with a mission to maximize impact and readership for authors and their articles. Loop seamlessly plugs into the environments of researchers, their universities and on published articles via a range of free plugins. This cross platform integration makes authors and their research visible on multiple websites via a universal Loop profile, which showcases and disseminates research achievements and academic impact. Our approach is open, collaborative and inclusive and we strive to provide a platform where researchers have all the tools at their disposal to enhance academic discovery and impact.

Loop profiles and features are already integrated into **54** Frontiers journals, **34** Nature Publishing Group journals, Universidad Politechnica de Madrid platform, and ORCID, with many more partners to be announced.

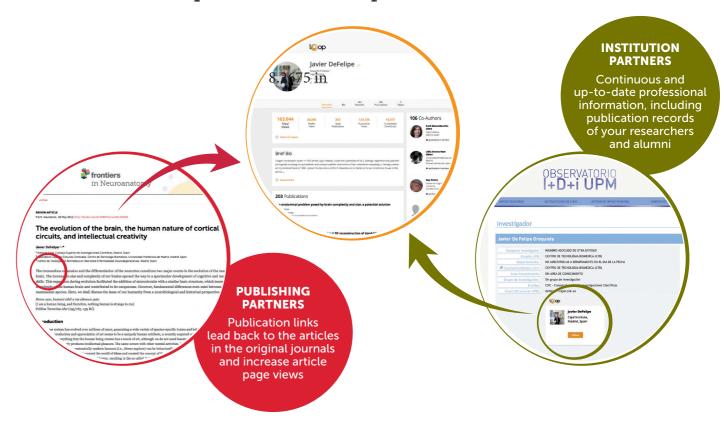
Create your account so Loop can increase your discoverability and boost your impact

There are direct links to your Loop profile, which includes all your published work and author impact metrics, from multiple journals and institutional websites.

**Real-time impact metrics** are aggregated for you at an article and author level. Data is sourced from a number of academic platforms giving you a more accurate impression of your universal academic impact.

Create your profile and let Loop maximise discoverability for your articles:

loop.frontiersin.org loop.info@frontiersin.org A range of free Loop plugins allows publishers and institutions instantaneous access to a universal academic profile and our open research network



INTEGRATED PARTNER ORGANIZATIONS ......









**44** | 2015 Frontiers | **45** 

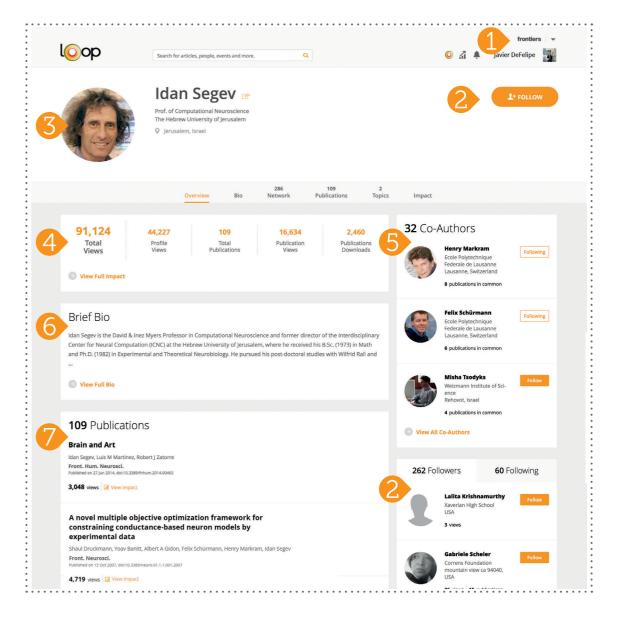
# Your Loop profile at a glance

- 1 INTEGRATED
  Loop is fully integrated into the
  Frontiers journal series. You can now
  also link your Loop profile from your
  nature.com articles.
- Stay up-to-date with the research activity of your colleagues.
- PROFILE PICTURE

  Adding a professional photo increases your profile views.
- 4 IMPACT
  Our impact metrics provide daily feedback on the readership of your articles.

- CO-AUTHORS
  Your collaborators are automatically displayed for you.
- 6 BRIEF BIO
  Showcase your career and increase your impact.
- PUBLICATIONS

  We have found all your published work for you to easily claim and link to your profile.



### **ADVANTAGES OF PUBLISHING IN FRONTIERS**



### **FAST PUBLICATION**

Average 85 days from submission to publication



#### COLLABORATIVE PEER-REVIEW

Designed to be rigorous

– yet also collaborative,
fair and constructive



### LOOP RESEARCH NETWORK

Our network increases readership for your article



### **OPEN ACCESS**

Articles are free to read, for greatest visibility



### **TRANSPARENT**

Editors and reviewers acknowledged by name on published articles



### **GLOBAL SPREAD**

4'000'000 monthly page views worldwide



#### **COPYRIGHT TO AUTHORS**

No limit to article distribution and re-use



#### **IMPACT METRICS**

Advanced metrics track your article's impact



#### **SUPPORT**

By our Swiss-based editorial team

### Frontiers

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