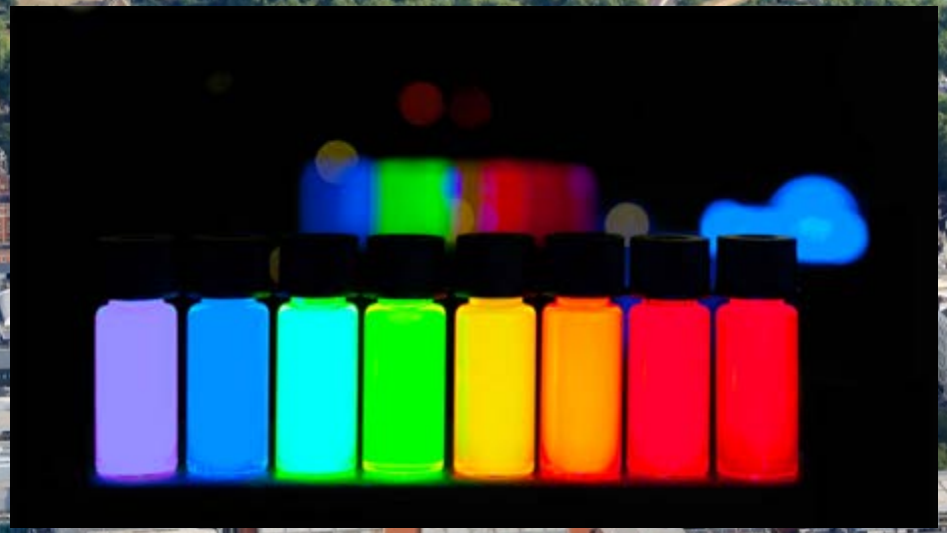
why i'm writing women scientists back in to history.

@jesswade

wiki workshop 2020

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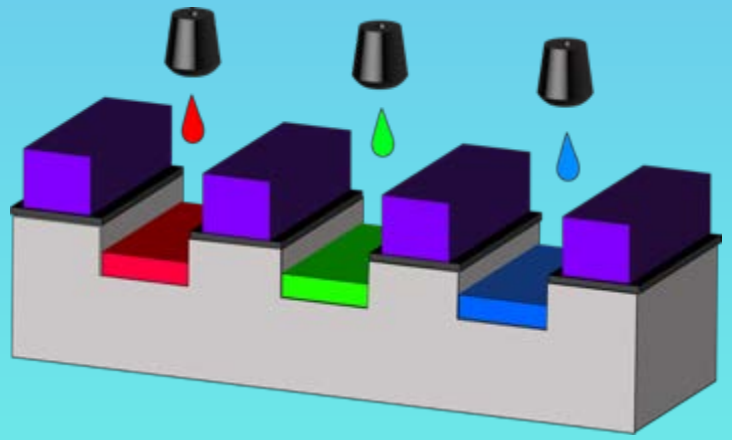
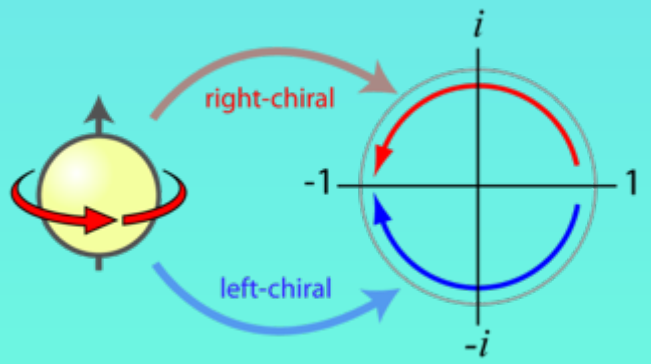


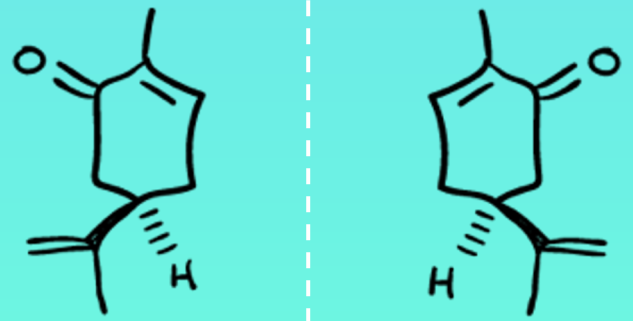

SAMSUNG DISPLAY

chirality

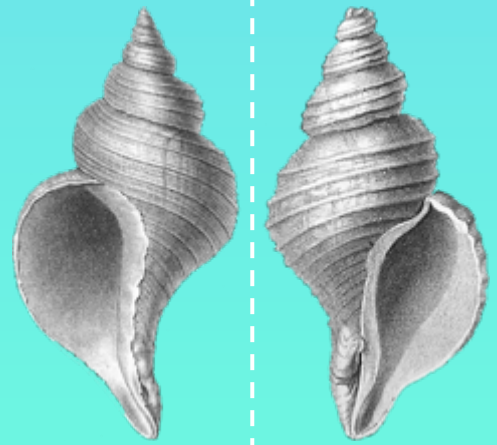
>non-superimposable mirror images



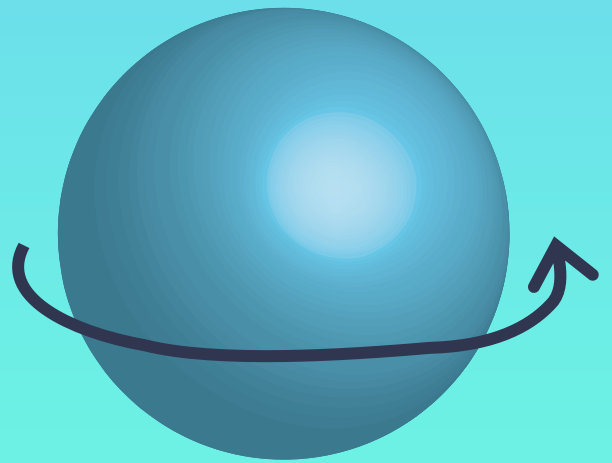
subatomic particles



molecules

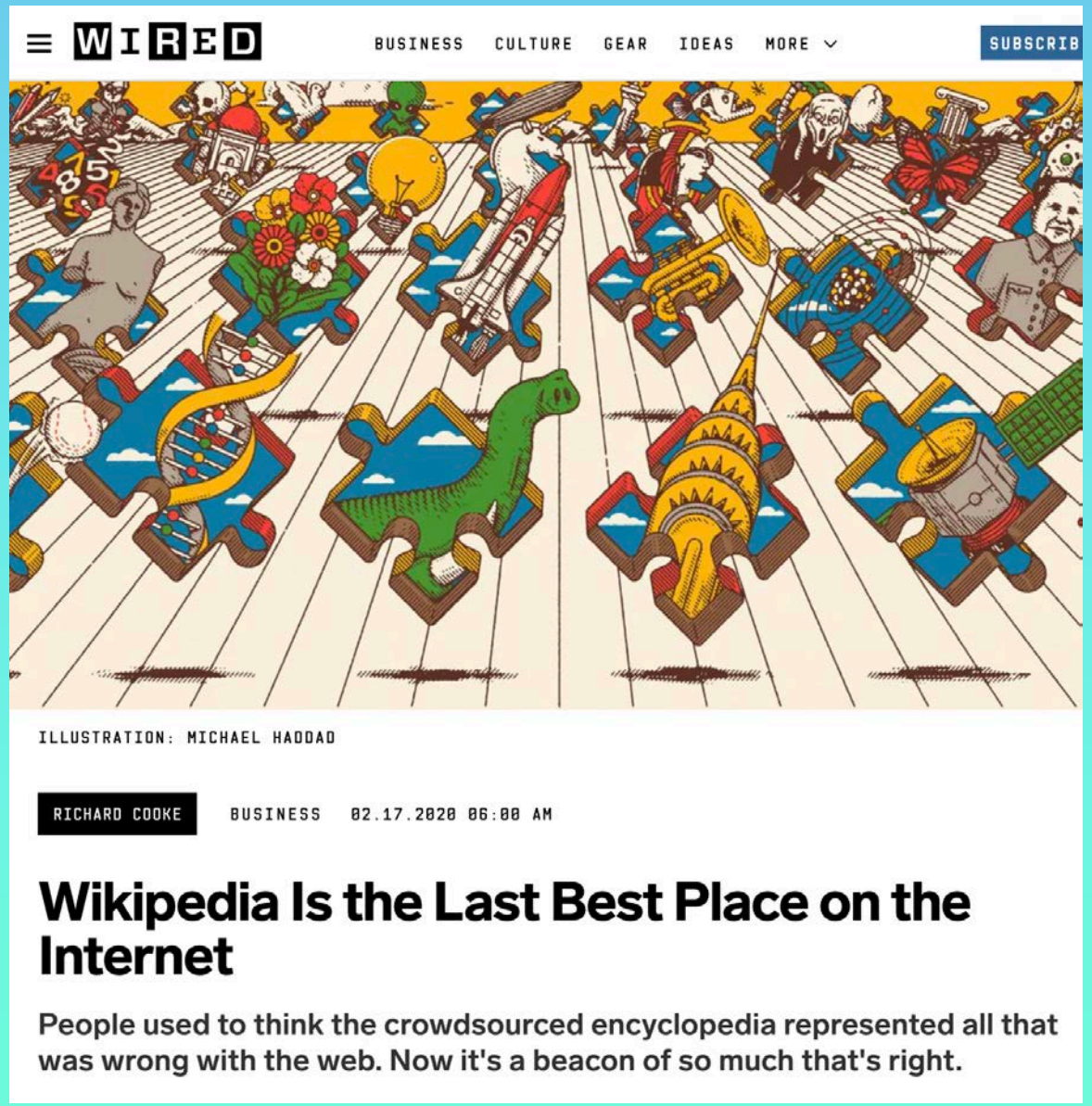


macroscopic objects




Welcome to
rial College Healthcare NHS Trust
ammersmith Hospital
Welcome to
mmersmith Hospital
Main Entrance
LITTER

what you are all doing/going to do is **very important.**



“Wikipedia is built on the personal interests and idiosyncrasies of its contributors. You could even say it is built on love.”

@rgcooke

why Wikipedia is *super* important during the pandemic:

* the general public
* home schooling + education
* academics
* historians

Why Wikipedia is winning against the coronavirus 'infodemic'

Against all odds, Wikipedia's eccentric volunteer editors are holding back the tide of coronavirus misinformation

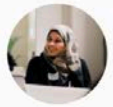
◆ Premium

By Laurence Dodds, US TECHNOLOGY REPORTER, SAN FRANCISCO

3 April 2020

CORONAVIRUS | 11,045 views | Mar 18, 2020, 11:47am EDT

Like Zika, The Public Is Heading To Wikipedia During The COVID-19 Coronavirus Pandemic



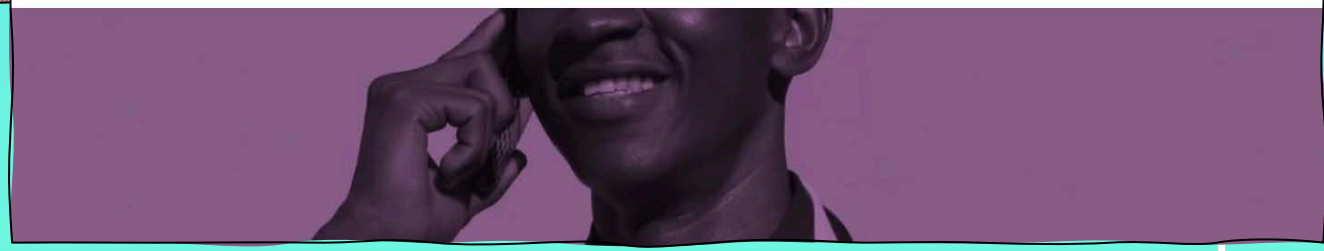
Farah Qaiser Contributor

I like telling stories about science, especially genetics, and scientists.

NOAM COHEN IDEAS 03.15.2020 07:00 AM

How Wikipedia Prevents the Spread of Coronavirus Misinformation

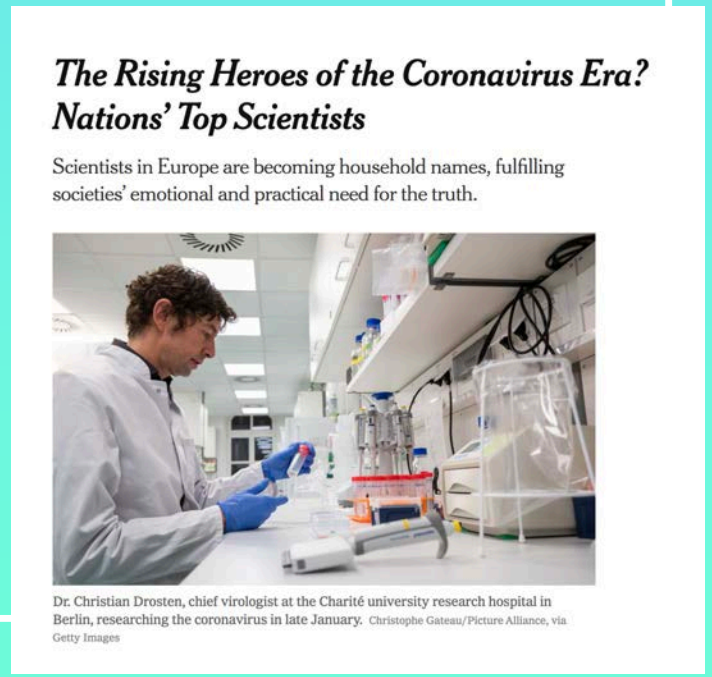
A group of hawk-eyed experts operate on a special track to monitor medical information on the site.

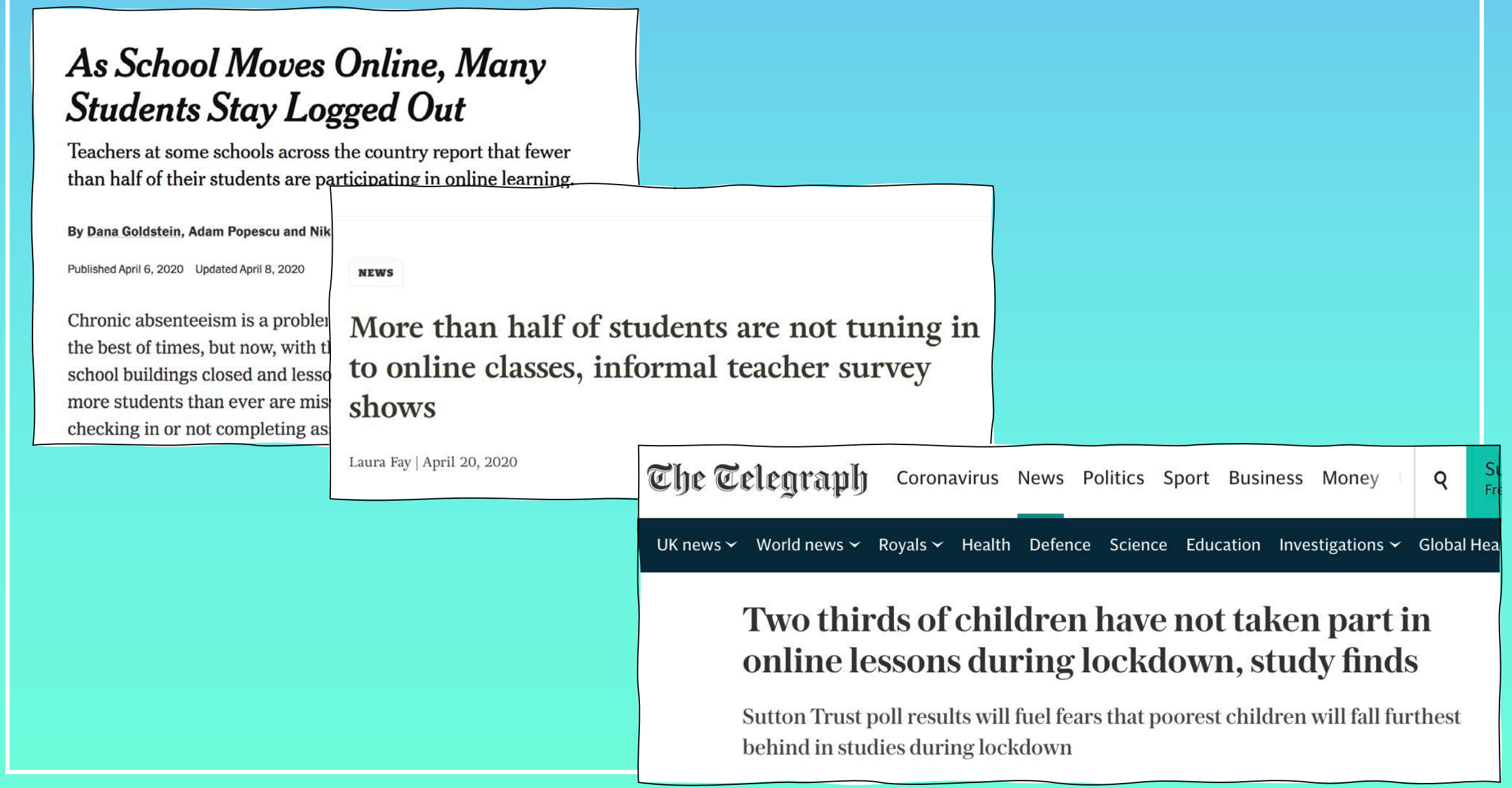


for the general public:

- non-partisan, up-to-date source of information on a trusted platform
- first pre-print pandemic: impact on journalism
- create, edit and improve pages about covid-19/ covid-19 researchers

Sergio Flores/Getty Images





As School Moves Online, Many Students Stay Logged Out

Teachers at some schools across the country report that fewer than half of their students are participating in online learning.

By Dana Goldstein, Adam Popescu and Nik

Published April 6, 2020 Updated April 8, 2020

Chronic absenteeism is a proble
the best of times, but now, with t
school buildings closed and lesso
more students than ever are mis
checking in or not completing as

NEWS

More than half of students are not tuning in to online classes, informal teacher survey shows

Laura Fay | April 20, 2020

The Telegraph Coronavirus News Politics Sport Business Money

UK news World news Royals Health Defence Science Education Investigations Global Hea

Two thirds of children have not taken part in online lessons during lockdown, study finds

Sutton Trust poll results will fuel fears that poorest children will fall furthest behind in studies during lockdown

for education:

* help design + deliver class projects for high school + university teachers to help with shift to online delivery (can be data related)
* improve educational resources for > 1/5th of world who are on lockdown
* improve offline access to content
* ensure content is representative

for researchers:

- lockdown writing/researching opportunities
- data sharing, data generation

Open data and COVID-19: Wikipedia as an informational resource during the pandemic

Diego Sáez-Trumper Follow

Apr 16 · 8 min read

Authors: Changwook Jung, Sun Geng, Science, South Korea & KAIST), Inho P Max Planck Institute for Human Devel (Wikimedia Foundation) .

From the very start of COVID-19, wh atypical pneumonia in China, people and sharing information about the vi resource for medical information. W information on Wikipedia is shaped contributing to COVID-19 related pa

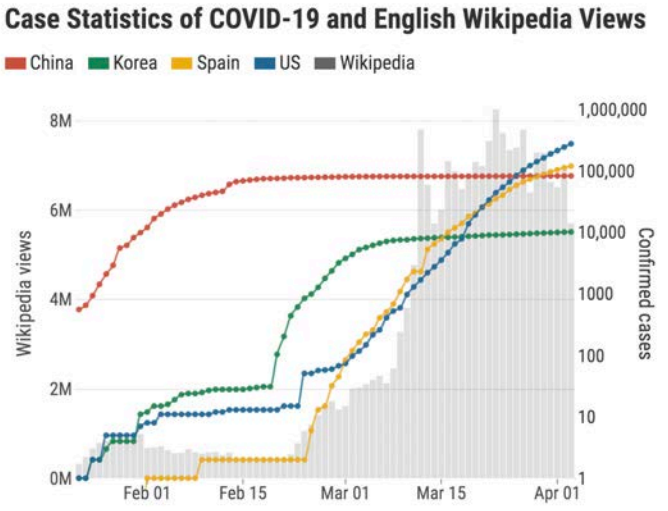


Figure 1 . Case Statistics of COVID-19 in China, South Korea, Spain, and the US (right axis — log scale). These countries have outbreaks at different times. While the patient count increases at a smaller rate for China and South Korea by early March, Spain and the US show a sharp rise. On gray the number of page views on English Wikipedia COVID-19 related articles (left axis — linear scale).


Angela Saini
'An important and necessary book'
Guardian
Inferior
The True Power of Women and the Science that Shows It
4th


History of science
Science @ younger age
curriculum
with scientists
Known - Textbooks
girls in chem-GIT?
social media
Marie Curie
Ada Lovelace
Miss Poplar
Franklin
about female scient
everyone
teachers

Wikipedia shapes language in science papers

Experiment traces how online encyclopaedia influences research write-ups.

Mark Zastrow

26 September 2017

Wikipedia is one of the world's most popular websites, but scientists rarely cite it in their papers. Despite this, the online encyclopedia seems to be shaping the language that researchers use in papers, according to an experiment showing that words and phrases in recently published Wikipedia articles subsequently appeared more frequently in scientific papers[1].


amazon

Google Images

#74

CEO, Ionis

Barbara Rentler

From Wikipedia, the free encyclopedia

This article has multiple issues. Please help **improve it** or discuss these issues on the **talk page**. *(Learn how and when to remove these template messages)* [hide]

- This biography of a living person **needs additional citations for verification**. *(February 2015)*
- **This article may have been created or edited in return for undisclosed payments**, a violation of Wikipedia's terms of use. *(November 2017)*

Barbara Rentler (born between 1957 and 1958[4]) is a businesswoman, and the current CEO of Fortune 500 company, Ross Stores Inc.[5]

Barbara Rentler	
Occupation	CEO, Ross Stores
Years active	1986–present
Net worth	$69.9 million (estimated) [1]
Spouse(s)	James Tighe [2]

Career [edit]

Rentler joined Ross Stores in February 1986[1]. She held a variety of merchandising jobs until February 2001, when she became Senior Vice President and General Merchandise Manager at Ross Dress for Less[1]. Rentler held those positions until January 2004, when she became Senior Vice President and Chief Merchandising Officer at dd's DISCOUNTS[6].

From February 2005 until December 2006, Rentler served as Executive Vice President and Chief Merchandising Officer of dd's DISCOUNTS. Beginning in December 2006 Rentler took on the responsibility of Executive Vice President of Merchandising. She was responsible for all Ross Apparel and Apparel-related products.[7]

In December 2009, she was appointed the President and Chief Merchandising Officer at Ross Dress for Less. After less than five years, Rentler was promoted to Chief Executive Officer on May 7, 2014. On June 1, 2014, she took over as CEO upon the retirement of the previous CEO, Michael Balmuth.[5][8][9]

In 2019, Rentler was named to Forbes list of America's Most Innovative Leaders.[10] Although 99 men were included in the list, Rentler was the only woman named.[11]

≃10 %

18.37 %

Susan Goldberg

From Wikipedia, the free encyclopedia

Susan Goldberg is an American journalist and editor in chief of *National Geographic Magazine*.[1] She is the first woman to edit the magazine since it was first published in 1888.[2][3] Before joining *National Geographic*, Goldberg worked at Bloomberg and for cross-platform story te

Susan Goldb	
Born	Michigan, US
Residence	Washington, D. C
Alma mater	Michigan State U

Kim Cobb

From Wikipedia, the free encyclopedia

Kim Cobb (born 1974) is an Ameri is a professor in the School of Earth Sciences at the Georgia Institute o Georgia Power Faculty Scholar. Sh

Carrie Nugent

From Wikipedia, the free encyclopedia

Carrie Nugent (born 1984) is an assistant professor of computational physics and planetary science at Olin College. She is also a popular science communicator, and is a Senior TED fellow. The asteroid 8801 Nugent was named after her.

Carrie Nugent	
Born	Carolyn Rosemary Nugent
Alma mater	University of California, Los Angeles

essy

edia

an American radiochemist y element group at the tory.[2] She was

Wendy Burn

From Wikipedia, the free encyclopedia

Wendy Burn (born 1959) FRCPsych is a Professor of Psychiat Royal College of Psychiatrists. She specialises in old age psyc care.

Contents [hide]
1 Early life and education
2 Career
3 Personal life
4 References

Early life and education [edit]

Burn was born in Oxford.[1] Whilst at school she joined the Sc and.[1] She decided that she wanted to be a doctor at the age o first in her family to attend university.[2] Whilst at school she joi administering first aid.[1] Her grandfather was Joshua Harold B medicine at Southampton Medical School and joined the univer night and failed her first year of medicine.[2] She managed to b degree whilst acting as stage manager for the medical school started a project on people who self-harm, and was surprised t eventually earned a medical degree and specialised in psychia Medical School.[3] She finished medical school in 1982 and cre

Elizabeth Wayne

From Wikipedia, the free encyclopedia

Elizabeth (Liz) Wayne was raised in Crystal Springs, Mississippi. She is a biomedical engineer in the Centre for Nanotechnology in Drug Delivery at the University of North Carolina at Chapel Hill. She was a 2017 TED fellow.[1]

Contents [hide]
1 Education
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3 Public engagement
4 Publications
5 References

Education [edit | edit source]

Wayne attended Mississippi School for Mathematics and Science in Columbus.[2] Wayne earned an undergraduate degree in Physics at the University of Pennsylvania in 2009.[3] She moved to Cornell University, where she comple delivery.[4] Wayne organised the 2013 Northeast Conferenc raising $60,000 for delegates to attend.[2] At Cornell, she wo

Service Award, the *Alice & Constance Cook Award*, and the

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ee encyclopedia

ll is an Associate [7] She works o innovative electro of the American

Alan

From Wikip

Alanoud A member o She has b BBC 100 l

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1 Early li
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2.1 A

Elizabeth Wayne

Alma mater	University of Pennsylvania

Susan Harrison (ecologist)

From Wikipedia, the free encyclopedia

Susan Patricia Harrison is a professor of ecology at the University of California, Davis who works on the dynamics of natural populations and ecological diversity. She is a fellow of the Ecological Society of America and the California Academy of Sciences. She has previously served as vice president of the American Society of Naturalists. She was elected to the National Academy of Sciences in 2018.

Contents [hide]
1 Early life and education
2 Research and career

Susan Harrison	
Alma mater	Stanford University University of California, Davis
Known for	Ecology
Awards	Elected member of the National Academy of Sciences (2018) Scientific career
Institutions	University of California, Davis
Thesis	*The metapopulation dynamics of the Bay checkerspot butterfly, Euphydryas editha bayensis*[1] (1989)

Professor of Earth vid Templeton Berkeley. She rt in the otochemistry. ademy of Sciences

Kristie Boer	
Born	Kristie Ann Boer October 6, 1963 (
Alma mater	University of Cali Stanford Univers
Spouse(s)	Ronald C. Cohen
Awards	Member of the Na of Sciences (2011
	Scientific care
Institutions	University of Cali
Thesis	*Experimental Inv Intermolecular Vi Transfer: Collisio and Relaxation o Molecular Ions]*
Doctoral advisor	John I. Brauman
Influences	Steven Wofsy
Website	boeringgroup.wo

Nguyen TK T

From Wikipedia, the free enc

Nguyễn Thị Kim Thanh College London. She was Award for her research an

Contents [hid
1 Early life and educatio
2 Research and career
2.1 Academic service
2.2 Selected publicat
3 References

Early life and edu

Thanh grew up in Vietnam 1992.[1] She was selected scheme and moved to the Master's degree in 1994, t During her PhD she devel papillary necrosis.[2] Thanh was a postdoctoral researcher at Aston U She developed a technique that could be used to synthesise cell men adenosine monophosphate (cAMP) and cyclic guanosine monophosp

1.1 Philanthropy
1.2 Honours and recognition
2 References

Phyllis Gardner (academic)

From Wikipedia, the free encyclopedia

Phyllis I. Gardner (born 7th July, 1950) is a Professor of Medicine at the Stanford University School of Medicine. She has previously served as Dean of Education. Gardner was one of the first people to be skeptical of Elizabeth Holmes, the fraudulent founder of Theranos.

Phyllis Gardner	
Alma mater	University of Illinois Columbia University Massachusetts General Hospital Columbia University
Known for	Ion channel biophysics

Contents [hide]
1 Early life and education
2 Research and career
2.1 Entrepreneurship
2.2 Selected publications
3 References

Early life and education [e

Gardner completed her bachelor's degr Harvard University Medical School and California since 1979.[2] She completed a She was a postdoctoral fellow at Univer Massachusetts General Hospital.[1] She argued for a merger of University Colleg

Research and career [edit]

Gardner joined Stanford University in 19 pathogenesis.[1] In 1998 Gardner was a University.[1] She is a Professor of Clinic biophysics.[3]

Charles Rotimi

From Wikipedia, the free encyclopedia

Charles Nohuoma Rotimi (born 1957) is the Director of the Trans-National Institutes of Health (NIH) center for research in genomics works to ensure that population genetics include genomes populations and founded the African Society of Human Ge Rotimi leads the $70 million human heredity and health in the NIH and Wellcome Trust. He was elected to the Natio Medicine in 2018.

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1 Early life and education
2 Research and career
2.1 Awards and honors
3 References

Early life and education [edit]

Rotimi was born in Benin City, and is the second oldest of mother had no education and his father was a high schoo Rotimi studied at the University of Benin and graduated in chemistry lab at a high school in Benin.[1] He decided to a abroad, and applied to universities in the United Kingdom He was supported by his family to attend the University of from Nigeria to Mississippi via London, including catching studying at the University of Mississippi. Rotimi met his wi degree in 1983.[1] In 1985 he returned to Nigeria and was America to complete a program in epidemiology at the Un a doctorate.[1] Rotimi completed his PhD and then spent a he worked on Alzheimer's disease.[1]

Mariana Wolfner

From Wikipedia, the free encyclopedia

Mariana Federica Wolfner is the Goldwin Sm biology and genetics at Cornell University. He sexual conflict in the fruit fly *Drosophila melan* member of the National Academy of Sciences of her distinguished and continuing achievem

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1 Early life and education
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3 References

Early life and education [edit]

Wolfner became interested in biology as a child.[4] She decided to study at Cornell University because it was well known for genetics.[4] During her undergraduate degree she worked in Gerald Fink's laboratory, studying the control of amino acids in yeast, and graduated in 1974.[1][5] She moved to Stanford University for her graduate degree, where she was a doctoral student in the lab of David Hogness.[6] She was one of the first to use recombinant DNA to isolate the genes in *Drosophila*.[4] Wolfner pioneered the use of cDNA hybridisation to isolate the genes which respond to

Joan Latchman

From Wikipedia, the free encyclopedia

Joan L. Latchman is a seismologist from Trinidad and Tobago who was the first woman to lead the University of the West Indies Seismic Research Centre. She was awarded the 2019 Caribbean Disaster Emergency Management Agency Council Award.

Joan L. Latchman	
Born	Trinidad and Tobago
Alma mater	University of the West Indies
	Scientific career
Institutions	University of the West Indies Montserrat Volcano Observatory Seismic Research Centre

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1 Early life and education
2 Research and career
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3 References

Early life and education [edit]

Latchman was born in Trinidad and Tobago. In 1972, shortly after completing h joined the University of the West Indies (UWI) Seismic Research Centre as a te started a part-time undergraduate degree in natural sciences.[2] She worked on volcanic eruption with Keith Rowley in 1979 and worked at the Montserrat Volc 1982, after an earthquake swarm that occurred in the vicinity of Tobago, Latchm in seismicity.[4][5] She worked with Frank Dale Morgan, a visiting academic from Institute of Technology who was working at the Seismic Research Centre.[1] He the development of simple microprocessors that could convert the acoustic rec events into digital signals that can be analysed on a computer.[6]

Viviana Gradinaru

From Wikipedia, the free encyclopedia

Viviana Gradinaru is a Professor of Neuroscience at the California Institute of Technology. She develops technologies for brain imaging, including optogenetics and CLARITY, to understand reward and sleep. She has been awarded the Presidential Early Career Award for Scientists and Engineers and the National Institutes of Health Director's Pioneer Award. In 2019 she was a finalist for the Blavatnik Awards for Young Scientists.

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1 Early life and education
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2.1 Awards and honours
2.2 Publications
3 References

Viviana Gradinaru	
Born	Romania
Alma mater	Stanford University (PhD) California Institute of Technology (BS) University of Bucharest
	Scientific career
Institutions	California Institute of Technology Circuit Therapeutics
Thesis	*Mechanisms of deep brain stimulation revealed by optogenetic deconstruction of diseased brain circuitry*[1] (2010)
Doctoral advisor	Karl Deisseroth
Influences	Frances Arnold

Early life and education [edit]

Gradinaru is from a small village in Romania.[1] As a child, her grandparents and the rest of her community would work together to solve local problems.[1] Growing up in Eastern Europe, Gradinaru was encouraged to study science from a young age, and took part in science olympiads.[1] She has said that she benefited from the many "brilliant women teaching and practicing science in my home country".[1] Gradinaru eventually studied physics at the University of Bucharest. After two years she moved to the California Institute of Technology and graduated in biology in 2005.[2] During her undergraduate studies she became fascinated by neurodegeneration.[3] She moved to Stanford University for her doctoral studies, where she specialised in neuroscience under the supervision of Karl Deisseroth.[2] During her PhD research she taught summer courses at Cold Spring Harbor Laboratory and trained researchers for the Stanford Optogenetics Innovation Laboratory.[4] She took part in ballroom dancing and competed in quickstep at an amateur level throughout graduate school.[5]

Yewande Akinola

From Wikipedia, the free encyclopedia

Yewande Akinola MBE (born 1984) is a Chartered Engineer who specialises in sustainable water supplies. She works as Principal Engineer for Laing O'Rourke and hosts television shows about engineering for Channel 4 and National Geographic.

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1 Education
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Yewande Akinola	
	MBE
Born	1985 Ibadan, Nigeria
Alma mater	Cranfield University University of Warwick
Employer	Laing O'Rourke
Known for	Design Engineering

[edit source]

. She studied zoology at University of California, Davis and graduated ology for her graduate studies, and earned a master's degree in rsity for her doctoral studies, completing her PhD in biology in ed the Edith's checkerspot butterfly and was supervised by Paul R.] Harrison was a postdoctoral fellow at Imperial College London, where

Education [edit]

Akinola was born in 1984 in Nigeria. As a child she designed model-sized houses.[1] Her father, J. M Akinola, was Permanent Secretary in the Ministry of Works of the old Western Region in Nigeria.[2] Akinola studied Engineering Design and Appropriate Technology at the University of Warwick, which she completed in 2007. During her degree she was a mechanical engineer for Thames Water, where she worked on clean water treatment sites. In 2007 she was employed by Arup Group as a Design Engineer designing water supplies and water management systems. Whilst working for Arup, she earned a master's degree from Cranfield University in 2011.[2]

Career and research

[edit | edit source]

After completing her PhD she joined the Medical Molecular Biology (LMB) in Cambridge.[6][8] She Imperial Cancer Research Fund at Imperial Colle pathway of zebrafish in gut development.[9][10]

Skipper joined *Nature* in 2001 as an Associate E interested in innovations in science publishing.[1] *Nature Reviews Genetics*, and was promoted to on the Advisory Board of the University of Oxfor worked briefly as Director for Scientific Commun Sciences in Seattle.[4][11]

In 2018 she worked with Nature and Estée Lauc women in science.[1][6][12] She became the first e year history in May 2018, when she succeeded I intends to ensure that science is reproducible ar career researchers.[13]

Mary Anne Frey

From Wikipedia, the free encyclopedia

Mary Anne Frey (born 1945) was chief scientist for the NASA Neurolab Spacelab module mission (STS-90). She researched the impact of gravity on astronauts.

Mary Anne Frey	
Alma mater	George Washington Univ
	Scientific career
Institutions	Boonshoft School of Medic Wright State University

Early life and education [edit | edit source]

Frey attended Montgomery College, graduating in 1967.[1] Frey completed a Bachelors degree in physics at George Washington University.[2][3] She earned a at George Washington in physiology in 1975.[2] Whilst completing her doctoral studies Frey worked lecturer in the Department of Physiology at the George Washington University School of Medicine & Health Sciences and Montgomery College.[2]

Research [edit | edit source]

Therese Ann Markow

From Wikipedia, the free encyclopedia

Therese Ann Markow is the Amylin Chair in Life Sciences at the University of California, San Diego. Her research involves the use of genetics and ecology to study the insects of the Sonoran Desert. She was awarded the Presidential Early Career Award for Scientists and Engineers in 2001 and the Genetics Society of America George Beadle Award in 2012.

Therese Ann Markow	
Alma mater	Arizona State University
Known for	Genetics Ecology
Awards	Presidential Early Career Award for Scientists and Engineers Genetics Society of America George Beadle Award
	Scientific career
Institutions	University of California, San Diego Monterrey Institute of Technology and Higher Education

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1 Early life and education
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Early life and education [edit]

Markow studied physical anthropology at Arizona State University (ASU). She was a member of the honorary Phi Kappa Phi. She remained there for her doctoral studies, focusing on *Drosophila* genetics with Charles Woolf.[1] She completed her doctorate in 1974, and spent time as a postdoctoral researcher at Indiana University in the laboratory of Anthony P. Mahowald. Upon returning to Arizona, she held research professor positions before being appointed an Assistant Professor at ASU.

Research and career [edit]

Markow was appointed a Professor of Zoology at ASU in 1990. In 1993 she initiated the Minority Access to Research Careers program, supported by NIH, to support students from underrepresented groups pursue careers in biosciences.[2] She served as Director of the National Science Foundation Program in Population Biology. In 1995 she was awarded a Fulbright Program fellowship, which allowed her to pass a semester at the Monterrey Institute of Technology, Campus Guaymas, in Sonora, where she conducted long-term studies on natural populations of cactophilic *Drosophila*. At Arizona State University she became Regents Professor, the highest honour bestowed upon a faculty member.[3] During her last three years at Arizona State University, she served as Editor in Chief of the journal *Evolution*.

Adisa Azapagic

From Wikipedia, the free encyclopedia

Adisa Azapagic MBE FREng FRSC FIChemE (born 10 April 1961) is a chemical engineer and academic.[2][3] She has served as Professor of Sustainable Chemical Engineering at the University of Manchester since 2006.[4]

Adisa Azapagic	
	MBE FREng FRSC FIChemE
Born	Adisa Azapagic 10 April 1961 (age 58)[1]
Alma mater	University of Surrey (PhD)
	Scientific career
Fields	Sustainability Chemical engineering Corporate social responsibility[2]
Institutions	University of Manchester University of Surrey Tuzla, Bosnia and Herzegovina
Thesis	*Environmental System Analysis: The Application of Linear Programming to Life Cycle Assessment*[1]
Website	www.research.manchester.ac.uk/portal/adisa.azapagic.html[2]

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Early life and education [edit]

Azapagic was born on 10 April 1961 in Tuzla, Bosnia and Herzegovina.[1] She attended the University of Tuzla, and graduated in 1984 with a bachelor's degree in Chemical Engineering.[2] She completed her doctoral studies at the University of Surrey, and earned her PhD on Environmental System Analysis in 1996.[4]

Fauzia Ahmad

From Wikipedia, the free encyclopedia

Fauzia Ahmad is an Associate Professor of Electrical Engineering at Temple University. Her research considers statistical signal processing and ultrasonic guided wave structural health monitoring. She serves as Associate Editor of the IEEE Transactions on Aerospace and Electronic Systems and Geoscience and Remote Sensing Society. She is a Fellow of the Institute of Electrical and Electronics Engineers and SPIE.

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Education and early career [edit]

Ahmad studied electrical engineering at the University of Pennsylvania, where she earned her Master's degree in 1996. She completed her doctorate under the supervision of Saleem Kassam in 1997.[1] Her PhD thesis considered the design and analysis of passive imaging arrays. After completing her doctoral degree she moved to Pakistan, where she worked at the National University of Sciences & Technology as an Assistant Professor in the College of Engineering.[2] In 2000 she joined the Fizaia College of Information Technology in Pakistan as an Assistant Professor.[3]

Research [edit]

She joined Villanova University in 2002, where was appointed the Director of the Radar Imaging Laboratory. She was made a Research Professor at Villanova in 2013, and worked in the Antenna Research Laboratory.[3] Here she developed multiple-input multiple-output (MIMO) radar systems.[2] Ahmad worked on urban sensing and *Through the Wall Radar Imaging* (TWRI) to visualise areas that become obscured; allowing for the collection of information and making of intelligent decisions. TWRI can permit the identification of building layouts, an understanding of activities taking place inside a building and the behind-the-wall imaging of targets. TWRI may have applications in the military, for example in search and rescue, as well as in

Chamberlain

ida, the free encyclopedia

berlain CSci CMath (born 17 June 1969) is a British mathematic mingham, UK. He is the Principal Consultant for Data and Decis Babcock International Group and is one of the Vice-Presidents Mathematics and its Applications.

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h and career
ers

Early life and education [edit | edit source]

Born in Birmingham,[1] Chamberlain always enjoyed mathematics at school despite a lack of encouragement from his teachers, studied a BSc in Mathe at Coventry Polytechnic, graduating in 1991. He then moved to Loughborou University, where he achieved an MSc in Industrial Mathematical Modelling 1993.[2] In 2014, he completed a PhD under the supervision of Professor An Obaidelstein entitled "Extension of the gambler's ruin problem played over networks".[3]

Research and career [edit | edit source]

Chamberlain has worked all over the world, helping a range of industrial part mathematical cue capability trade-off for the HMS *Queen Elizabeth*, modelling the lifetime running costs of aircraft carriers versus operating budgets.[5] This use of mathematics in the real world was cited in the *Encyclopedia of Mathematics and Society*.[6]

In 2012, Chamberlain was involved with the UK STEM Project "Being a Professional Mathematician", where his interview was selected for an iTunes podcast.[7][8] In 2014 he was named by the Science Council as one of the UK's top scientists.[9] Only five mathematicians were selected for this accolade.[10]

He is currently a member of the Institute of Mathematics and its Applications (IMA), European Mathematical Society, Operational Research Society and London Mathematical Society. He was appointed a Council Member of the IMA in 2009 and again in 2015.[7]

Corne

From Wikipe

Cornelia De of Physics a nonlinear op Optical Soci

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Early life and education [edit]

Denz was born in Frankfurt.[1] She studied physics at the Technische Unive earned her diploma in nonlinear optics in 1988.[1] She remained their for he neural network and optical data storage.[2] During her doctorate she worke d'optique.[1] In her early career she worked alongside Margit Zacharias, a P Freiburg Institute for Advanced Studies.[3]

Research and career [edit]

Marina Marinova

ia, the free encyclopedia

arinova is a Bulgarian aeronautical engineer. inior Mars and Vehicle Systems Development SpaceX.

and education [edit | edit source]

rinova was born in Bulgaria[when?] and can nguages, English, Bulgarian, Russian, German [1] When she was 10, she moved to Vienna for ime moving to Toronto.[2] Her mother and father were computer engineers.[3] She was the founder and chair of the Toronto Chapter of the international Mars Society whilst at high school.[4] She entered and won[intensification needed] the NASA Space Settlement Design Contest in 1997, 1998 and 1999.[5] By the age of 18, she had co-authored five science papers.[7] She was determined to one day visit Mars, although she did not always receive encouragement from her adult advisors: "In high school, my guidance counselor gave me a big speech about how I would never get into an American university".[1]

Marinova completed a Bachelor of Science in Aerospace Engineering at MIT in 2003, specializing in liquid rocket propulsion.[6][7] As an undergraduate she worked with Chris McKay of NASA Ames Research Center on the warming effects of perfluorocarbons (PFCs), with the aim to trigger a greenhouse effect and eventually terraform Mars.[7] In 2003 she moved to Germany, working for a year at Airbus Safran Launchers on the Calorimetric Nozzle Program, where she investigated heat transfer in an engine rocket nozzle.[8] She completed an MSc in Planetary Science at Caltech in 2006 and a PhD "Inquiries into the consequences of planetary-scale impacts and the implications of carbonates in the hyper-arid core of the Sahara" in 2010, under the supervision of Oded Aharonson.[9][10] While at Caltech, she led a study published in *Nature* in 2008 that demonstrated that the dichotomy in the surface age and relative altitude between Mars's northern and southern hemispheres could have been caused by Mars being struck by a large impactor early in its history.[10]

Margarita Marinova

Marinova in 2017

Born	Sofia, Bulgaria
Alma mater	MIT Caltech
Employer	SpaceX Terraforming Mars

Public engagement and honours [edit]

She was appointed to the University of East Anglia School NESTA dreamtime fellow in 2004. Here she wrote poetry at Osbourn became a popular science writer, and founded the Initiative.[11][12][13] Young scientists from elementary scho SAW initiative.[1] In 2016 Osbourn took part in an internatio of Science and Technology.[14]

Osbourn was elected to AcademiaNet in 2014.[15] She is an won various awards and honours, including the medal of th was selected as a Fellow of the Royal Society.[16][17] She i elected Fellow from the John Innes Centre.[18]

Awards and honours [edit source]

Her awards and honours include:

- 2019 Elected a Foreign Member of the
- 2019 Royal Norwegian Society of Scie
- 2017 Ramon Margalef Prize in Ecolog
- 2014 Barnardo Houssay Award in Biol
- 2013 Konex Platinum Award in Biolog
- 2014 Honorary member award of the P
- 2008 Ecological Society of America Su
- 2008 *Proceedings of the National Acad*
- 2007 Nobel Peace Prize as a member

Patents [edit]

Hollow Flashlight [edit | edit source]

In 2013 Makosinski won the Google Science Fair with *Hollow Flashlight*, a thermoelectric flashlight.[6][7] She was inspired by visits to her mother's homeland in the Philippines, where her friends failed at high school because they didn't have enough light to study at night.[7][8] The device relies on the Thermoelectric effect using Peltier tiles. It is hollow to increase convection currents.[9] She is currently in negotiations to commercially manufacture and distribute the light.[9][10]

She presented at TEDx Richmond and TEDx Vancouver in 2013.[2][11] That year she appeared on Time (magazine) 30 Under 30.[12] She won a gold medal at the Canada-Wide Science Fair.[13] In 2014 she presented *The Pro* with *Inventions* and TEDx Victoria.[14] She presented at TEDx Teen in 2016 - her talk *Why I don't u*

Ann Makosinski is around 9 or 1 years old, soldering circuit boar students university classes.

Gladys West

From Wikipedia, the free encyclopedia

Gladys Mae West (née **Brown**) (born 1930[1] or 1931) is an American mathematician known for her contributions to the mathematics underpinning Global Positioning Systems. West was inducted into the United States Air Force Hall of Fame in 2018.

Gladys West

cation [edit]

e County, Virginia,[2] to a farming family in a community of
ning a scholarship for achieving the first place in her high-s
matics at Virginia State College.[2] After graduating she tau

rk at Naval Surface Warfare Center Dahlgren Division, whe
h to collect data from satellites, eventually leading to the de
recommended her as project manager for the Seasat radar
6] In 1979, Neiman recommended West for commendation.
nputers and a project manager for data-processing systems

Data Processing System Specifications for the Geosat Sate
rated guide. The Naval Surface Weapons Center (NSWC)
o increase the accuracy of the estimation of "geoid heights
of satellite geodesy.[9] This was achieved by processing the
meter on the Geosat satellite which went into orbit on 12 Ma
ahlgren for 42 years,[11] retiring in 1998.[1] Her contributions
a member of West's sorority, Alpha Kappa Alpha, read a short
itted for an alumni function.[9]

BBC as part of their 2018 100 Women.[12] She was inducted into the
all of Fame in 2018, one of the Air Force Space Command's highest
ribed as one of the pioneering *hidden figures* who did essential
mathematical computing for the United States Armed Forces before electronic systems.[13]

Data processing report for GeoSat by Gladys West

Personal life [edit]

She met her husband Ira West at the naval base and they married in 1957.[1][3] They have 3 adult children and seven grandchildren.[14] As of February 2018, West lives in King George County, Virginia.[11] In 2018 she completed a PhD via a distance-learning program with Virginia Tech.[13][15]

100 Women: Gladys West - the 'hidden figure' of GPS

By Amelia Butterly
100 Women

20 May 2018 Share

From the sat nav in your car, to the tags on your social media posts, many of us use global positioning systems, or GPS, every day.

Gladys West is one of the people whose work was instrumental in developing the mathematics behind GPS.

Until now, her story has remained untold.

When Mrs West started her career at the Naval Surface Warfare Center in the US state of Virginia in 1956, just one other black woman and two black men worked alongside her.

"I carried that load round, thinking that I had to be the best that I could be," she says.

Katie Bouman

From Wikipedia, the free encyclopedia

Not to be confused with Katie Bowman.

Katherine Louise Bouman (/ˈbaʊmən/;[1] born 1989/1990[2]) is an American computer scientist working in the field of Computer imagery.

She led the development of an algorithm for imaging black holes, known as Continuous High-resolution Image Reconstruction using Patch priors (CHIRP), and was a member of the Event Horizon Telescope team that captured the first image of a black hole.[3][4]

As of June 2019, she is an assistant professor of computing and mathematical sciences in California Institute of Technology.[5][6][7][8]

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Katie Bouman

Born	Katherine Louise Bouman 1989/1990 (age 29–30)
Nationality	American
Education	Massachusetts Technology University of M
Known for	CHIRP algorith
Scientific ca	
Fields	Computer visio learning
Institutions	California Insti Harvard Univer
Thesis	*Extreme Imag Model Inversio Corners and I Holes*
Doctoral advisor	William T. Fre
Website	www.cms.calte /klbouman

Early life and education [edit source]

Bouman grew up in West Lafayette, Indiana, and graduated from West Lafayette Junior-Senior High School in 2007. Her father, Charles Bouman, is a professor of electrical and computer engineering and biomedical engineering at Purdue University.[9] As a high school student, she conducted imaging research at Purdue University.[9] She first learned about the Event Horizon Telescope in school in 2007.[10]

Bouman studied electrical engineering at the University of Michigan and graduated summa cum laude in 2011. She earned her master's degree doctoral degree (2017) in electrical engineering and computer science from the Massachusetts Institute of Technology (MIT).[11]

At MIT, she was a member of the Haystack Observatory.[12][13] She was supported by a National Science Foundation Graduate Fellowship. Her master's thesis, *Estimating Material Properties of Fabric through the Observation of Motion*,[14] was awarded the Ernst Guillemin Award for best Master's Thesis in electrical engineering.[15] Her Ph.D. dissertation, *Extreme imaging via physical model inversion: seeing around corners and imaging black holes*, was supervised by William T. Freeman.[16] Prior to receiving her doctoral degree, Bouman delivered a TEDx talk, *How to Take a Picture of a Black Hole*, which explained algorithms that could be used to capture the first image of a black hole.[1][2][17]

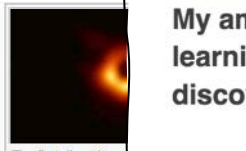
Extern

How to take a hole, Katie Bou
April 28, 2017, 12

Research and career [edit source]

After earning her doctorate, Bouman joined Harvard University as a postdoctoral fellow on the Event Horizon Telescope Imaging team.[18][19][20]

Bouman joined Event Horizon Telescope project in 2013.[21] She led the development of an algorithm for imaging black holes, known as Continuous High-resolution Image Reconstruction using Patch priors (CHIRP).[17][22][23] CHIRP inspired image validation procedures used in acquiring the first image of a black hole in April 2019,[24] and Bouman played a significant role in the project[3][25] by verifying images, selecting parameters for filtering images taken by the Event Horizon Telescope,[26] and participating in the development of a robust imaging framework that compared the results of different image reconstruction techniques.[27] Her group is analyzing the Event Horizon Telescope's images to learn more about general relativity in a strong gravitational field.[28]



The first direct image of a black hole, imaged by the Event Horizon Telescope and published in April 2019

Bouman received significant media attention after a photo, showing her reaction to the detection of the black hole shadow in the EHT images, went viral.[3][29][30][31] Some people in the media and on the Internet misleadingly implied that Bouman was a "lone genius" behind the image.[32][33] However, Bouman herself repeatedly noted that the result came from the work of a large collaboration, showing the importance of teamwork in science.[3][34][33] Bouman also became the target of online harassment, to the extent that her colleague Andrew Chael made a statement on Twitter criticizing "awful and sexist attacks on my colleague and friend", including attempts to undermine her contributions by crediting him solely with work accomplished by the team.[25][27][35][36]

She joined the California Institute of Technology as an assistant professor in June 2019, where she plans to work on new systems for computational imaging usin computer vision and machine learning.[28][37][38]

References [edit source]

Katie Bouman

US
Scientist

Katie led the development of an algorithm which resulted in the first-ever image of a black hole.

She started the project as a graduate student, and is now an assistant professor of computing and mathematical sciences at the California Institute of Technology.

My ambition for the future is that we use artificial intelligence and machine-learning methods to design better scientists, who tell us how to go and discover the world around us.

From: pmsuds@yahoo.com [mailto:pmsuds@yahoo.com]
Sent: 12 April 2019 19:56
To: Wade, Jessica A F <jessica.wade@imperial.ac.uk>
Subject: Re: Elizabeth Sudmeier

Dr. W thank you so much for your so swift reply !! Fabulous to hear from you, and indeed you do have it right!!.

Have to say that it is interesting to read that you found her via Langley's featured story website, because you're right... not that many people read what the CIA has to say. But she was one of their hero's, better said heroine! And what she accomplished is amazing as one of the first women to blow a hole in the glass ceiling when her superior finally relented and advocated for her to go through covert officer training. As I understand it, she was his executive assistant, and convinced him to allow this training (unheard of for a woman to do this in the late 40's/early 50's) so that she would be able to better interpret reports from the field for him. One thing lead to another, and she was assigned to the Near East, where she ran agents, eventually securing sensitive, classified Soviet military hardware per the CIA article. There's more to her and most of the story remains within the vault.

One fascinating part of the story is the fact that no one in her immediate family, she's my 2nd cousin, of brothers and their families knew what she did as she told them she was a career typist for the Foreign Service. They didn't find out until the director of the CIA called her nephew a few Septembers ago to invite him to the Trailblazer Award ceremony. Which is a hilarious story unto it itself as he didn't believe the caller was actually who he said he was!!!

She never married, and instead, was ferociously dedicated to the agency and the mission. Which is fortunate for all the rest of us because the intelligence she obtained turned the tide of the cold war at the time. The KGB knew this was happening, and she barely escaped Baghdad. If you google "Baghdad 1950's", then click the images tab you'll get a sense of the environment she was operating in. Looks pretty scary to me. I only met her once, when her direct niece was married but was just a lad then, and don't remember her. Wish I had been old enough as in retrospect would have like to follow her choice of career. Instead I became a movie producer, doing features in Hollywood, and we're in the process of turning her story into a film. Will keep you posted via the progress! And if we get it made, will definitely invite you to the premier !!

One of the Deputy Directors told a relative at the TB ceremony "if we had more like her, we'd actually know what's going on over there".

So thanks so much for "finding her" and being a part of the telling of her story!!! Do stay in touch, you have a really cool career in front of you and will be fascinated to follow it!
Warm regards,
MIchael

p.s. iamsamhill followed you on twitter, he's me !

Kizzmekia Corbett

From Wikipedia, the free encyclopedia

Kizzmekia "Kizzy" Shanta Corbett (born January 26, 1986)[1] is an American viral immunologist at the Vaccine Research Center (VRC) at the National Institute of Allergy and Infectious Diseases, National Institutes of Health (NIAID NIH) based in Bethesda, Maryland.[2][3] Appointed to the VRC in 2014, she is currently the scientific lead of the VRC's Coronavirus Team, with research efforts aimed at propelling novel coronavirus vaccines, including a COVID-19 vaccine.[4][5]

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Kizzmekia Corbett

Born	Kizzmekia Shanta Corbett January 26, 1986 (age 34) Hurdle Mills, North Carolina US
Nationality	American
Alma mater	University of Maryland, Baltimore County University of North Carolina at Chapel Hill
Occupation	Immunologist

Early life and education [edit source]

Corbett was born in Hurdle Mills, North Carolina to Rhonda Brooks.[3] She grew up in Hillsborough, a rural town in N large family of step-siblings and foster sib

Corbett went to A.L. Stanback Middle Sc School in Hillsborough, North Carolina.[6] sociology from the University of Marylan PhD in microbiology and immunology fro

Sarah Gilbert (scientist)

From Wikipedia, the free encyclopedia

Sarah Gilbert (born April 1962) is a British vaccinologist who is Professor of Vaccinology at the University of Oxford and co-fonunder of Vaccitech.[1][2][3][4] Gilbert specialises in the development of vaccines against influenza and emerging viral pathogens.[5] She led the development and testing of the universal flu vaccine, which underwent clinical trials in 2011. Gilbert is currently developing a viral vector based COVID-19 vaccine.

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6 External links

Sarah Gilbert	
Alma mater	University of East Anglia University of Hull
Known for	Vaccinology
Scientific career	
Institutions	University of Oxford Delta Biotechnology
Thesis	*Studies on lipid accumulation and genetics of Rhodosporidium toruloides*[2] (1986)
Influences	Adrian V. S. Hill
Website	www.ndm.ox.ac.uk/principal-investigators/researcher/sarah-gilbert[2]

Early life and education [edit]

Gilbert attended Kettering High School where she realised that she wanted to wanted to work in medicine.[6] She studied Biological Science at the University of East Anglia.[6] Gilbert moved to the University of Hull for her doctoral degree, where she focused on biochemistry.[6] After earning her doctoral degree Gilbert worked as a postdoctoral researcher in industry. She started her career at the ore moving to the Leicester Biocentre. Gilbert eventually utical company that manufactured drugs in Nottingham.[6]

ng the laboratory of Adrian V. S. Hill. Her early research alaria.[6] She was made a Reader in Vaccinology at the ade Professor at the Jenner Institute in 2010. With the ed work on the design and creation of novel influenza onsiders the development and preclinical testing of viral rotein inside a safe virus.[7][8] These viral vaccinations d against viral diseases, malaria and cancer.[7]

Allison McGeer

From Wikipedia, the free encyclopedia

Allison McGeer FRCPC (born 1953) is an Infectious Disease specialist in the Sinai Health System and a Professor at the Dalla Lana School of Public Health. McGeer led investigations into the severe acute respiratory syndrome outbreak in Toronto. During the 2019–20 coronavirus pandemic, McGeer studied how SARS-CoV-2 survives in the air.

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Allison McGeer	
Alma mater	University of Toronto (BS, MSc, MD)
Known for	Pandemic response
Scientific career	
Institutions	University of Toronto Dalla Lana School of Public Health Sinai Health System Yale New Haven Hospital

Early life and education [edit]

McGeer studied biochemistry at the University of Toronto. She remained there for he studies, first earning a master's degree and then training in medicine.[1] She went on internal medicine and infectious diseases. McGeer was a clinical fellow in epidemiol Haven Hospital.[1]

Research and career [edit]

McGeer studies the prevention and management of bacterial and viral infections.[2] I the Sinai Health System, where she specialised in microbiology.[1] She holds a joint p Professor of Infectious Diseases at the Dalla Lana School of Public Health.[3] At the Toronto she focussed on developing mechanisms to stop the spread of infectious diseases in hospitals and care homes.[1][4] McGeer has studied the impact of influenza on hospital staff. She encouraged people of all ages to receive the universal flu vaccine and supported hospitals in improving their influenza testing.[5]

Paula Reid

From Wikipedia, the free encyclopedia

Paula Reid (born 1984) is an American journalist who is the CBS News White House correspondent. She covered the Special Counsel investigation of Robert Mueller and the Hillary Clinton 2016 presidential campaign. During the 2019–20 coronavirus pandemic, Reid became well known for pressing Donald Trump on his lack of preparedness for the crisis.

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Paula Reid	
Born	1984 (age 35–36)
Nationality	American
Alma mater	College of William & Mary Villanova University School of Law University of Pennsylvania
Occupation	Journalist
Employer	CBS News

Early life and education [edit source]

In 2005, Reid earned her bachelor's degree with a dual degree in psychology and English from the College of William & Mary.[1] In 2008, Reid earned graduated from Villanova University School of Law with a Juris Doctor.[2] Reid passed the bar exams in New Jersey and Pennsylvania.[3] In 2016, Reid earned a Master of Bioethics (MBE) from the Department of Medical Ethics & Health Policy at the University of Pennsylvania.[3]

Career [edit source]

During college, Reid volunteered at the Juvenile Justice Project of Louisiana in 2006. From 2007 to 2008, she was a legal intern at the Chester County District Attorney's Office.

After law school, Reid worked in a judicial clerkship at the Delaware State Court from 2008 to 2009.[2] She then worked as a reporter at Fox29 in Philadelphia.[2]

In January 2010, Investigative Unit, became a product 2014, Reid worke From 2014 to 201 CBS News in Was

SOURCE: © SWINDLER & SWINDLER/FOLIO ART

Andy Extance tells the overlooked story of crystallographer June Sutor, whose C–H···O bonding hypothesis was unjustly suppressed

It was probably following long weeks in the early 1960s analysing x-ray diffraction data that an idea ahead of its time crystallised in Dorothy June Sutor's mind. Decoding the purine crystal structures the spots represented likely helped her imagine a previously inconceivable chemical phenomenon.

CRYSTAL GROWTH

Perspective

pubs.acs.org/crystal

Significant figures

Ellie Knaggs and tetrahedral carbon

Her claim to be the first to use x-rays to prove carbon's tetrahedral bonding in molecules has been overlooked, finds Andy Extance

Carbon's tetrahedral bonding is a central pillar of modern chemistry, yet the first person to 'see' it in organic molecules using x-ray crystallography is barely known to most chemists. In 1929, Isabel Ellie Knaggs published her x-ray derived structure of pentaerythritol tetrasacetate, and identified that the bonds around the central carbon atom were tetrahedral.

But that's not how history has recorded things. Instead, an International Union of Crystallography newsletter gave the credit to Japanese chemist Isamu Nitta for using x-ray crystallography to confirm 'the anticipated tetrahedral coordination in methane derivatives'.

Nitta and Knaggs had pursued the question separately in the 1920s and 1930s, according to Bart Kahr of New York University in the US. Knaggs confirmed the tetrahedral shape 'first and more completely', Kahr believes. She went further in trying to place the side chains attached to the carbon atom and in proposing atomic models, he wrote in the paper where he first highlighted Knaggs' claim.

Kahr explains that Knaggs' success came because she paid close attention to prior findings. 'By the time Knaggs did her work, the tetrahedral coordination of carbon had been established beyond a shadow of a doubt by Emil Fischer and many others,' he says. 'Her work was more like icing on the cake. Seeing it in an x-ray structure was a big result – more for x-ray crystallography than for structural chemistry, I would say.'

Ellie Knaggs was born in 1893 in Durban, South Africa, where her English father had moved to relieve his suspected tuberculosis symptoms. Ellie and her sister Marjorie moved to England to live with their grandfather and his wealthy fourth wife after their mother died in childbirth. Their new guardians 'really were ahead of their time in terms of education', says Elaine Mayer, Knaggs' niece.

The Knaggs girls attended the North London Collegiate School, where mathematician Sophie Bryant was head. Bryant would have been a striking role model. She was the first woman to receive a first class honours Bachelor of Science degree and the first to receive a Doctor of Science degree in Britain. She was also among the first women to own a bicycle. Riding in Bryant's tyretracks, Ellie Knaggs studied chemistry at Girton College, not then a full part of the University of Cambridge. At the time, female students could study and sit the university exams – but could not receive a degree. She would graduate with a PhD from Imperial College London in 1923, beginning the scientific adventure she would continue throughout her professional life.

Explosive findings

Knaggs immediately joined William Henry Bragg at the Davy Faraday Laboratory of the Royal Institution. Her application form can still be found in the Royal Institution archives. It specifically says that her three day-a-week research project would build on her PhD work producing crystal structures of carbon compounds with the formula CX_4. But many of Knaggs' studies would also involve potentially explosive nitrogen-rich materials – possibly related to what Mayer calls her 'secret war work'. For example, she is probably best known for discovering that the azide groups in cyanuric triazide are linear.

The collective dismissal of the work of Ellie Knaggs succeeded.

Crystallography entails a great deal of mathematical analysis, nowadays performed by computers. In Knaggs' time, it involved analysing spots formed on photographic films by x-rays diffracting off atoms in crystalline materials. To interpret chemical structure information from the spots' positions requires very difficult calculations. In their efforts to output the right structures, scientists need to work out which formulae to apply. The choice depends on the symmetry in the crystal, which in Knaggs' time was usually only partly known, or completely unknown. Successful results therefore depended on choosing molecules that offered some kind of clue – and then getting their symmetry right.

Knaggs knew that Bragg and his son Lawrence had determined that diamond has a tetrahedral carbon framework in 1913. Yet the idea that carbon atoms in discrete molecules were also tetrahedral, although widely accepted, had not been confirmed with x-rays. In 1925, Knaggs tackled the molecular carbon question in the explosive pentaerythritol tetranitrate. Her calculations only produced reasonable structures if the central carbon's bonds were arranged tetrahedrally.

Studying pentaerythritol tetracetate, Knaggs also found a tetrahedral arrangement, first communicating her results in 'a private communication to the Council of Girton College' in May 1927. In 1928, a German group published a pyramidal structure for pentaerythritol tetracetate. In rebutting them in a *Nature* paper before publishing her full structure, Knaggs asserted that 'the carbon atom plays the part expected of it', meaning it was tetrahedral. She made 'the first unequivocal statement derived from x-ray data that a methane derivative has tetrahedral coordination as far as I am aware', Kahr writes.

Yet when T H Goodwin and R Hardy from the University of Manchester returned to refine Knaggs' preliminary model in 1938 they were dismissive. Acknowledging that she had corrected the previously published space group for the crystal, they wrote that 'no good purpose would be served by discussing' her molecular structure. Kahr thinks that this is 'hardly sporting', as x-ray diffraction was a fast-moving field and much had changed in 10 years. 'Denigrating someone else's work to elevate your own is a strategy that should not stand up to scrutiny,' Kahr adds. 'The collective dismissal of the work of Ellie Knaggs succeeded.'

Against the odds

Nitta, meanwhile, published work on pentaerythritol's crystal structure in 1926. But he didn't commit to whether its central atom is tetrahedral or not. Instead, he partly follows the lead of previous scientists who had suggested an incorrect symmetry for pentaerythritol's crystals. He used his own data to narrow down the symmetry to just two options. But he concludes that 'these data may not be sufficient to decide' upon the symmetry that would yield a tetrahedral structure.

In the influential textbook *Fifty Years of X-ray Diffraction*, however, Nitta gives a different impression. Going by the shape of pentaerythritol crystals, he writes, he chose a symmetry 'which enabled the central carbon atom of the molecule to conform with the tetrahedral distribution'. Looking back at Nitta's papers, Kahr discovered that Nitta didn't settle on the right symmetry until 1937. In that paper, Nitta writes that 'there is no other x-ray investigation yet imparted which confirms the presence' of tetrahedral carbon atoms in organic crystals, overlooking Knaggs' work.

Research from Geoff and Marelene Rayner-Canham from Memorial University of Newfoundland, Canada, made Kahr aware of Knaggs' contributions. The Rayner-Canhams have reconstructed women's roles in the early years of x-ray crystallography. In their book *Chemistry Was Their Lives*, the Rayner-Canhams cite crystallographer Helen Megaw, another Girton College alumna, who wrote an obituary for Knaggs in 1981. Megaw described Knaggs as a 'kind and gentle person, rather shy'. 'She attended scientific meetings, but did not put herself forward,' Megaw says.

Mayer agrees that Knaggs was definitely 'not an extrovert'. Among many fond family recollections, she proudly remembers going to a Royal Institution public lecture with her aunt as a child. 'My sense is that Aunt would have been deeply disappointed and angered but not surprised. Perhaps she did not even know the full extent of the scientific theft,' she says. 'Above all she would be protective of her rare position and privilege in working at the RI, which was her life and which she had earned all on her own and against the odds.' Knaggs' final years were spent in Australia, having moved there in 1977 when she was showing signs of dementia. She died in 1980.

We'll probably never know whether Nitta was aware of Knaggs' work prior work. 'Her absence in his discussion is conspicuous,' Kahr says.

Andy Extance is a science writer based in Exeter, UK

Full references for this article are available online

educated at St Cuthbert's College,[4][5] and went on to study chemistry at Auckland University College.[1] She graduated Master of Science with first-class honours in 1952 and, supervised by Frederick Llewellyn, she graduated with her first PhD in 1954.[6] She published her first single-author *Acta Crystallographica* paper, *The unit cell and space group of ethyl nitrolic acid*, whilst a student.[7][8][9]

Scientific career	
Fields	Crystallography
Institutions	Birkbeck College University College London
Thesis	*The crystal structure of dipotassium nitroacetate and -nitropropionic acid* (1953)
Doctoral advisors	Frederick Llewellyn

In 1954, Sutor went to the United Kingdom, and took up a travelling scholarship and Bathurst Studentship at Newnham College, Cambridge.[5] There, she earned a PhD on the structures of purines and nucleosides in 1958.[1][5] During her second doctorate, Sutor identified the structure of caffeine, and showed that it can readily recrystallise in its monohydrate form.[10][11]

Research [edit source]

In 1925 she was awarded a two-year Hertha Ayrton fellowship to join the Royal Institution.[3] Knaggs worked with William Henry Bragg and Kathleen Lonsdale.[3][7] She looked at diffuse reflection of x-rays from single crystals.[8] She secured a permanent position in 1927.[3] She determined the crystal structure of cyanuric triazide.[3][9][10]

Knaggs co-authored *Tables of Cubic Crystal Structures* with Berta Karlik and Constance Elam in 1932.[11] She served as an advisor to Burroughs Wellcome (now GlaxoSmithKline).[3] In her retirement, Knaggs was elected as a visiting scientist to the Royal Institution.[3]

Personal life [edit source]

In 1979, Knaggs moved to Australia. On 29 November 1980, Knaggs died in Sydney, Australia.[3]

chemistryworld

Toksvig: women's successes are being ignored
TIM WHITBY/GETTY

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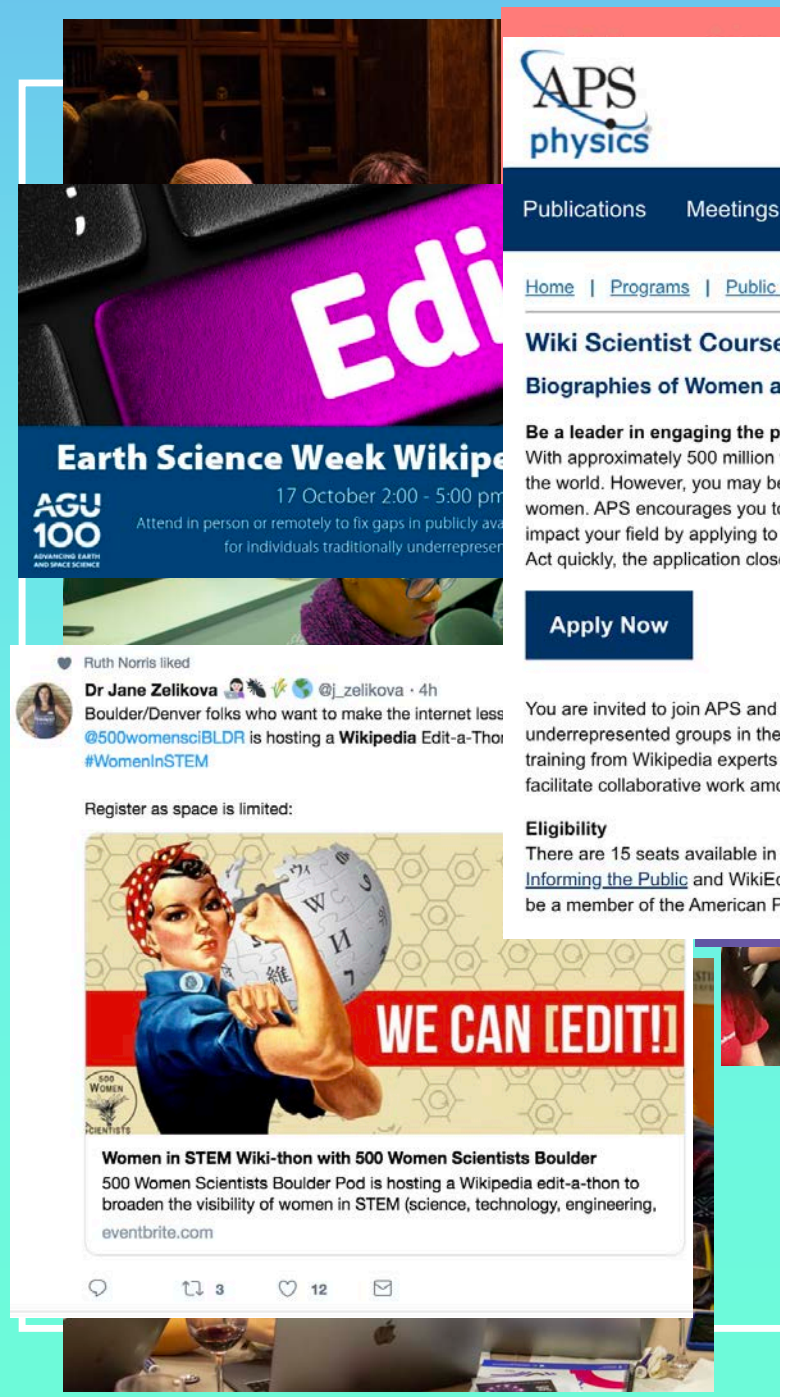
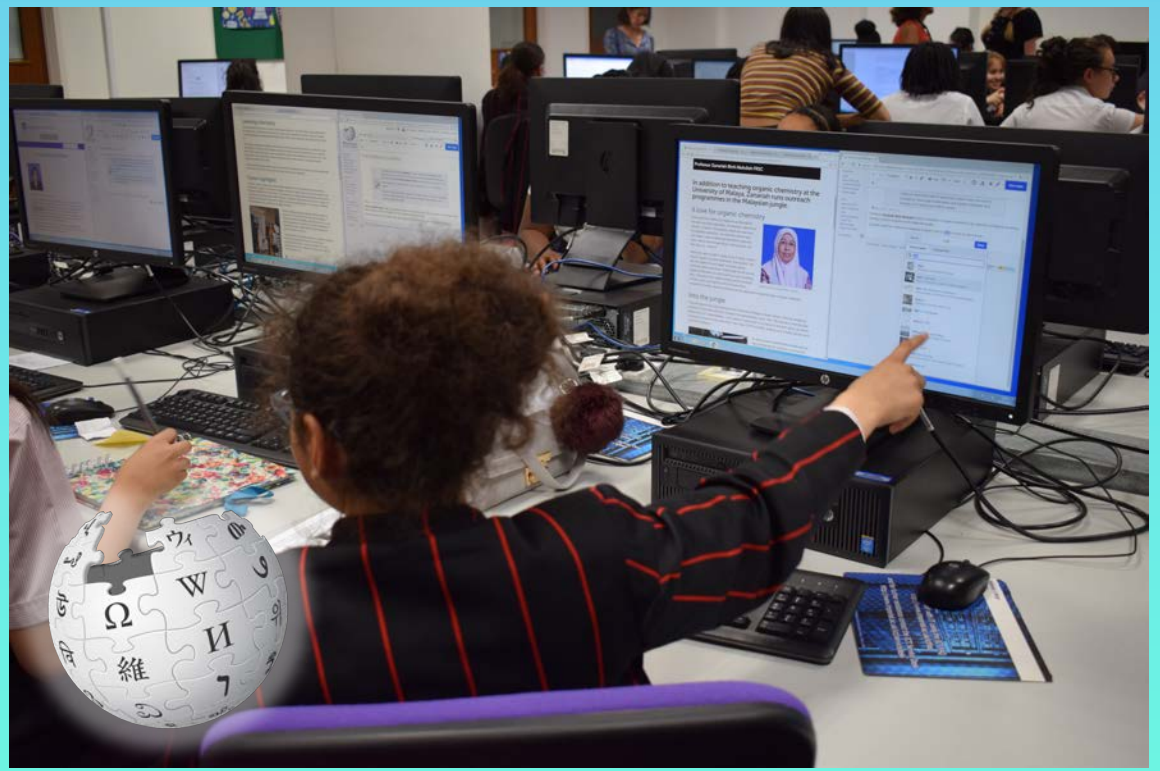
The broadcaster Sandi Toksvig has vowed to tackle sexism on Wikipedia, pledging to "rewrite history" so more women and their stories appear on the site.

Toksvig, who co-founded the Women's Equality Party in 2015, accused the online encyclopedia's volunteer editors — who are mostly male — of "actively editing women out".

Interviewed by Julia Gillard, the former Australian prime minister, on her new podcast, Toksvig said: "There are about 350,000 uber-volunteers and they tend . . . to be the same kind of guy . . . sitting in his pants. They are actively editing women out and women's achievements are not being inputted."





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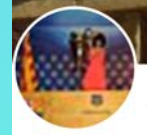


Jessica Wade

We're raising £20,000 to buy a copy of Inferior: How Science Got Women Wrong and the New Science that's Rewriting the Story for EVERY state school in the UK.

Add location

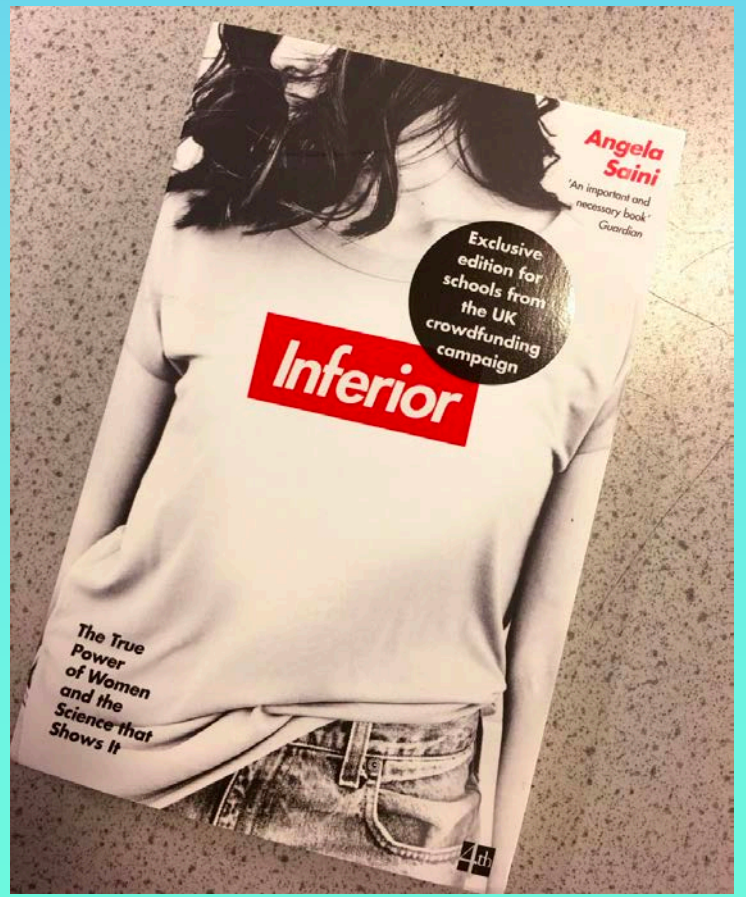
Schools and education

113%

£22,781

raised of £20,000 target by

890 supporters



'I don't just want to tell you that you can grow up to do anything, I want you to read this book, be as empowered as I have been and join this fight for equality'

Dr Jess Wade

Coming Soon

SUPERIOR
The Fatal Return of Race Science

NOT FOR RESALE

4thEstate.co.uk

Are women more nurturing than men?

Are men more promiscuous than women?

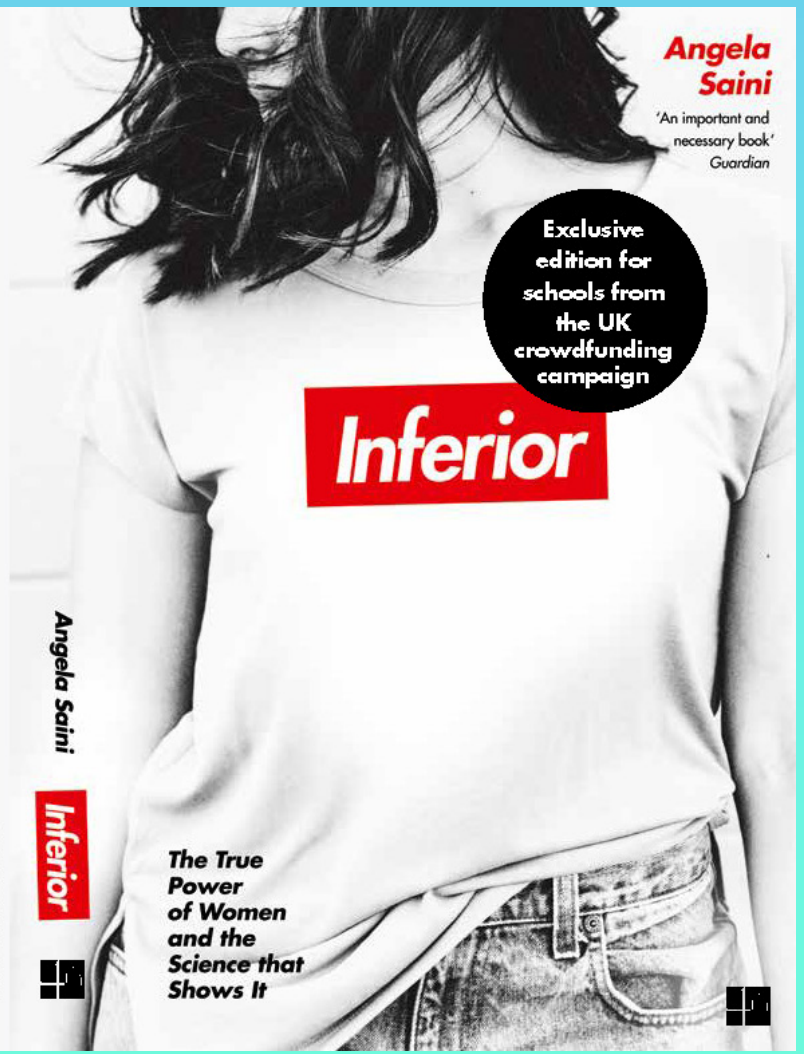
Are males the naturally dominant sex?

And can science give us an impartial answer to these questions?

Taking us on an eye-opening journey through science, *Inferior* challenges our preconceptions about men and women, investigating the ferocious gender wars that burn in biology, psychology and anthropology. Angela Saini revisits the landmark experiments that have informed our understanding, lays bare the problem of bias in research, and speaks to the scientists finally exploring the truth about the female sex.

The result is an enlightening and deeply empowering account of women's minds, bodies and evolutionary history. Interrogating what these revelations mean for us as individuals and as a society, *Inferior* unveils a fresh view of science in which women are included, rather than excluded.

Photo by Vanessa Serpas on Unsplash



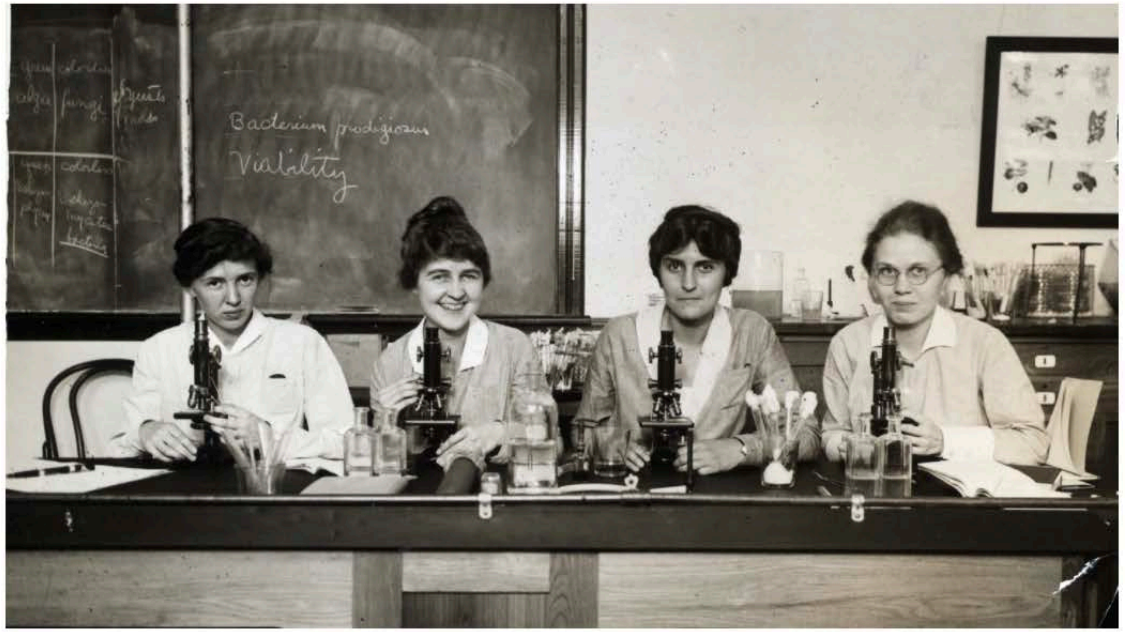
how what we do relates to what you do.

SCIENCE

The Women Who Contributed to Science but Were Buried in Footnotes

In a new study, researchers uncovered female programmers who made important but unrecognized contributions to genetics.

ED YONG FEBRUARY 11, 2019



The names of the women seated before microscopes in this undated photo were not recorded. (BETTMANN / GETTY)

In science, the question of who gets credit for important work—fraught in any field—is set down on paper, for anyone to see. Authorship, given pride of place at the top of scientific papers, can advance reputations and careers; credits buried in the rarely read acknowledgments section do not.

https://www.theatlantic.com/science/archive/2019/02/women-history-in-science-hidden-footnotes/582472/

Science History Institute
@SciHistoryOrg

Do you find internet sleuthing and historical research calming? Here's a task for you: help us identifying the women in this photo! Our #OthmerLibrary records don't tell us much about them, and we want to fix that. Read on to find out what we *do* know. ⬇️
#WomensHistoryMonth

4:13 PM · Mar 12, 2020 · Twitter Web App

IT'S NOT THAT WOMEN WEREN'T THERE. IT'S THAT THEY WERE HIDDEN

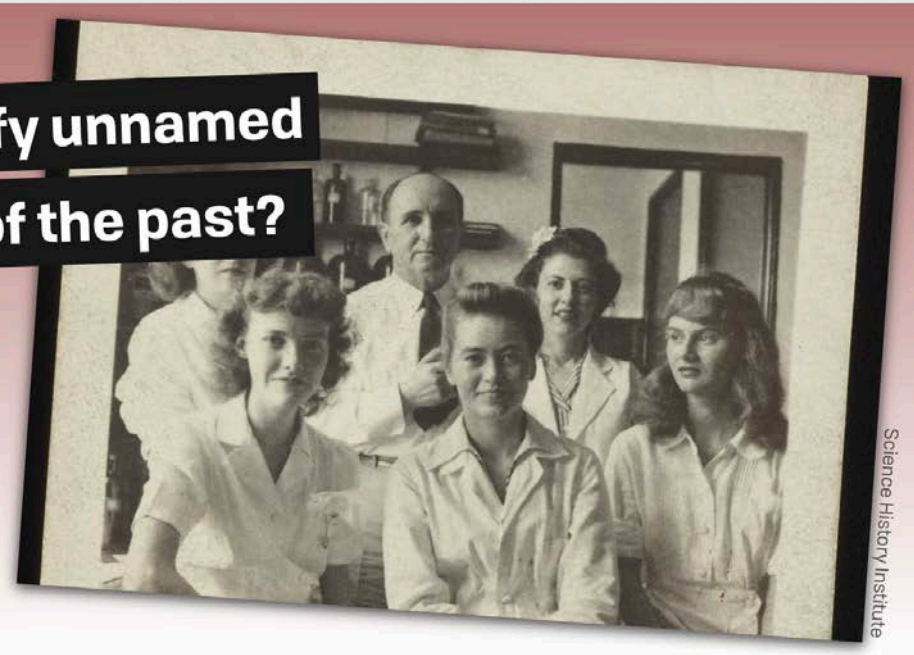
MASSIVE SCIENCE | Menu | Search | Jess

Can you help identify unnamed women scientists of the past?

Science History Institute is crowdsourcing the identities of scientists snubbed in archive

Karen Kwon
Chemistry

April 16, 2020



wiki editors:

* **who** are they?
* **where** are they?
* **what** are they editing?
* what happens to **new editors**, why **don't they stay**?

wiki content:

- which pages are more likely to be **nominated for deletion**?
- **length** of a **deletion discussion** for men/women
- **who is missing?** (newspaper, acknowledgements of journals analysis)
- **what is missing?** Topics, how this impacts interdisciplinary science
- support your local **wikimedians in residence** and wiki-editing community

wiki journeys:

* how do people **get to** a biography/page?
* how much time people spend reading these biographies?

thank you

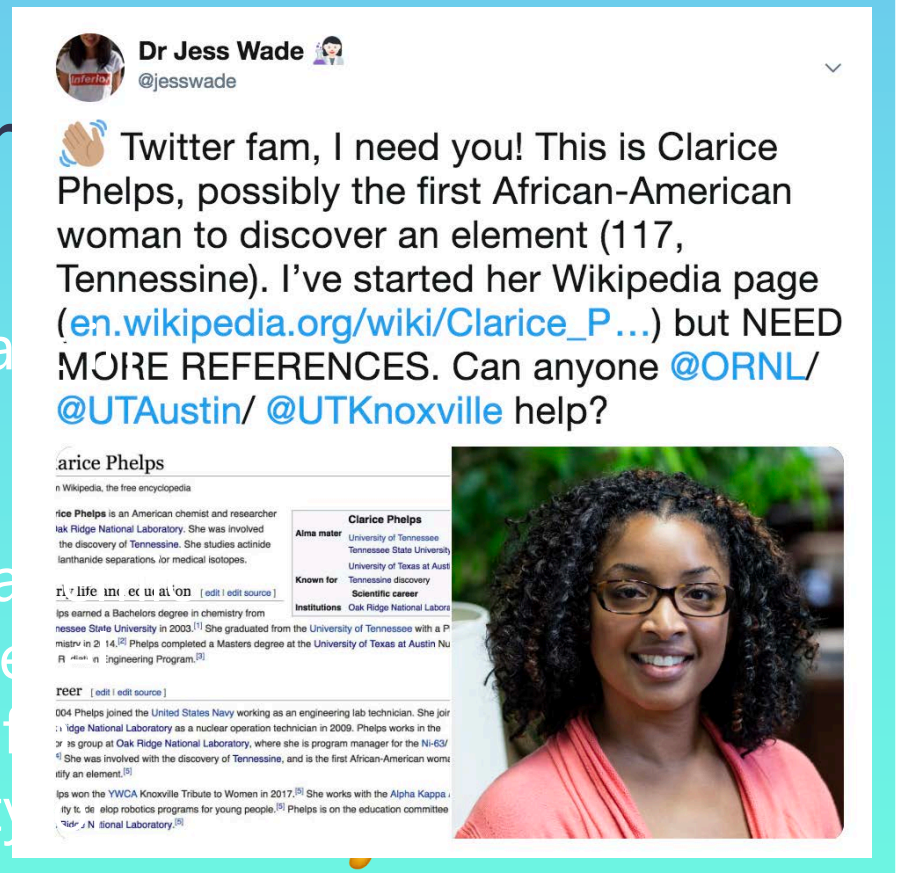
@jesswade

jessica.wade@imperial.ac.uk


Thou shalt not
read the comments

academic notability criter

- the person's research has had a significant impa
their scholarly discipline as demonstrated by independent reliable sources.
- the person has received a highly prestigious aca
award or honour at a national or international le
- the person is or has been an elected member o
highly selective and prestigious scholarly society
association.
- the person holds or has held distinguished professor appointment at a major institution of higher education and research



From today's featured article

Cosplay of Kratos

God of War is an action-adventure game franchise. Sony's Santa Monica Studio developed all the main entries, released on the PlayStation 2, 3, and 4 video game consoles by Sony Interactive Entertainment. The story follows Kratos *(cosplayer* pictured), a Spartan warrior who was tricked into killing his family by the Greek god of war Ares. *God of War* (2005), *God of War II* (2007), and *God of War III* (2010) constitute the original trilogy centered on vengeance; other games include *Chains of Olympus* (2008) and *Ghost of Sparta* (2010) for the PlayStation Portable, *Betrayal* (2007) for mobile phones, and *Ascension* (2013). A main title based on Norse mythology, also called *God of War* (2018), centers on redemption, with future games in this setting planned. The series has received numerous awards, including Game of the Year recognitions for the 2005 and 2018 installments. As of May 2019, the franchise has sold over 32 million games worldwide.

*(**This article** is part of a featured topic: **God of War franchise**.)*

Recently featured: Island of stability · *Aries* (album) · ...town Covered Bridge

...d articles

...Pierre, who became

...ed in the organ at a recital by Marce...

...of seven, later served as the organist of La...

Paris, and played around 2,000 recitals?

- ... that in Florida, **winged termites** are sometimes f...
stuck to wet foliage, buildings, or vehicles after rain?
- ... that nuclear scientist **Clarice Phelps** has been recognized as the first African-American woman to be involved with the discovery of a chemical element?
- ... that any tetrahedron that **has integer edge length... face areas, and volume** can be given in integer ver... ...oordinates?
- ...hat "Baby Yoda" is considered **the breakout**...
...*Star Wars* television series *The Manda*...
...a Takeuchi's 1984 song "Pl...

In the news

Coronavirus pandemic
Disease · Virus · Timeline (March) · By location · Impact · Portal

Edwin Catmull

- **Edwin Catmull** *(pictured)* and **Pat Hanrahan** receive the Turing Award for their work on computer-generated imagery.
- Paleontologists announce the discovery of ***Asteriornis maastrichtensis***, the oldest definitive species of modern bird, which lived at the end of the Mesozoic era.
- The World Health Organization recognises **the coronavirus outbreak** as a pandemic.

Recent deaths: Willigis Jäger · Peter Whittingham · Catherine Hamlin · John Tooley · Betty Williams · Alfred Worden

Other recent events · **Nominate an article**

On this day

March 22: **World Water Day**; **Mothering Sunday** (Western Christianity, 2020)

Emerald Buddha

- 238 – **Gordian I** and his son **Gordian II** were jointly proclaimed Roman emperor, ...he latter because of his ...her's advanced age.
- ... – The **Emerald Buddha** *(pictured)*, ...red the sacred palladium of Thailand, ...led in its current location at Wat Phra ...e grounds of the Grand Palace in ...
- ...rnor of North Carolina **William** ...en became the first U.S. state ...e removed from office through ...
- ...d World War: British and Italian ...fought the **Second Battle of Sirte** ...f Sidra north of Libya.
- ...ssian cosmonaut **Valeri Polyakov** ...om the space station *Mir* aboard ...M-20 after 437 days in space, setting a ...for the longest spaceflight.

...Raphael Mengs (b. 1728) · **Ahmed** ...vdet Pasha (b. 1822) · **James Black** (d. 2010)

More anniversaries: March 21 · **March 22** · March 23

Archive · By email · **List of historical anniversaries**