

NEWSLETTER

January 2025

Celebrating 20 Years of World Community Grid and Volunteer Impact on Research Benefiting Humanity

November 16, 2024 marked the 20th anniversary of the World Community Grid, an extraordinary project powered by volunteers worldwide who donate their computing power to advance scientific research. Over the past two decades, the Grid has made significant strides in addressing global challenges in health, sustainability, and technology. This milestone is not just a testament to the project's vision but to the incredible efforts of the global community that has fueled its success.

Thank you IBM-WCG team emeritus - Al, Bill, Blaine, Caitlin, Erika, Jonathan, Juan, Julie, Keith, Kevin, Lloyd, Nels, Rick, Robin, Sophia, Stan, Tedi and Viktors - members with an extended and important role in WCG at some point between 2004 and 2022, for developing this amazing platform.

Thank you WCG volunteers. Over the past 20 years more than 800 thousand of you contributed almost 8 million devices to generate over 2.6 million CPU years towards research on cancer, tuberculosis, COVID-19, HIV/AIDS, microbiome immunity, understanding genomes and protein structure, developing new materials, clean energy, ensuring sustainable water, understanding weather patterns in Africa, and other globally important projects.

At its core, the World Community Grid thrives on the collective spirit of individuals and institutions. Every computation, no matter how small, contributes to breakthroughs that benefit humanity.

While the grid was inspired by early projects like the Smallpox Research Grid, 32 projects benefitted from the support of the WCG volunteers. Several projects finished their first phase in 2024, including OPN1, HSTB and SCC, and moved to the validation stages. As of November 2024, Mapping Cancer Marker and African Rainfall Projects are the only active projects, but Mapping Arthritis Markers is coming soon.

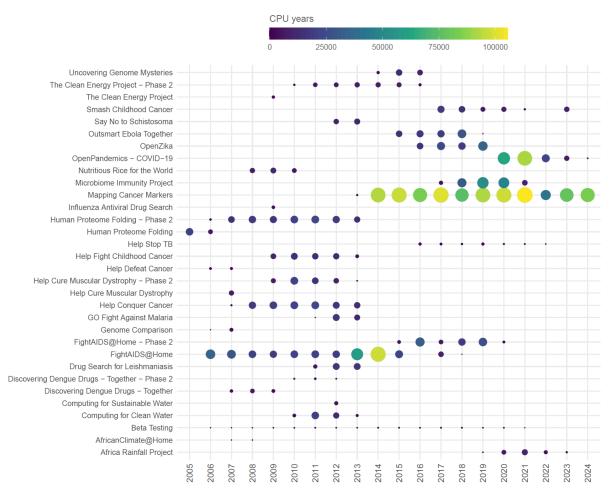


Figure 1. CPU-years donated by volunteers per project per year.

Recognizing the Top 20 Contributors

Many volunteers joined the Grid over the 20 years. Amazingly, 364 volunteers have joined WCG by Nov 16th 2004 and remained as active contributors for 20 years, providing the foundation for the overall 814,834 volunteers with 7,689,637 devices.

As of November 2024, the members collectively contributed 2,618,517 years of computing, and 31 volunteers gained more than 1 billion credits.

As we commemorate this achievement, we want to shine a spotlight on our top 20 contributors, who have gone above and beyond in advancing the mission of the World Community Grid. These outstanding individuals and organizations have shown dedication and donated immense computing power and time. To honor their efforts, we are presenting them with certificates of appreciation as a token of gratitude for their remarkable contributions.

Here are the top contributors by CPU years or credits still active, and their incredible achievements:

User	CPU years	Total credits	Days as a member
marist_college	56,062.97	18,897,890,086.36	7076
hillenbr	24,853.01	8,583,056,962.60	6187
NightHawk59	17,102.47	5,120,517,247.21	6347
Dagda	16,468.24	5,387,356,407.66	6432
boid.com	10,374.14	2,911,564,799.52	2394
Science United	9,705.62	2,913,258,478.22	2024
Syracuse University	8,619.70	2,638,676,124.44	4064
RCTCGrid	5,857.03	954,794,213.32	6704
ttt67	5,161.03	331,153,106.01	5029
u.t.g	5,109.98	1,436,127,802.96	4865
Alexey305472	4,914.21	1,171,972,834.80	6676
acpartsman	4,808.72	763,455,947.87	6309
deltavee	4,618.18	1,046,418,545.80	7209
FourSev	4,374.70	1,335,849,578.58	6430
myni	4,044.01	1,118,527,033.88	5653
NyeLabs	3,844.63	1,150,951,321.78	6312
Aperture_Science_I nnovators	3,771.99	1,177,419,196.54	5517
NESC@Nokia	3,384.59	1,199,729,846.03	3516
Sami Gabriel - Vodafone RnD	3,350.55	639,401,072.09	4938
stoneageman	1,289.55	3,309,535,149.31	6840

Looking Forward

As we look to the future, the World Community Grid will continue to rely on the passion and commitment of its contributors. Together, we can accelerate discoveries that will make the world a better place.

Thank you to everyone who has participated in this journey—your work is changing lives. Let's make the next 20 years even more impactful.

20 Years of Innovation: Words from WCG Contributors

The 20th anniversary of the World Community Grid showcases inspiring stories from contributors worldwide, highlighting the profound impact of volunteer-powered computing. From advancing cancer research and predicting protein structures to modeling African rainfall patterns and fostering student innovation, these projects demonstrate how WCG enables meaningful contributions to global challenges.

Volunteers, educators, scientists, and tech pioneers like Sawyer Thompson, Jose Angel, John Benskin, Nick van de Giesen, Tomasz Kosciolek, Dylan Bethune-Waddell, Chiara Pastrello, and Stan Litow have shared their personal experiences and insights, emphasizing the platform's unique role in driving collaboration, innovation, and discovery.

Together, these stories celebrate the transformative power of community-driven science and call for continued support to advance critical research for the betterment of humanity. To hear their inspiring words and learn more about their contributions, watch their stories below.

Dr. Stan Litow - Celebrating the Grid: https://youtu.be/GHkY6yVDdjl

Dr. Stan Litow is a former President of the IBM Foundation and Vice President in charge of global Corporate Social Responsibility and Corporate Affairs for the IBM Company. He is a Professor at Columbia University's School of International and Public Affairs, writer and consultant. Above all - he has been instrumental for the WCG to start. Thank you Stan and thank you IBM-WCG team.

Dr. Tomasz Kosciolek - Microbiome Immunity Project: https://youtu.be/KyXgYJgnxFw

Dr. Tomasz Kosciolek is Research Team Leader of Structural and Functional Genomics Group at Sano – Centre for Computational Personalized Medicine

International Research Foundation in Krakow, Poland. The goal of his group is to build a multi-level understanding of the microbiome from genes, through structures, to functions and therapies.

Dr. Nick van de Giesen - African Rainfall Project: https://youtu.be/DbMqZmhpvJ4

Prof. Ir. Nick van de Giesen is a Professor at the Delft University of Technology's Faculty of Civil Engineering where he holds the chair of Water Resources Management, and a leader of the African Rainfall Project at WCG. Dr. Giesen is also a co-founder of the Trans-African Hydro-Meteorological Observatory (TAHMO).

Dylan Bethune-Waddell - World Community Grid Tech Team:

https://youtu.be/OPygyokw3io

Dylan started in the lab in 2013 as a BSc student. Moving through positions of research programmer, he is now the WCG tech team and data science specialist. Thank you Dylan for making the system work.

Dylan Bucci Legacy - Sisler High School: <u>https://youtu.be/FaR1FVED68Y</u>

To focus on technology education, Charles Bazilewich and Robert Esposito developed the Cyber Security Academy at Sisler High School, the first of its kind in Canada. Inspiring high school students to take interest in IT and science led to multiple amazing results, including an enormous support for the WCG over the years (<u>https://www.sislercyberacademy.org</u>). Thank you for encouraging the students to get involved and enable seemingly impossible scientific research to come to life. Dylan's legacy of computing for the cure will continue to motivate other students and volunteers across the globe to get involved and condense computational time to allow scientists to answer the world's most pressing questions. Thank you Robert and Charles for inspiring students and supporting them in expanding Dylan Bucci's legacy.

John Benskin - Boca Raton Community High School: https://youtu.be/i_3vHv0iibY

Mr. Jon Benskin is a Science Olympiad Head Coach at Boca Raton Community High School in Florida (<u>https://www.palmbeachschools.org/BocaRatonHigh</u>). He has inspired several classes of students to learn about advanced science and to support scientific research for the betterment of humanity. Thank you John for enabling the students to participate in the WCG research.

Jose Angel - Supporting World Community Grid: <u>https://youtu.be/mO8vTaSYIS8</u> and versión en español: <u>https://youtu.be/8UBL3C6dk2s</u>

World Community Grid (WCG) harnesses hundreds of thousands of individual computers (and devices) to create a supercomputer powered by a community of volunteers. WCG enables seemingly impossible scientific research to come to life. Jose is one of 815,187 volunteers that donated more than 7.69 million devices since 2004 and contributed over 2.6 million CPU-years supporting scientific research for the betterment of humanity. ¡Gracias!

Sawyer Thompson - Sawyer's Cancer Fighting Network: <u>https://youtu.be/iGDpykcq-FQ</u> I'm always humbled when I meet World Community Grid volunteers, who are so passionate about the project. If you'd like to help Sawyer fight cancer, visit: <u>https://www.helpsawyerfightcancer.com</u>

Dr. Chiara Pastrello - World Community Grid Scientist: https://youtu.be/0JBPpCXv0_8

Chiara joined the lab in 2010 as a visiting scientist, and she has contributed the most to the lab research across many projects:

<u>https://pubmed.ncbi.nlm.nih.gov/?term=jurisica+pastrello&sort=date</u>. With a background in genetics, biology and in bioinformatics, she is working on the MCM as well as most of our other projects. Thank you Chiara for moving discoveries from computational to translational research.

Dr. Igor Jurisica - https://youtu.be/yxKCKmrk86E

I have been involved with WCG since 2007 when we started the Help Conquer Cancer project. Later, we continued with a Mapping Cancer Marker project, and in 2021 my lab took over from IBM to run the WCG.

FUNDRAISING CAMPAIGN

We would like to thank you for donating computing power to support research projects and diminishing computational bottlenecks for open science. We are immensely grateful for the passion of the volunteers who support WCG and its mission to accelerate science.

As you know, the cost to run WCG comes from the lab research funding. We need your support more than ever before. Over the last year, we have started the fundraising campaign (<u>https://www.cs.toronto.edu/~juris/jlab/mcm.html?tab=donations</u>) to support back-end operation of the WCG. As an academic group, we face significant financial (and technical) challenges in providing the same level of support to the global research community as IBM was able to.

We continue to search for long-term partners that could help supplement research funding we use for supporting the operation of WCG. If you have some contacts that may help, please, let us know.

If you could spare additional resources to support us, there are multiple ways of donating to <u>WCG</u>, which are highlighted below.

- One time donation directly to the WCG at UHN Foundation;
- Monthly donation directly to the WCG at UHN <u>Foundation</u>.
- Should you wish to receive a US tax receipt, please call UHN Foundation at 416-603-5300 or toll free at 1-877-846-4483 (UHN-GIVE).

Thank you to all the volunteers that contributed and supported the WCG. It would not have been possible without all of you!