Global Bioinformatics Education Summit

May 20-22, 2024

New York Genome Center
New York, USA | Online
bioinfoedsummit.org | info@bioinfoedsummit.org

Sponsorship Prospectus

Global Bioinformatics Education Summit — 2024

The Global Bioinformatics Education Summit (GBES) is a working meeting that gathers bioinformatics educators and other experts to address challenges in bioinformatics education and workforce development. Participants will share successes and challenges, and the outcomes of the Summit will set priorities and issue calls to action.

For the *first* time—the *6th* annual GBES comes to the United States May 20-22, 2024, at the New York Genome Center, New York City and online via Zoom.

Why Bioinformatics Education Matters

Bioinformatics—the computational study of biological data—is essential to life science research. In the 1970s, before there was "Data Science," the term bioinformatics was coined, anticipating then what is clear now—life science is data science. Bioinformatics is how we transform data into insight. The more effectively we use increasingly massive data sets, artificial intelligence, and machine learning to solve problems and drive innovation, the faster we can advance life science, including health, medicine, agriculture, and biofuels.

Biology has never been more data-rich. In 2024 a high school student can generate more biological data (e.g., DNA sequence) in a single day than was produced globally from 1970 to 2000. Preparing this next generation and keeping current researchers up to date depends on our willingness to invest in education. **Bioinformatics education is the "booster rocket" that accelerates discovery.**

"As data size and complexity increase in life science research, so the need for bioinformatics training has increased … The need for bioinformatics education and training is immense, but it is also diverse. There is a wide range of audiences who are potential recipients of training, each of which has different needs in terms of what skills or knowledge they require and at what depth." [1]

GBES 2024: Energizing Communities to Power the Workforce

Why Sponsor GBES 2024?

GBES is the only summit dedicated to supporting international communities of bioinformatics educators and other experts to address challenges in education and workforce development. Sponsoring this Summit means supporting the "doers" who are proposing and implementing solutions to life science's biggest challenges.

Features of the 2024 Summit

GBES is an open and inclusive working meeting where the global bioinformatics education community develops solutions to educational roadblocks. Our vision is to enable the excellent bioinformatics education currently happening in a few places to happen everywhere.

- **Engaged audience**: Summit participants agree in advance to fully participate in the development of products such as proposals, papers, or other tangible outputs.

- **Keynote speakers**: Thought provoking and inspirational talks orient participants to key opportunities and challenges.

- **Short talks**: Short talks open each working session to focus objectives.

- **Working Sessions**: The primary work of the Summit, participants spend co-working time in-person or in moderated online breakouts.

- **Workshops:** Assembled experts lead workshops on skills relevant to enhancing bioinformatics teaching and training.

- **Funders, Industry, and Policymakers forum:** Decision makers are guided through structured conversations to better understand the needs of all sectors. Pertinent to the 2024 theme, we will brainstorm on roadmaps for effective, inclusive, and sustainable bioinformatics education deployable at scale.

- **Supporting communities:** After the Summit, virtual platforms and networks of educator communities which continue developing usable and useful products.

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GBES Facts and Figures

2024 Summit Venue — New York Genome Center

For the first time, GBES will be held in the United States. New York is an iconic location and the U.S.'s most visited city. New York has direct flights from most large domestic and many major international cities. Fine dining and tourist attractions are a draw. In May, hotel rates are reasonable, and the overall cost of attendance is offset by low registration fees (estimated $140 for full price). Sponsorships support need-based travel awards and waivers. Located in the heart of Manhattan, the New York Genome Center is accessible, and an ideal space featuring meeting, breakout, and dining spaces as well as comprehensive audiovisual support.

Date: May 20-22, 2024
Venue: New York Genome Center, New York, NY | nygenome.org or
online via Zoom (w/moderators by time zone)
Website/email: www.bioinfoedsummit.org | info@bioinfoedsummit.org
Est. attendance: 70 in-person (120 max), 30 online (no max)

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2024 Organizing Committee

GBES is an entirely volunteer effort led by accomplished, internationally recognized leaders in bioinformatics education. The committee spans North America and beyond, intersecting with the wide variety of bioinformatics education contexts.

Michelle Brazas	**Ontario Institute for Cancer Research**
Patricia Carvajal Lopez	**EMBL-EBI**
Nia Hughes	**Ontario Institute for Cancer Research**
Jessica Liberles	**Florida International University**
Irma Martínez-Flores	**Center for Genomic Sciences (CCG-UNAM)**
Susan McClatchy	**The Jackson Laboratory**
Barbara Murdoch	**Eastern Connecticut State University**
Nicolás Palopoli	**UNQ-CONICET & MetaDocencia**
Russell Schwartz	**Carnegie Mellon University**
Jason Williams	**Cold Spring Harbor Laboratory**

Past Summits

Founded in Cape Town, South Africa, in 2019 and held annually, the Summit has united and strengthened an international community of bioinformatics educators.

- **2023**: Hinxton, United Kingdom & Online | Attendance: 83 from 32 countries
- **2022**: Jakarta, Indonesia & Online | Attendance: 90 from 30 countries
- **2021**: Online | Attendance: 90 from 35 countries
- **2020**: Online | Attendance: 33 from 17 countries
- **2019**: Cape Town, South Africa | Attendance: 36 from 12 countries

The first Bioinformatics Education Summit, Cape Town, 2019

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Past Summit Accomplishments

As a working meeting, the Summit is designed to deliver tangible outcomes. These outcomes take several forms including peer-reviewed research, policy recommendations, curricular resources, and workforce development tools. Examples of previous Summit accomplishments include:

- Grand challenges in bioinformatics education (research paper/policy guide)
- Bioinformatics competency framework (workforce resource)
- Course design: Considerations for trainers – a Professional Guide (curriculum)
- Train-the-Trainer: Course design and delivery for bioinformatics trainers (curriculum)
- Challenges and Considerations for Delivering Bioinformatics Training in LMICs: Perspectives From Pan-African and Latin American Bioinformatics Networks (paper/policy guide)
- Bicycle Principles for effective, inclusive, and career-spanning professional development (research /policy guide)

Sponsorship Usage

This Summit is a 100% volunteer effort, with all revenue going towards the cost of the venue and travel awards (prioritizing attendees from minority-serving institutions, primarily undergraduate institutions, community colleges, and attendees from lower- and middle-income countries). Any unexpended funds will be donated to future summits and convenings supporting bioinformatics education and workforce development. Sponsorship helps keep registration costs minimal and recognizes that many bioinformatics educators have few resources or opportunities to support their own professional development.

GBES is committed to open-educational resources, open-source, and open-access to ensure bioinformatics education is accessible to all.

Past Sponsors and Supporters

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Sponsorship Levels and Benefits

Visit bioinfoedsummit.org/sponsorship to lend your support!

Silver Sponsor — $5,000

- Logo and recognition on our website and promotional materials
- 2 complimentary registrations

Gold Sponsor — $10,000

- Logo and recognition on our website and promotional materials
- 3 complimentary registrations
- Recognized sponsor of travel awards

Platinum Sponsor — $15,000

- Logo and recognition on our website and promotional materials
- 4 complimentary registrations
- Recognized sponsor of travel awards
- Table for product placement or meetings
- Opening remarks opportunity and/or short video

Diamond Sponsor — $20,000+

- Logo and recognition on our website and promotional materials
- 5 complimentary registrations
- Recognized sponsor of travel awards
- Table for product placement or meetings
- Opening remarks opportunity and/or short video
- Custom logo on lanyard

Sponsors will be issued a sponsorship invoice detailing the terms and benefits of sponsorship.

Custom sponsorship levels, including for non-profit organizations are available.

All invoices due starting March 31, 2024.

Example travel award:

Sponsorships will allow us to offer inclusive participation with awards of up to $2500, covering estimated costs:

International attendee:
- $1200 flight/ground transit
- $1300 room and board

Domestic attendee:
- $700 flight/ground transit
- $1300 room and board

Contact info@bioinfoedsummit.org for questions and more options

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Local Context — Bioinformatics Education in the U.S.

Despite its status as a leading bioinformatics innovator, the U.S., like many countries has *no comprehensive national strategy* for bioinformatics education.

## Local Bioinformatics Hero — Margaret Oakley Dayhoff

Dr. Dayhoff (1925-1983) was born in Philadelphia but raised in New York City where she went on to be the valedictorian of Bayside High School, obtained a degree in mathematics from New York University, and graduated with a PhD in quantum chemistry from Columbia University. Dr. Dayhoff was the creator of several foundational tools and approaches in bioinformatics, including the first computer software used to discover phylogenetic relationships between proteins and the creation of the single-letter amino acid code we use today. Dr. Dayhoff's work solved in minutes bioinformatics challenges which had previously taken months to solve. She also created the *Atlas of Protein Sequence and Structure*, which was the predecessor and inspiration for many of the major biological databases we all use today. [2,3]

U.S. Challenges — Bioinformatics is Important, But Too Few Students Have Access

In the largest survey of undergraduate life science educators to date, while 95% agreed that bioinformatics should be integrated into undergraduate life sciences, only a third of educators reported that they achieve this. [4] Despite challenges, there are several institutions that give degrees in the subject with 1,156 awarded in 2021. [5 (chart),6]

Percentage of 2021 bioinformatics degrees by U.S. institution
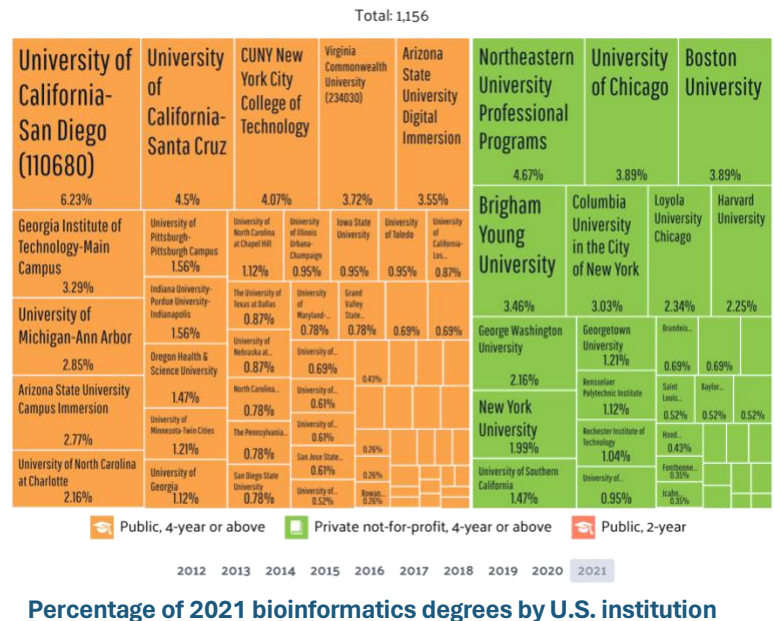
U.S. Opportunity — Bioinformatics Career Outlook

The job outlook for bioinformatics has been positive since 2004, with vacancies increasing by 43% nationally in that time. Demand for Bioinformatics Scientists is expected to go up, with an expected 8,240 new jobs filled by 2029. [7]

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Works Cited

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6. https://nces.ed.gov/ipeds/use-the-data [accessed Nov. 26, 2023]
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