University at Buffalo The State University of New York

RESEARCH & ECONOMIC DEVELOPMENT

Featured research facilities, equipment, tech incubators and capabilities 2025

High quality imaging equipment for the treatment of vascular, neurological and related diseases.

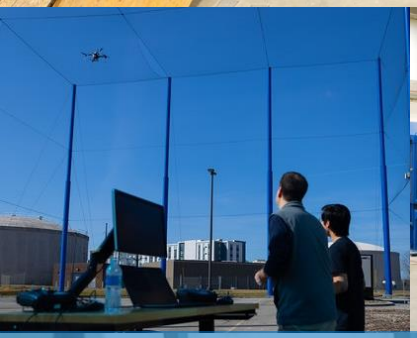
- Canon high-def bi-plane fluoroscopy system
- OEC 9900 Elite Digital Mobile Standard C-Arm VAS15
- Toshiba SXT-2000A C-Arms
- O-Arm (intraoperative CT)
- 64 slice CT scanner
- Bruker 9.4 Tesla Microspec MR Imager
- Phillips MR770 3.0 Tesla MR Imager
- GE Discovery PET CT 690

High Quality Imaging: The Jacobs Institute

26 years' experience delivering HPC and related services to UB

- ~1300 active users (~350 PI groups)
- Involved in >500 proposals >100M$ awarded in external funding since ‘17
- >750 node cluster with GPUs (ML/AI) and high-performance networking
- >4 PB shared storage
- $27M 15-year NSF Metrics Service award (3x 5y awards)

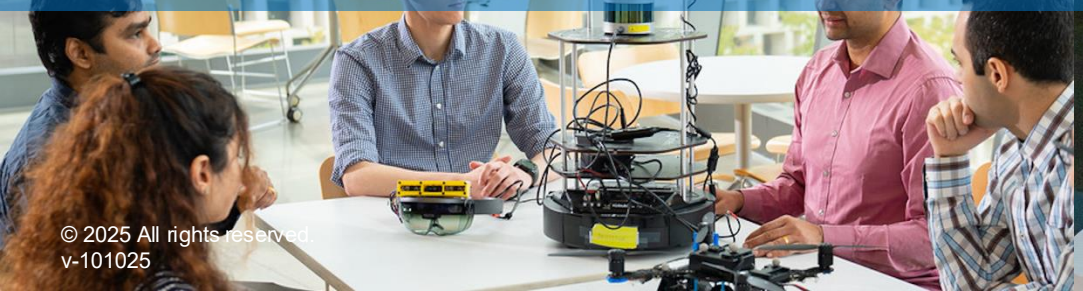
Research Computing Facility

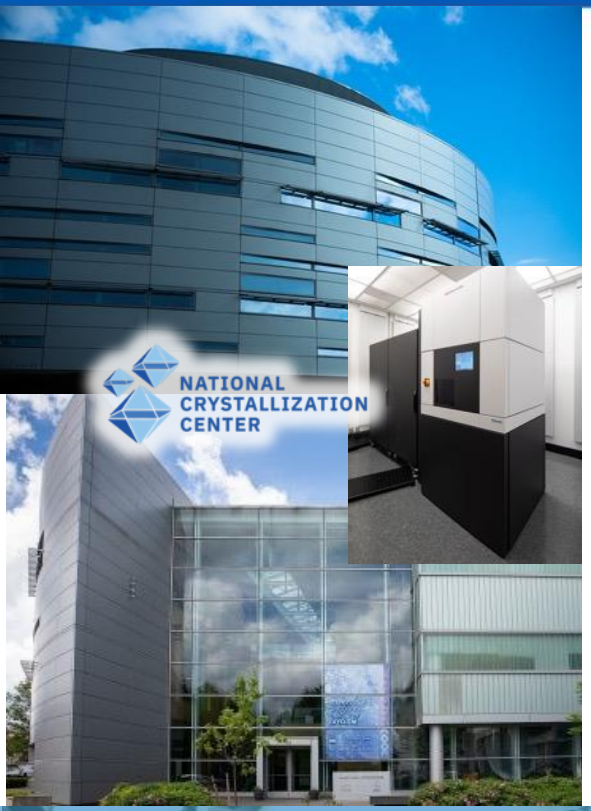


Fundamental research and new technologies that address big challenges

- UB's SOAR: 24,000-square-foot research facility, among the largest of its kind in the U.S.
- Earthquake Simulation Laboratory
- Motion Simulation Laboratory
- Multidisciplinary cleanroom

Drone, Autonomy, Robotics & Simulation Labs

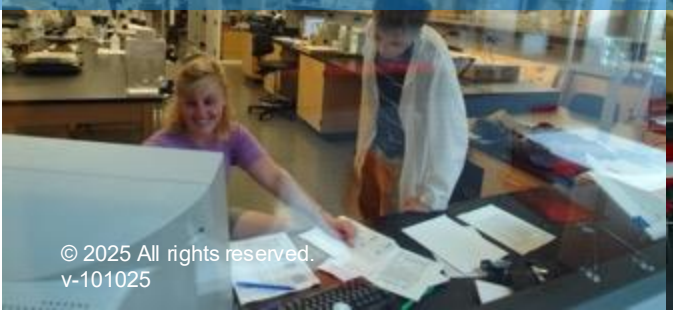




Founded in 1956

- Advancing disease research and pharmaceuticals
- National resource for crystallography
- Single-particle and microcrystal electron diffraction capabilities
- Comprehensive facilities for protein production, purification and characterization
- Has conducted over 25 million experiments on 18,000 macromolecules for nearly 2,000 laboratories worldwide

Hauptman-Woodward Medical Research Institute (UB-HWI)



Center of Excellence in Bioinformatics and Life Sciences (CBLS)

- Supports mature companies to innovative startups
- Helps biomedical and life sciences companies grow
- Provides access to experts, wet labs, office space, shared equipment, core services

Single Laboratory Animal Facilities (LAF)

- Modern and fully equipped animal facilities on all three campuses
- Animal housing for more than 13 species of research animals
- Biosafety Level 2 (BSL-2)
- Two air locks (one at entrance and one at exit) & clean area near the entrance
- Specific pathogen free (SPF) facility

Life Sciences & Animal Research Facilities

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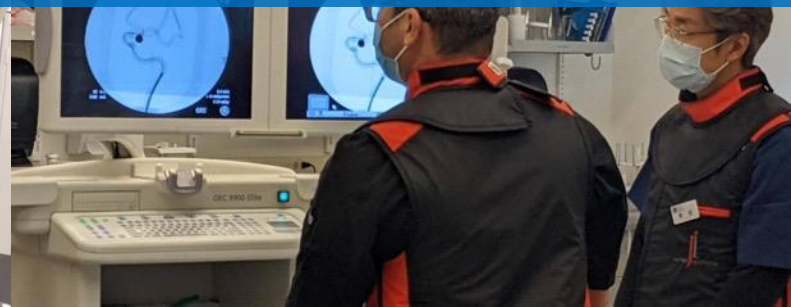
Materials Informatics Science Research

Research & development support, expertise and funding for small & large manufacturing companies

- Access to licensable technologies
- Connection to faculty experts and diverse student talent
- High-performance computing solutions
- Funding resources
- State-of-the art facilities
- Business liaise to faculty
- Faculty-Industry Applied Research (FIAR) funding opportunities
- Emphasize key areas of societal, economic and technological interest to UB and NYS such as clean energy, environment, sensors, semiconductors, AI and wireless technology

Center of Excellence in Material Informatics



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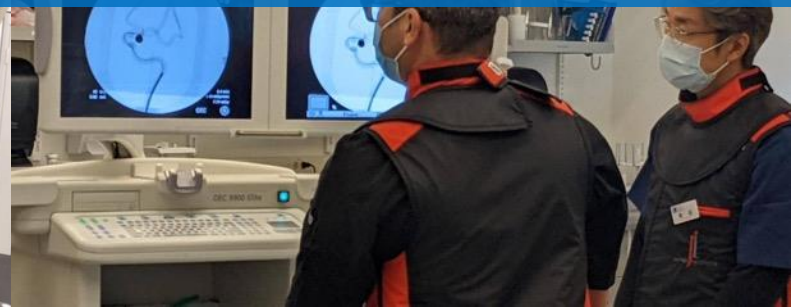
Research to Advance Semicon Technology

Collaborations between faculty & industry, focused on innovative technologies and commercialization to expand the semiconductor ecosystem in NYS.

- The Tech Hub has key commercialization assets and facilities across academia, government and industry to help startup, small- to mid-size, and minority-owned businesses access critical resources for semiconductor-related innovation and entrepreneurship, to help them bring their ideas to market more successfully. The NY SMART I-corridor aims to become a globally recognized hub for semiconductor manufacturing and innovation.
- The Center for Advanced Semiconductor Technologies brings together researchers across campus to work collaboratively on cutting-edge research in microelectronics while training the next generation of leaders and engineers for the semiconductor industry.

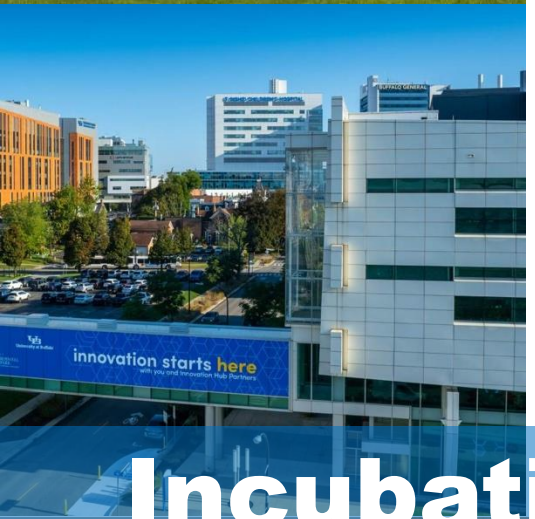
TECH HUB, Advanced Semiconductor Technologies



Cutting edge research in micro-electronics

- Electrical Engineering Cleanroom: 5,000 sq. ft. facility combines class-100 and class-1000 space to enable cutting-edge semiconductor R&D
- Elionix ELS-G100 electron beam lithography system with a 1.8-nm beam diameter and 100kV acceleration voltage
- High-resolution SEM integrated with focused ion beam milling
- Seven specialized research bays, the cleanroom offers extensive capabilities in deposition, etching, lithography, and metrology
- Carl Zeiss AURIGA CrossBeam Focused Ion Beam Electron Microscope

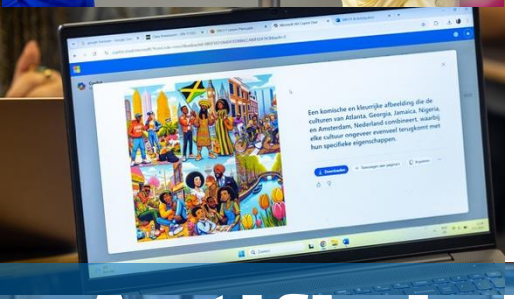
Cleanroom



Entrepreneurial ecosystem with two incubators

- Incubator @ CBLS – on the Buffalo Niagara Medical Campus, inside the Center of Excellence in Bioinformatics and Life Sciences (CBLS)
- Turnkey BSL2 lab space with access to shared instruments, equipment and clean room
- Mass spectroscopy, next-gen sequencing, bioinformatics services
- Incubator @ Baird – adjacent to UB's North Campus
- BSL2 lab space, chemical fume hood, DI water
- Designated Start-up NY and WIN (Western New York Incubator Network)

Incubation, Co-working, Office & Lab Space



UB's legacy isn't just about being part of AI history—it's about shaping AI's future

- National AI Institute for Exceptional Education ($20 million) is transforming education
- Center for Literacy and Responsible AI ($10 million) is improving literacy rates
- Center for AI Business Innovation is advancing business processes & product development
- Center for Information Integrity is combatting unreliable information in the public sphere
- The Institute for Artificial Intelligence and Data Science (IAD) focuses on advancements in AI.
- NEW: UB has launched the Dept of AI and Society and AI curriculum

Artificial Intelligence Centers & Institutes

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Research Support

New equipment helps increase the competitiveness of external proposals & strengthen UB's research environment

$12M+
funded equipment since 2023 including $5.9M in 2025

- Two high-resolution scanning electron beam imaging systems with differing capabilities
- Fusion Flow sorter, MRI – 3T Scanner
- New laser/microscopy system for nanophotonics
- Cryogen-free, Multifunctional Optical Probe
- Confocal microscope
- Portable Lab
- Caging Systems

VPRED Equipment Grant Program

Explore more of UB's facilities & capabilities

1. https://www.buffalo.edu/research/research-services/facilities_and_equipment_for_UB_and_businesses.html
2. https://www.buffalo.edu/shared-facilities-equip/facilities-equipment/SearchEquipment.facility-type.html
3. https://engineering.buffalo.edu/mechanical-aerospace/research/centers-labs.html
4. https://medicine.buffalo.edu/research/core_facilities.html
5. https://www.buffalo.edu/research/research-expertise/research-centers-institutes.html
6. https://www.buffalo.edu/research/about-us/units/cmlaf.html
7. https://engineering.buffalo.edu/chemical-biological/research/centers-and-labs.html
8. https://www.buffalo.edu/health-sciences/research/cores-and-services.html
9. https://www.buffalo.edu/partnerships/about/programs/incubator-cbls.html
10. https://www.buffalo.edu/partnerships/about/programs/incubator-baird.html
11. https://www.buffalo.edu/administrative-services/managing-facilities/environment-and-safety/laboratory-facilities.html

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Questions?
Contact:
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Thank You!

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