

CASSA Constitution | Version 2.0 – 1 July 2026

Preamble

Independent University, Bangladesh (IUB), established in 1993 under the Private Universities Act, 1992 (now replaced and governed by the Private Universities Act, 2010), has established the Center for Astronomy, Space Science and Astrophysics (CASSA) as one of its research centers, dedicated to the study of astronomy, astrophysics, and space science and engineering.

The institutional approval of CASSA proceeded through three governing bodies of IUB. At the 95th meeting of the Board of Trustees (BOT) held on 1 December 2024, the establishment of CASSA was first proposed; the BOT directed that a detailed proposal with financial projections be placed before the Academic Council and the Syndicate for review. The 106th meeting of the Academic Council (AC), held on 9 July 2025, endorsed the establishment of CASSA and approved an annual budget, and the 104th meeting of the Syndicate, held on 17 July 2025, reviewed and concurred with the AC's decision. Following the Syndicate's approval, the minutes of the 95th BOT meeting were deemed sufficient for BOT-level approval, completing the three-body process. The Vice Chancellor's office accordingly issued an Office Order on 14 August 2025 confirming that CASSA had been duly approved by the Academic Council, the Syndicate, and the Board of Trustees.

The CASSA Constitution Version 1.2 was adopted on 14 August 2025 as the foundational instrument for the incorporation and governance of the Center. The present Version 2.0 was subsequently developed and vetted by all core and associate members of CASSA.

Definitions

- **Astronomy** is an interdisciplinary natural science that studies extraterrestrial (celestial) objects, systems, and processes, and the Universe as a whole, using mathematical, statistical, computational, and natural sciences, and engineering technologies.
- **Space and planetary science and engineering (SPSE)** is an interdisciplinary field integrating natural and engineering sciences to study extraterrestrial objects, systems, and processes, the solar system and its space environment, and Earth from space, for scientific exploration, technological development, and practical utilisation.
- **Astrophysics** is a branch of physics and astronomy that uses physics to study extraterrestrial objects, systems, and processes.
- **Cosmology** is a branch of **astronomy and astrophysics (A&A)** that studies the Universe and its evolution globally as a single object, and uses local studies of individual objects, systems, and processes only to understand the Universe as a whole.

The Clauses

A. OPERATIONAL POLICIES

1. The Center for Astronomy, Space Science and Astrophysics (CASSA) shall be an autonomous multidisciplinary **research center** of Independent University, Bangladesh (IUB) dedicated to the *intermingled* fields of astronomy and astrophysics (A&A), and space and planetary science and engineering (SPSE).
2. The **autonomy** of CASSA entails that it is **administratively independent**, working directly under the Office of the Vice Chancellor (VC), while an academic department of IUB may have **academic affiliation** with CASSA for its educational activities related to A&A and SPSE.
3. **Administrative Independence** of CASSA shall entail the following.
 - 3.1. The premises of CASSA built with the budget given in the letter *Establishing a Center for Astronomy, Space Science and Astrophysics (CASSA) at IUB* (dated 16 October 2024) and the fixed assets of CASSA described in [Appendix C](#) shall belong to CASSA, and their maintenance and use shall be determined by the directors of CASSA.
 - 3.2. The IUB members of CASSA shall receive their salary from the academic department in which they were hired and are employed. In return, they shall teach the relevant courses offered by their department. Their research activities related to A&A and SPSE shall be part of CASSA.
 - 3.3. The directors of CASSA may issue internal memoranda (memos) within IUB through the Executive Director (ED) without routing them through another academic or administrative unit.
 - 3.4. CASSA and its members may apply for national and international research, education, development, and outreach grants independently.
 - 3.5. IUB Management shall contact CASSA directly regarding all activities of CASSA.
 - 3.6. The directors of CASSA shall have the right to sign letters or memoranda of agreement or understanding between CASSA and external or international researchers (e.g. associate members) or organisations.
4. **Academic Affiliation** of a department with CASSA shall entail the following.
 - 4.1. Faculty members of a department who are directors, core members, or associate members of CASSA may initiate an application, through the Head of the department, for the department to establish academic affiliation with CASSA.
 - 4.2. The Head of the department shall be informed about the activities of CASSA.
 - 4.3. CASSA shall contribute to the research aspects of the relevant courses of the department.
 - 4.4. Research papers (co)authored by CASSA members who are also faculty members of the department shall carry both the CASSA and the department affiliation.
5. The Astronomy Research Group, IUB (ARGI), founded in mid-2020, and its successor, the Computational and Observational Astronomy Lab (COALab), established in late 2023, are regarded as the predecessors of CASSA. All personnel, assets, funding, and policies from COALab shall be incorporated into CASSA.
6. Any actions taken by ARGI and COALab **prior to the enactment** of the CASSA Constitution (CC) that contradict the CC shall be overruled by it. However, if any provision of an existing IUB manual (such as the Faculty Manual, Staff Manual, or Purchase Manual) conflicts with the CC, the IUB manual provision shall take precedence.
7. **Amendments.** Amendments to the CC may be made through a referendum, conducted by a director in an inclusive meeting (or by email) that includes all directors and both the core and associate members.
8. **Dispute resolution.** Disputes between members, or between a member and the Executive Director, shall first be referred to the ED for mediation within 14 days. If unresolved, the matter shall be referred to a panel of three Core Members who are not party to the dispute. If still unresolved, it shall be escalated to the Office of the Vice Chancellor, whose decision shall be final. Any member subject to a removal decision may appeal to the Office of the Vice Chancellor within 30 days of the decision.
9. **Conflict of interest.** All directors and core members of CASSA shall declare any financial or personal interest in any entity that CASSA proposes to partner with, receive funds from, hire from, or procure from. A declared conflict of interest requires the relevant member to **recuse** themselves from the associated decision. The Executive Director (ED) shall maintain a **conflicts register**, updated at least annually. In any matter in which

the ED has a declared conflict of interest, the director of the other division shall chair the relevant meeting or decision process.

10. **Website and Web Resources.** CASSA shall maintain a public website and associated web resources to communicate its activities, research, and outreach to the global community.
 - 10.1. All content published on the CASSA website or official web platforms must be reviewed and approved by a Director or Core Member of CASSA before publication.
 - 10.2. The Manager (Science) shall be responsible for implementing approved content updates and maintaining CASSA web resources through the official CASSA GitHub repository.
 - 10.3. The website shall give equal prominence to all CASSA divisions and all personnel. The guiding philosophy of CASSA’s web presence is to engage and inspire successive generations through the story of astronomy and space science.

B. ORGANIZATIONAL STRUCTURE

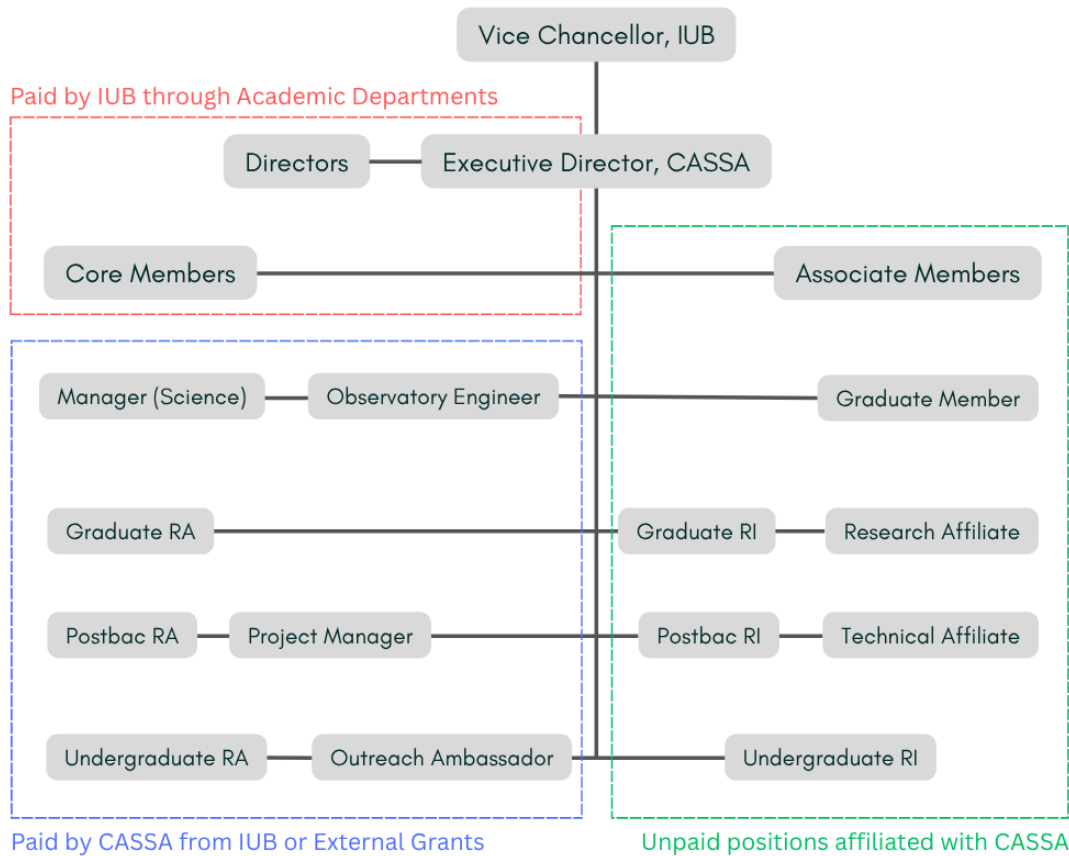


Figure 1: CASSA Organogram; here, "RA" denotes Research Assistant and "RI" denotes Research Intern.

11. CASSA operates under the hierarchical organogram in Figure 1. Eligibility criteria, duties, and ethical standards for each role are detailed in the subsequent clauses. Research activities are organized into two **scientific divisions**, each led by a Director.
 - 11.1. **Optical and Time-domain Astronomy Division (OTA):** Focuses on optical and time-domain observations, transient phenomena, and supernova cosmology.
 - 11.2. **Radio and Space Science Division (RSS):** Focuses on radio and x-ray observations, space-based science, and high-energy astrophysics.
 - 11.3. The establishment of any new scientific division, and the appointment of all Directors and the Executive Director, require an Office Order from the Vice Chancellor. Each active division shall have at least one

appointed Director and at least one Core Member committed to its research programme.

12. Directors

Role & Duration	Eligibility	Responsibilities
Director <i>tenure at IUB</i>	PhD with ≥ 5 years postdoctoral and/or faculty experience in A&A or SPSE; established research record demonstrated by publications and citations.	Leads a CASSA Division and its activities, including securing grants, recruiting and supervising personnel, and overseeing publications and public outreach.
Executive Director (ED) <i>2 years</i>	Rotates biennially among the Division Directors; consecutive terms are prohibited.	Oversees general administration; supervises the Manager (Science); facilitates cross-division decisions through Core Meetings or email.

- 12.1. If a Director is on leave or vacates the position, the ED shall assume leadership of that division for up to 30 days, within which a successor shall be appointed by a two-thirds majority vote of all Directors, Core Members, and Associate Members. If no suitable candidate is identified within this period, a new faculty member of equivalent standing may be hired into the role within 3 to 6 months.

13. Members

Role & Duration	Eligibility	Responsibilities
Core Member (CM) <i>2-5 years, renewable</i>	IUB full-time faculty with a PhD in A&A or SPSE; or with a PhD in another discipline and major CASSA-affiliated publications; or a founding Core Member.	Uses CASSA affiliation on all A&A/SPSE papers; leads ≥ 1 project and supervises students; publishes ≥ 1 CASSA paper/year; applies for ≥ 1 grant/year; attends monthly Core Meetings.
Associate Member (AM) <i>1-3 years, renewable</i>	Active postdoctoral researcher in a CASSA-relevant field at any institution; eligible for Lifetime AM status after two consecutive terms (see clause 13.3).	Uses CASSA affiliation on papers; supervises students and applies for grants; delivers ≥ 1 talk/year; attends quarterly plenary meetings.
Graduate Member (GM) <i>2 years or until PhD</i>	PhD student or candidate in a CASSA-relevant field.	Same as Associate Member; additionally mentors CASSA students on MSc/PhD applications and scholarship opportunities.

- 13.1. **Core Meetings** are the principal executive meetings of CASSA. All Directors and Core Members may vote, in person or by email if absent, and all Core Members shall be consulted in either form. Quorum is a two-thirds majority of all sitting Directors and Core Members. Decisions on fund disbursement, member status, and other substantive matters shall be made at Core Meetings or by email consultation with equivalent participation.
- 13.2. The Manager (Science) shall prepare meeting minutes; the ED shall circulate them to all Directors and Core Members, and they shall be ratified within 3 days of each meeting.
- 13.3. **Lifetime Associate Member** status is conferred by a two-thirds Core Meeting vote, upon nomination by any Core Member, after at least two consecutive AM terms. Lifetime AMs are exempt from renewal review and retain all AM duties and privileges. The ED shall issue written confirmation upon conferral.
- 13.4. For Core Member eligibility, **major CASSA-affiliated publications** means at least one peer-reviewed article in a Q1 journal, or at least two papers in top-ranked international conferences, in either case with CASSA affiliation.

14. Administrative and Technical Staff

Role & Duration	Eligibility	Responsibilities
Manager (Science) <i>2 years, renewable</i>	MSc in a relevant field; proficiency in scientific computing, Ubuntu Server, Google Workspace, and AI tools; project management experience preferred.	Manages official documents and annual budget; coordinates research personnel; administers the HPC with the custodian; liaises with PIs and Directors on fund disbursement.
Observatory Engineer <i>2 years, renewable</i>	MSc in a relevant field; proficiency in operating astronomical telescopes, scientific computing, and Ubuntu Server.	Ensures continuous operation of CASSA observatories; works under the supervision of the Director of the relevant division.
Project Manager <i>1–2 years</i>	Bachelor's in a relevant field; demonstrable experience in grant or project administration; appointed on a project-specific basis, renewable subject to funding.	Manages timelines, budgets, and reporting for a funded project; serves as administrative liaison between the PI/project lead and IUB finance/administration.

15. Affiliates

Role & Duration	Eligibility	Responsibilities
Research Affiliate <i>1–2 years, renewable</i>	IUB full-time, visiting, or adjunct faculty from any department who conduct research on a CASSA project or apply for grants through CASSA.	Uses CASSA affiliation on jointly produced outputs; co-supervises students or participates in CASSA seminars as appropriate.
Technical Affiliate <i>1–2 years, renewable</i>	IUB R&D officers, lab managers, or researchers without a PhD who work on a CASSA technical project.	Provides hands-on technical support for CASSA projects (e.g., telescope hardware, HPC setup, data pipelines); is acknowledged in relevant CASSA outputs.

16. Student Researchers and Communicators

Role & Duration	Eligibility	Responsibilities
RA (Graduate) <i>1 year, renewable</i>	Master's student or completed Master's, qualified for the specific project.	Conducts research under the supervision of a Director, Core Member, or Associate Member of CASSA; contributes to journal publications and outreach.
RA (Postbac) <i>1 year, renewable</i>	Completed bachelor's, not enrolled in a master's, qualified for the specific project.	Same as RA (Graduate).
RA (Undergraduate) <i>6 months, renewable</i>	Undergraduate student currently enrolled at IUB.	Same as RA (Graduate).
Outreach Ambassador <i>1 year, renewable</i>	Undergraduate student currently enrolled at IUB.	Represents CASSA at school visits, public events, and Durbin/BDOAA activities; position is paid.

- 16.1. Each Research Assistant (RA) shall have a designated primary supervisor (a Director, Core Member, or Associate Member) and a secondary supervisor. A supervision agreement shall be signed at the time of appointment. If the primary supervisor leaves CASSA, the ED shall appoint a replacement within 30 days. RAs may raise welfare concerns directly with the ED without going through their supervisor.

17. Student Interns

Role & Duration	Eligibility	Responsibilities
RI (Graduate) <i>6 months, renewable</i>	Master's student or completed Master's, qualified for the specific project.	Same as RA (Graduate); position is unpaid.
RI (Postbac) <i>6 months, renewable</i>	Completed bachelor's, not enrolled in a master's, qualified for the specific project.	Same as RA (Postbac); position is unpaid.
RI (Undergraduate) <i>6 months, renewable</i>	Undergraduate student currently enrolled at a university.	Same as RA (Undergraduate); position is unpaid.

18. CASSA shall **collaborate** with departments and schools within IUB, and with researchers from other national and international universities, institutions, and industries.
- 18.1. All substantial collaborations shall be governed by Letters or Memoranda of Agreement or Understanding (LoA/U, MoA/U) between the collaborating entity and CASSA.
 - 18.2. **Adjunct** and **visiting** professors, researchers, and national and international collaborators may become Associate Members based on their contributions through grants, teaching, or roles as co-supervisors of students and co-investigators on projects.
19. CASSA shall constitute a **Scientific Advisory Board (SAB)** of three to five external researchers, at least two of international standing, appointed by Core Meeting vote for three-year terms. The SAB shall meet at least annually (in person or virtually), review CASSA's research programme and scientific direction, and submit a written report to the Office of the Vice Chancellor. SAB members may be drawn from the Associate Member ranks but must be external to IUB.
20. Any CASSA member, staff member, or student researcher who consistently violates the CASSA **Code of Conduct (Appendix D)** or **Safeguarding Policy (Appendix E)** may be removed through the following two-step process.
- 20.1. The individual shall be issued a written notice of concern. They shall have 30 days to submit a written response, which shall be discussed at a Core Meeting.
 - 20.2. Removal shall require a unanimous vote of all Directors and Core Members, with the individual under review excluded from the vote. If the individual to be removed is a Director, the removal notice shall be issued by the Office of the Vice Chancellor; for all other personnel, the ED may effect removal upon the unanimous vote.
21. This clause governs all paid positions funded by CASSA: Manager (Science), Observatory Engineer, Project Manager, and paid Research Assistants. Volunteer and unpaid intern positions are not subject to this procedure.
- 21.1. **Position creation.** If a position has not been previously approved, the ED shall submit a formal request to the Office of the Vice Chancellor and IUB Human Resources, specifying the job title, number of positions, reporting line, and funding source. The position may be opened only with VC approval.
 - 21.2. **Advertisement.** Once approved and budgeted, the ED shall request IUB HR to issue a public circular. The advertisement shall remain open for at least two weeks. CASSA shall set all timelines for shortlisting, interviews, and selection; IUB HR shall assist throughout the process. CASSA shall shortlist candidates against the advertised criteria and invite shortlisted candidates in person for interview.
 - 21.3. **Interview panel.** Interviews shall be conducted by the principal supervisor of the position – a Director, the ED, a PI, or a Project Lead, as appropriate to the role. The panel shall comprise at least two members, both graded above the position being filled; at least one shall be a Director. Any panel member with a declared conflict of interest under clause 9 shall recuse themselves from the relevant decision.
 - 21.4. **Selection.** The final selection decision shall be made jointly by the principal supervisor and at least one Director. The decision and its rationale shall be documented in writing; all shortlisting and interview records shall be retained for a minimum of three years.
 - 21.5. **References.** A minimum of two references shall be obtained and assessed before the appointment offer is finalised, with at least one reference from the candidate's most recent direct supervisor.
 - 21.6. **Appointment.** CASSA shall provide IUB HR with a memo confirming the selected candidate and certifying budget availability. HR shall then issue the formal appointment letter specifying position

- title, duties, start date, salary, contract type (fixed-term or renewable), probation period, and notice terms, consistent with the Bangladesh Labour Act 2006.
- 21.7. **Onboarding.** The Manager (Science) shall coordinate the issuance of the IUB ID card, creation of all required institutional accounts (email, HPC, CASSA systems), and initiation of payroll through IUB Finance and Accounts.
 - 21.8. **Probation.** All appointed personnel shall serve a probation period of three months. The principal supervisor shall conduct a review at three months and at the end of the probation period; written confirmation of appointment shall be issued by the ED via HR upon satisfactory completion.
 - 21.9. **Contract renewal and non-renewal.** Fixed-term appointments shall be renewed only if funding is available and performance has been satisfactory. The ED shall notify HR and the appointee in writing at least 30 days before contract expiry of the intent to renew or not renew.
 - 21.10. **Equity and inclusion.** All hiring shall comply with the equity, diversity, and inclusion (EDI) commitments in the [Code of Conduct \(Appendix D\)](#). Diversity monitoring data shall be collected at application stage and stored separately from selection records, inaccessible to panel members during the selection process.
 - 21.11. **Failed search.** If no suitable candidate is identified at the close of an open search, the ED shall report to the Directors and Core Members. The position shall not be re-advertised without a documented review of its requirements, grade, and advertising reach.

C. PREMISES, ASSETS AND FUNDS

22. All IUB assets related to A&A and SPSE shall be owned by IUB and managed by CASSA.
 - 22.1. All fixed assets of CASSA are listed in [Appendix C](#), together with the funding source for each asset. Guardianship of an asset shall be determined either by a Letter of Agreement (LOA) or automatically based on the funds contributed by the entity.
 - 22.2. The list of fixed assets shall be recorded in the IUB Book of Accounts by the executive director at least once every six months, and the assets shall be subject to IUB's annual audit.
 - 22.3. The executive director shall be responsible for the custody and management of all fixed assets allocated to CASSA.
23. Assets and funds acquired through independent research or outreach grants by a core or associate member of CASSA shall be managed by the respective member through CASSA.
24. Intellectual property (IP) generated through IUB-funded research is jointly owned by IUB and the Principal Investigator (PI) per IUB IP policy. IP arising from independently secured grants is governed by the respective funder's terms. In the absence of specific funder terms, the PI retains ownership but grants CASSA a non-exclusive right to cite and publicize the work. The use, storage, retention, access controls, and deletion of data on CASSA's computing infrastructure shall be governed by the [CASSA HPC Manual \(Appendix H\)](#).
25. Assets and funds acquired by CASSA jointly with another academic or research unit of IUB shall be managed jointly by CASSA and that unit.
26. The relevant Administrative Unit shall audit CASSA's premises and assets twice a year, and the executive director shall be responsible for their safety.
27. The Office of CASSA is the rooftop space on the main academic building of IUB (Bashundhara R/A, Dhaka), as detailed in the CASSA Detailed Proposal.
 - 27.1. CASSA Office shall be used primarily as a research workspace and for mini-courses or workshops organized by CASSA. It may also be used for meetings by core and associate members, subject to prior booking, provided that CASSA employees are not disturbed in their work.
 - 27.2. On all working days, CASSA Office shall be open as a research workspace to all core and associate members and the official students of CASSA, unless the space is booked for an official CASSA event (e.g., workshops).
28. CASSA's expenses shall be funded through: (i) the annual budget allocated by IUB, (ii) financial grants secured

by CASSA, its directors or members, (iii) revenue from CASSA's non-degree mini-courses and workshops, and (iv) other legally approved funding.

- 28.1. Funds from sources (i) and (iv) shall be managed by the directors and core members, with disbursement decisions made collectively at Core Meetings or by email.
 - 28.2. Funds from sources (ii) and (iii) shall be managed by the individual who secured the grant (e.g., the Principal Investigator, Grant Lead, or Project Lead) or conducted the mini-courses or workshops, and shall be reported to the ED on an annual basis.
 - 28.3. All funds are detailed in [Appendix B](#). By 14 August of each year, CASSA shall publish an annual report for the preceding fiscal year covering its members' grants (source ii), all expenditure by category, publications with CASSA affiliation, and a summary of teaching and outreach activities. The report shall be led by the ED and published on the CASSA website or equivalent public platform.
 - 28.4. CASSA shall seek funding through IUB from various national and international space agencies, universities, and organizations, such as the International Astronomical Union.
 - 28.5. Signatory authority over CASSA funds is held exclusively by Directors, Principal Investigators, and project leads, as appropriate to the fund source. The Manager (Science) shall have no independent signatory authority. Expenditures from pre-approved project budgets, as decided through Core Meetings or email consultation among directors and core members, do not require additional real-time authorization.
29. In the event of the dissolution of CASSA or the withdrawal of its recognition by IUB, the following provisions shall apply.
- 29.1. All fixed assets shall revert to IUB ownership. Active grant funds shall be returned to funders or transferred in accordance with the relevant grant terms.
 - 29.2. Ongoing student supervision obligations shall be transferred to the relevant academic department of IUB.
 - 29.3. Coordination of the Durbin program shall be transferred to the relevant IUB department, wound down in accordance with the terms of the active funding agreement, or dissolved. BDOAA's Executive Committee shall assume independent operation of BDOAA.
 - 29.4. Dissolution of CASSA requires an Office Order from the Vice Chancellor and may not be effected by Core Meeting vote alone.

D. VISION AND MISSIONS

30. The **vision** of CASSA is to be the pathfinder in Bangladesh, be impactful in South Asia, and be a part of the international community in the fields of A&A and SPSE.
31. The **vision** shall be achieved via three **missions**: research, teaching, and outreach.
- 31.1. For all three missions, CASSA shall prepare and uphold a framework for equity, diversity, and inclusion (EDI) following international norms, e.g., the EDI practices of the [American Astronomical Society](#).
32. The **research mission** of CASSA is to conduct cutting-edge research in simulation, instrumentation, theory, and observation (SITO), and to publish the results in peer-reviewed international journals and conference proceedings. This mission shall be accomplished through the following **action plans**.
- 32.1. Develop international collaborations to provide CASSA members access to leading sensitive and high-resolution ground-based and space telescopes.
 - 32.2. Seek research funding through grant applications by core and associate members to IUB, the Bangladeshi government and private sector, and international organizations.
 - 32.3. Upgrade the HPC server on a regular basis to increase computing capacity.
 - 32.4. Support IUB academic departments in faculty recruitment for A&A and SPSE by providing advice that prioritizes the research strengths of potential hires.
 - 32.5. Promote the creation of **Postdoctoral** Research Fellowships within CASSA.

- 32.6. Partner with IUB's Office for Graduate Studies and Research and SETS departments to develop a **PhD** program roadmap for A&A or SPSE.
 - 32.7. Campaign for the establishment of **IUB CORE** as the educational observatory on CASSA premises, and the **IUB Observatory** as a research observatory at the IUB Kaliakair campus. Both observatories shall operate under the [Observatory Manual \(Appendix G\)](#).
 - 32.8. Advance Bangladesh's space economy by generating space research jobs and forging collaborations with international space agencies and their key missions.
 - 32.9. Organize regular online, offline, and hybrid seminars, symposia, talks, and conferences featuring invited and guest speakers to enhance collaboration in relevant fields.
33. The **teaching mission** of CASSA is to contribute to the research aspects of A&A and SPSE courses offered by various departments, and to offer its own non-degree workshops, schools, and mini-courses. This mission shall be accomplished through the following **action plans**.
- 33.1. Contribute to the research components of the minor program in A&A.
 - 33.2. Contribute to the proposal for an MSc in the fields of A&A and SPSE in collaboration with the relevant departments.
 - 33.3. Contribute to the Data-Intensive Astronomy and Space Science Track (DIASS) within the MSc in Data Science and AI.
 - 33.4. Involve visiting professors and researchers in existing courses, and develop new specialized courses with instructors from IUB and other universities.
 - 33.5. Organize regular summer and winter schools with invited speakers and instructors from various national and international universities and organizations.
34. The **outreach mission** of CASSA is to engage students from schools and other universities, and the public at large, and to use popular science for the enlightenment and development of society through various outreach events, images, and articles. All outreach events shall be documented in the CASSA outreach log. This mission shall be accomplished through the following **action plans**.
- 34.1. The national outreach program Durbin was coordinated by CASSA under the Letter of Agreement (LOA) and its amendment between IUB and the University of Toronto through 30 April 2026. From 1 May 2026, Durbin is funded by a grant from British Council Bangladesh through Women of the World. Durbin shall always remain an outreach program conducted by volunteers under the supervision of the directors of CASSA. Day-to-day coordination of Durbin shall be the responsibility of the **Durbin Management Team (DMT)**, which shall operate in accordance with the [Outreach Manual \(Appendix F\)](#). Any change in Durbin's external funding or institutional affiliation shall be managed by the DMT in consultation with the Directors of CASSA.
 - 34.2. The Bangladesh Olympiad on Astronomy and Astrophysics (BDOAA) is a national outreach program of CASSA, as established by the affiliation agreement between CASSA and BDOAA. BDOAA is governed by an Executive Committee comprising a president, a general secretary, and a chief advisor. The Executive Committee shall operate in accordance with the [Outreach Manual \(Appendix F\)](#). Any change in BDOAA's affiliation or operational structure shall be managed by the Executive Committee in consultation with the Directors of CASSA.

Appendices

APPENDIX A: PERSONNEL

Directors, Core Members & Associate Members

Name	CASSA Role	Position, Institution
Syed Ashraf Uddin	Director	Associate Professor, Dept. of Physical Sciences, IUB
Khan Muhammad Bin Asad	Director, ED	Assistant Professor, Dept. of Physical Sciences, IUB
Mustafa Habib Chowdhury	Core Member (Founding)	Professor, Dept. of Electrical and Electronic Engineering, IUB
M Arshad Momen	Core Member (Founding)	Professor, Dept. of Physical Sciences, IUB
Syeda Lammim Ahad	Associate Member (Founding)	Postdoctoral Fellow, Waterloo Centre for Astrophysics, Univ. of Waterloo, Canada
Tonima Tasnim Ananna	Associate Member	Assistant Professor, Dept. of Physics & Astronomy, Wayne State University, USA
Shah Mohammad Bahauddin	Associate Member (Founding)	Research Faculty, LASP, Univ. of Colorado Boulder, USA
Tanveer Karim	Associate Member (Founding)	Postdoctoral Fellow, David A. Dunlap Dept. of A&A, Univ. of Toronto, Canada
Lamiya Ashraf Mowla	Associate Member (Founding)	Assistant Professor, Dept. of Physics & Astronomy, Wellesley College, USA
Payaswini Saikia	Associate Member (Founding)	Associate Research Scientist, Dept. of Astronomy & Physics, Yale University, USA
Anowar Jaman Shajib	Associate Member (Founding)	Postdoctoral Fellow, Kavli Institute for Cosmological Physics, Univ. of Chicago, USA
Tabassum Shahriar Tanvir	Associate Member	Postdoctoral Research Associate, Dept. of Physics & Astronomy, Iowa State University, USA

Graduate Members & Affiliates

Name	CASSA Role	Position, Institution
Istiaq Hossain Akib	Graduate Member	Doctoral Student, Observatoire de Paris, France
Md Redyan Ahmed	Graduate Member	Doctoral Student, Sydney Institute for Astronomy, Univ. of Sydney, Australia
Rafia Rokaiya Hossain	Research Affiliate, CSFP	Lecturer, Dept. of Pharmacy, IUB
Shoaib Mirza	Technical Affiliate	Lab Manager, Fab Lab & Dept. of CSE, IUB

Administrative Staff & Research Assistants

Name	CASSA Role	Supervisor
Muhammad Jobair Hasan	Manager (Science)	Executive Director (ED)
Farzana Akter Lima	Project Manager, Durbin	SA Uddin, KMB Asad
Ahmad Al-Imtiaz	Graduate RA	SA Uddin, LA Mowla
Nafis Sadik Nihal	Postbac RA	AJ Shajib
Md Shahadat Hossain Shahal	Postbac RA	KMB Asad
Deba Priyo Guha	Postbac RA	SA Uddin

APPENDIX B: FUNDS

Project Title / Description	Grant / Provider	Year	Amount (BDT)	PI / Supervisor
Identifying astronomical objects in images captured by radio telescopes	ICT Innovation Fund, Govt. of Bangladesh	2020	10,00,000	KMB Asad
Analysing big data from the international LOFAR and SKA telescopes	IUB Sponsored Research Grant (SRG)	2021	10,33,600	KMB Asad
Capacity building for astronomical research and collaboration	IUB SRG	2022	6,00,000	KMB Asad
Durbin – Citizens of Distant Worlds	Dunlap seed grant, University of Toronto	2023	14,00,000	LA Mowla
Analysing the Universe: Data, Interpretation, Theory (AUDIT)	IUB SRG	2023	7,00,000	MA Momen
Construction of CASSA Office and premises	IUB Overall CapEx (P&D)	2024	51,00,000	KMB Asad, MA Momen
Networking infrastructure at CASSA office	IUB Overall CapEx	2025	5,90,000	CITS, IUB
CASSA IT equipment	Vice Chancellor, IUB	2025	7,00,000	KMB Asad
CASSA annual budget, FY 2025–26	IUB	2025	16,00,000	ED
Revenue from CASSA Workshop 2	Participants	2025	1,38,000	KMB Asad
Durbin – Women of the World	British Council Bangladesh	2026	19,59,400	KMB Asad, FA Lima
Total			1,48,21,000	

APPENDIX C: FIXED ASSETS

Asset ID	Description	Cost (BDT)	Source of Fund	Owner	Custodian
F001	CASSA office, AC and furniture (tables, chairs, cabinets)	51,00,000	IUB Overall CapEx	IUB	ED, Manager
F002	Furniture added in 2026 (desk, chairs, cabinet)	90,000	CASSA annual budget	IUB	ED, Manager
C001	Timaeus – high performance computer (HPC)	14,50,000	KMB Asad’s SRG 65%, CASSA 18%, DPS 17%	IUB	KMB Asad
C002	Laptop 1 – Lenovo ThinkPad E14	1,50,000	CASSA annual budget	IUB	Manager
T001	START – Small Transient Array Radio Telescope	6,00,000	DPS 50%, CASSA 40%, Fab Lab 10%	IUB	KMB Asad
T002	Ashvin 1 – optical telescope, 110 mm (Unistellar)	4,50,000	Dunlap/UofT 70%, DPS 30%	UofT	SA Uddin
T003	Ashvin 2 – optical telescope, 110 mm (Unistellar)	4,50,000	Dunlap/UofT 70%, DPS 30%	UofT	SA Uddin
T004	Camera and accessories for 200 mm telescope	4,00,000	Dunlap/UofT	IUB	SA Uddin
T005	Optical telescope, 200 mm	1,50,000	DPS, IUB	IUB	SA Uddin
T006	Optical telescope, 80 mm	50,000	DPS, IUB	IUB	SA Uddin
E001	Sound system	2,00,000	CASSA annual budget	IUB	Manager
E002	Projector and screen	1,40,000	CASSA annual budget	IUB	Manager
E003	Printer	40,000	CASSA annual budget	IUB	Manager
Total		92,70,000			

UofT: University of Toronto, Canada DPS: Department of Physical Sciences, IUB SRG: IUB Sponsored Research Grant Dunlap: Dunlap Institute for Astronomy and Astrophysics, UofT

APPENDIX D: CODE OF CONDUCT

All CASSA members, staff, and student researchers are bound by the professional and ethical standards set out in this Code. Compliance is a condition of membership and participation in any CASSA activity.

D.1 Equity, Diversity, and Inclusion

- CASSA is committed to equity, diversity, and inclusion (EDI) in accordance with the norms of the [American Astronomical Society](#).
- Discrimination on any basis – including gender, religion, ethnicity, nationality, disability, age, or socioeconomic background – is prohibited.
- All members shall use inclusive language and take reasonable steps to ensure accessible participation in CASSA activities.

D.2 Research Integrity

- All research output must reflect honest attribution of contributions; fabrication, falsification, and plagiarism are strictly prohibited.
- Authorship and acknowledgement practices shall follow the norms of the relevant discipline.
- Data, code, and materials shall be managed and retained in accordance with applicable funder and journal policies.

D.3 Respect and Professional Conduct

- All members shall treat colleagues, students, and outreach participants with dignity and fairness.
- Harassment, bullying, intimidation, and language intended to shame or humiliate are prohibited in all CASSA settings, including online and outreach contexts.

D.4 Professional Boundaries

- Romantic or sexual relationships where a power differential exists – including faculty/student, supervisor/RA, and CASSA staff/outreach participant – are prohibited.
- No academic opportunity, HPC access, co-authorship, or CASSA position may be exchanged for personal favours.

D.5 Communication

- Work-related communications shall use official CASSA or IUB channels; unmonitored personal channels (e.g. personal email or messaging apps) shall not be used for CASSA business.

D.6 Physical Conduct and Environment

- Dress and conduct shall be appropriate to the setting and to the cultural context of Bangladesh.
- Alcohol, illegal drugs, and smoking are prohibited on CASSA premises and at all CASSA events.

D.7 Conflicts of Interest

- All conflicts of interest shall be declared in accordance with clause 9 of the Constitution.

D.8 Accountability

- Violations of this Code trigger the two-step removal process set out in clause 20 of the Constitution.
- Concerns involving children or vulnerable adults shall be escalated immediately per the [Safeguarding Policy](#) (Appendix E).

APPENDIX E: SAFEGUARDING POLICY

CASSA maintains a **zero-tolerance to inaction** approach regarding abuse and Sexual Exploitation, Abuse, and Harassment (SEAH) in all its activities. This policy applies to all personnel, and is especially operative in CASSA activities involving minors: BDOAA, Durbin, school visits, and rooftop astronomy nights.

E.1 Definitions

- *Child*: any person under 18 (UNCRC; Bangladesh Children Act 2013).
- *Adult at risk*: an adult unable to protect themselves due to power dynamics, dependency, or vulnerability.
- *Abuse*: physical or emotional ill-treatment, sexual abuse, neglect, or exploitation in a relationship of trust or power.
- *SEAH*: Sexual Exploitation, Abuse, and Harassment – any actual or attempted abuse of vulnerability or differential power for sexual purposes.

E.2 Legal Alignment

This policy aligns with IUB institutional policy, High Court of Bangladesh directives on sexual harassment in educational institutions, the *Children Act 2013*, and the *Prevention of Women and Children Repression Act 2000*.

E.3 Safeguarding Roles

- *Central Safeguarding Focal Point (CSFP)*: a designated Core Member or Affiliate who oversees policy implementation across all CASSA operations, conducts annual safeguarding risk assessments, and liaises with IUB's Gender & Sexual Harassment Committee and Proctorial Committee.
- *Project Safeguarding Focal Point (PSFP)*: designated per programme (Durbin, BDOAA, etc.); serves as the first point of contact for programme-specific concerns and reports directly to the CSFP.

E.4 Prevention

- A minimum of two CASSA representatives must be present at all night events and rooftop observational activities.
- Personnel must never be alone with a child in a closed or unlit space; all BDOAA and Durbin activities must be conducted in pairs or groups.
- Photography or video of minors requires prior written consent from a parent or guardian and the child.
- All communication with minors must use official CASSA/IUB channels; personal social media and private messaging are prohibited.
- All personnel working directly with children undergo vetting comprising academic reference checks and a boundary-awareness interview.

E.5 Reporting

- Concerns must be reported immediately to the PSFP or CSFP; if the complaint involves CASSA leadership, report directly to the IUB committees listed below.
- IUB Gender & Sexual Harassment Committee: safespace@iub.edu.bd.
- IUB Proctorial Committee: proctor@iub.edu.bd.
- A survivor-centred approach applies: the survivor's safety and wishes are the primary consideration; information is shared on a strict need-to-know basis.
- The CSFP notifies IUB within 24 hours for severe cases; CASSA defers to IUB disciplinary bodies and Bangladeshi law for investigation.

E.6 Consequences

- Immediate suspension from all CASSA activities pending investigation.
- Full cooperation with IUB authorities and, where applicable, law enforcement.
- Legal prosecution under the *Children Act 2013* and the *Prevention of Women and Children Repression Act 2000* for cases involving minors.

E.7 Review

This policy is reviewed annually by the Directors and Core Members.

APPENDIX F: OUTREACH MANUAL

CASSA operates two national outreach programmes: **Durbin** and the **Bangladesh Olympiad on Astronomy and Astrophysics (BDOAA)**. Both are supervised by the Directors of CASSA and governed by their respective teams in accordance with this manual.

F.1 Durbin

Durbin is a volunteer-based astronomy outreach initiative of CASSA, conducted by teams of volunteers under the supervision of CASSA Directors. Day-to-day coordination is the responsibility of the **Durbin Management Team (DMT)**, comprising:

- **LA Mowla** – scientific supervision and programme oversight
- **SA Uddin** – scientific supervision and programme oversight
- **SL Ahad** – scientific supervision and programme oversight
- **KMB Asad** – evaluates team proposals and determines final outcomes
- **MJ Hasan** – oversees funds and ensures punctual disbursement
- **FA Lima** – plans activities and partnerships, coordinates volunteers, tracks expenditure, and reports to funders
- **A Al-Imtiaz** – assesses scientific content and coordinates publication across platforms
- **F Ferdous** – manages IR/VR content and school outreach activities
- **AZ Purnota** – maintains Durbin web presence and coordinates logistics for public events
- **MSH Shahal** – manages telescope operations and the astrophotography pipeline

Financial guidelines:

- All Durbin funds are held in IUB's official bank account; the Manager (Science) oversees disbursements under the Director's authorisation.
- Advances are requested phase by phase; a new advance may be requested only after all receipts from the preceding advance are submitted to IUB Finance.
- DMT members may claim reimbursement for authorised project-related travel, meals, and minor expenses against original receipts. Volunteers may claim reimbursement for pre-authorised activities via CASSA reimbursement slips.
- External partner organisations receive funds through Letters of Agreement with CASSA; per-diems and allowances are paid via CASSA slips, and other expenses require submission of original receipts.

Volunteer guidelines:

- Volunteers are assigned to fixed teams for the duration of a programme cycle; transfers between teams are not permitted once constituted.
- Core activities include developing educational materials (text, imagery, audiovisual, and immersive content), operating telescopes during outreach events, and conducting astrophotographic observations.
- CASSA covers all costs for pre-authorised activities. Volunteers who complete the programme cycle successfully receive a Letter of Experience; winning teams at programme exhibitions receive cash prizes.

F.2 BDOAA

BDOAA is a national educational outreach programme of CASSA, endorsed by a certification agreement between CASSA and BDOAA. The BDOAA office is located at the CASSA Office, IUB. National rounds have been funded by the Department of Physical Sciences (DPS), IUB, since 2020.

Governance. BDOAA is governed by three committees:

- **Executive Committee (EC):** SA Uddin (President), KMB Asad (General Secretary), MA Momen (Chief Advisor). All EC members are CASSA faculty. The CASSA Outreach Ambassador maintains regular communication between the EC and the two committees below.

- **Academic Committee (AC):** Undergraduate and graduate students and young graduate professionals; responsible for academic content and evaluation.
- **Organizing Committee (OC):** Undergraduate and graduate students; responsible for event logistics.

Activities:

- **Olympiad:** Regional rounds are held across Bangladesh; top performers advance to the national round; national K-12 winners represent Bangladesh at the International Olympiad on Astronomy and Astrophysics (IOAA) and IOAA Junior. CASSA is responsible for organising and funding the BDOAA team's participation at IOAA each year.
- **K-12 Workshop:** Designed for school students and conducted by university students.
- **K-12 Conference:** Talks and poster sessions by and for school students.

APPENDIX G: OBSERVATORY MANUAL

CASSA operates two observatories serving research, teaching, and outreach purposes, governed by the standards and procedures set out in this manual.

G.1 IUB CORE – Campus Observatory for Research and Education

IUB CORE is the educational observatory located on the rooftop of the IUB main academic building (Bashundhara R/A, Dhaka), forming part of the CASSA premises. It serves teaching, training, and smaller research programmes. Instruments, in descending order of aperture:

- **Main optical telescope** – 11–14 inch aperture with autotracking dome; currently under planning and development. It will be the primary research instrument of IUB CORE, under **OTA Division** custodianship (SA Uddin).
- **START** (Small Transient Array Radio Telescope, T001) – radio instrument under **RSS Division** custodianship (KMB Asad).
- **Portable optical telescopes:** Ashvin 1 and Ashvin 2 – 110 mm (Unistellar, T002/T003); 200 mm with camera (T005/T004); 80 mm (T006) – under **OTA Division** custodianship (SA Uddin).
- Further instruments may be added as CASSA's programme develops.

IUB CORE is managed jointly by both divisions. Educational use is open to all CASSA members; scheduling for outreach events is coordinated by the DMT (Durbin) or BDOAA EC as relevant.

G.2 IUB Observatory

The **IUB Observatory** is located at the IUB Kaliakair campus and serves as a mid-research-grade optical facility. Its primary instrument is a **0.5 m optical telescope** housed in an autotracking dome. The observatory is operated exclusively by the **OTA Division**. **SA Uddin** holds full executive control of all IUB Observatory operations, including scheduling, staffing, and maintenance, and is supported by an Observatory Engineer and other team members. Observing requests are submitted to SA Uddin with a brief scientific justification; time allocation follows OTA Division priorities.

G.3 Environmental Closure Thresholds

All autotracking domes must be capable of automated closure on sensor threshold exceedance; internet or power loss triggers immediate closure.

- Wind speed sustained >50 km/h: close dome.
- Single gust >60 km/h: close immediately.
- Relative humidity $>80\%$: close dome; reopen only after a 30-minute hold below 70%.
- Dewpoint within 3 °C of ambient temperature: close dome.
- Any detection of rain, mist, or hail: close immediately; 30-minute minimum hold before reopening.
- Lightning within 30 km: close immediately and disconnect power to mount and instruments.

G.4 Safety

- A minimum of two CASSA personnel must be present during any night observing session at IUB CORE (rooftop safety) and at IUB Observatory.
- Access to the IUB CORE rooftop is key-controlled; observers sign in and out; no unsupervised access during night operations.
- Three E-stop buttons are distributed at: the mount, inside the dome, and at the hatch/entry point.
- All personnel must complete a safety induction before first rooftop access.

G.5 Observer Certification

- All observers must complete a minimum of two supervised sessions on the specific telescope before independent access.
- Certification is instrument-specific and recorded by the Observatory Director.
- Student observers (RAs, RIs) must always be accompanied by a certified CASSA member.
- Visitors and outreach participants never operate the telescope; a certified operator manages the instrument at all times during public sessions.

G.6 Scheduling and Time Allocation

- *Primary use:* CASSA research programmes, ranked by the Observatory Director.
- *IUB CORE secondary uses:* teaching and student training (prioritised for RAs and student researchers), and CASSA outreach nights.
- *IUB Observatory requests:* submitted to SA Uddin with a brief scientific justification; allocation follows OTA Division priorities.
- *IUB CORE outreach scheduling:* coordinated by the DMT (Durbin) or BDOAA EC as relevant.

G.7 Data Management

- All raw observations are saved in **FITS format** with complete headers.
- Calibration frames (bias, dark, flat) are acquired each night and archived alongside raw science frames.
- **3-2-1 backup rule:** one local copy on the observatory server; one on CASSA HPC (Timaeus); one off-site (cloud or IUB IT).
- Raw data is backed up within 24 hours of acquisition.
- *Proprietary period:* 12 months from observation date; data may thereafter be shared upon request, subject to approval by the Observatory Director.
- All publications using CASSA observatory data must acknowledge the observatory and cite the relevant facility.
- Raw data is institutional property of IUB/CASSA; the PI holds exclusive analysis rights during the proprietary period.

G.8 Maintenance

All maintenance is logged in the observatory logbook by the Observatory Engineer.

- *Before each session:* verify dome movement, inspect mount, check collimation, and confirm all sensors are active.
- *Monthly:* inspect optical surfaces with blower; check mount lubrication; test dome auto-close on simulated threshold trigger.
- *Annually:* perform full optical cleaning (distilled water and mild soap, rinse, air dry – no rubbing); lubricate mount axes; inspect dome drive mechanically.
- Mirror reflectivity is inspected annually; re-aluminization is carried out when throughput drops below an acceptable threshold (typically every 5–10 years).

APPENDIX H: HPC MANUAL

This manual governs the use, administration, and data management of CASSA's high-performance computing infrastructure. It currently applies to **Timaeus** (asset C001), CASSA's HPC server, and is designed to scale without revision to any future expansion — additional nodes, a multi-server cluster, or a supercomputing facility.

H.1 Governance

- *Custodian*: A CASSA Director with active HPC coding and administration experience; currently **KMB Asad**. The Custodian holds root access, sets system-level policy, and approves major hardware or software changes.
- *Day-to-day operations*: The **Manager (Science)** handles user account management, storage allocations, job queue monitoring, routine upgrades, and liaison with IUB IT.
- *Division access*: All CASSA divisions have equal access to the HPC; no division-specific partition is enforced by default.
- *Resource conflict resolution*: When competing projects contend for limited resources, priority is given first to the project with the largest active funding, or, where funding is comparable, to the project with the most significant expected publication. Conflicts are resolved by the Directors and Core Members via Core Meeting or email consultation.

H.2 User Accounts and Security

- Accounts are created by the Manager upon written request from a Director or supervising Core Member; each user must be an active CASSA member, RA, or approved collaborator.
- Login is by **SSH key authentication** only; password-based SSH is disabled. Sharing credentials is prohibited and grounds for immediate account suspension.
- Accounts are deactivated within 30 days of a user's departure from CASSA. Data in home and project directories must be transferred to the supervising PI's project space before deactivation.
- Compromised credentials must be reported to the Manager within 48 hours.

H.3 Job Scheduling and Allocation

- Jobs are submitted through a **SLURM**-based scheduler. This standard applies to Timaeus and to all future expansions; partitions and QOS limits are defined in `slurm.conf` and updated by the Manager as hardware scales.
- **Fair-share scheduling** is used: groups that have recently consumed more resources receive lower priority; under-used allocation accumulates priority for future jobs.
- Default maximum wall-clock time per job: **72 hours**. Longer runtimes require prior approval from the Custodian.
- Interactive use on compute nodes is limited to testing and debugging; sustained interactive jobs must go through the scheduler.

H.4 Storage

- *Home* (`$HOME`): per-user, quota-limited, backed up daily. For code, scripts, and configuration — not large datasets.
- *Project space* (`/project`): per-PI or per-project, backed up, not auto-purged. Primary location for research data and results.
- *Scratch* (`/scratch`): high-speed temporary storage, **not backed up**. Files not accessed or modified within **60 days** are deleted automatically without warning. Raw data and results must be moved to project space promptly.

H.5 Acceptable Use

The HPC is a shared research resource funded by IUB. Strictly prohibited:

- Cryptocurrency mining, commercial work, or any activity outside CASSA research, teaching, or training.

- Credential sharing or running jobs under another user's account.
- Network scanning, penetration testing, or any activity that may compromise system or network security.
- Storing personal or non-CASSA data in project space.

H.6 Data, Maintenance, and Publications

- All data generated on CASSA HPC infrastructure is institutional property of IUB/CASSA; the PI holds exclusive analysis rights for 12 months, consistent with the IP clause of the Constitution.
- Scheduled maintenance is announced at least **7 days in advance** via CASSA email; three maintenance windows per year are recommended. Emergency shutdowns are communicated through the same channel with maximum available notice.
- All publications using CASSA HPC resources must include the acknowledgement: *"This work used the CASSA HPC facility (Timaeus) at Independent University, Bangladesh."* Future systems shall be acknowledged by their designated name.