

INTERNATIONAL CONFERENCE ON APPROPRIATE TECHNOLOGY for HEALTHCARE in LMICs (ICATH-LMIC)

July 5-6, 2026



Venue: Dhaka University Senate Building

5 July: Main Auditorium

6 July: Seminar Hall

SCHEDULE of EVENTS

ORGANISERS



Department of Biomedical Physics & Technology (BMPT), University of Dhaka. <https://bmpt.du.ac.bd/>

Department of Biomedical Engineering, Bangladesh University of Science & Technology (BUET)

Department of Clinical Oncology, Bangladesh Medical University. <https://oncology.bmu.ac.bd/>

BIBEAT Ltd. (non-profit R&D based manufacturer) <https://bibeat.com/>

Relevant Science & Technology Society, Bangladesh (RSTS). <https://relevantscience.org/>

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1st Day Programme, July 5

Registration: 9:00 am to 11:00 am

CONFERENCE

INAUGURAL SESSION

9:00 am to 10:50 am: (110 mins)

1. **Welcome speech and Introduction of guests:** Professor Md. Adnan Kiber, Conference Co-Chair (5 mins)
2. **Keynote Speech: *Bangladesh's stride on the indigenous development and dissemination of Appropriate technology in Healthcare, challenges and way outs***, Prof Khondkar Siddique-e Rabbani, Conference Chair (25 mins)
3. **Keynote Speech: *Empowering Biomedical Engineering Entrepreneurs: An Integrated Approach to Need-Based Innovation at BUET***: Prof Taufiq Hasan, Conference Co-Chair (10 mins)
4. **Speech by Special Guests:** (45 mins)
 - i. State Minister, Health: Mr. M. A. Muhit
 - ii. National Professor A K Azad Khan, President, Bangladesh Diabetic Samity (BADAS)
 - iii. Secretary, Science & Technology: Mr. Md Anwar Hossain
 - iv. Vice Chancellor, Dhaka University, Professor A B M Obaidul Islam
 - v. Vice Chancellor, BUET, Prof. Eqramul Hoque
 - vi. Vice Chancellor, Bangladesh Medical university, Professor Dr. F. M. Siddiqui
 - vii. WHO Representative to Bangladesh, Dr Ahmed Jamsheed Mohamed:
 - viii. Professor B H Brown, Professor Emeritus, Sheffield University, UK (Recorded Video)
 - ix. Professor Abdul Basit, Secretary General, Diabetic Association of Pakistan (Recorded Video)
5. **Speech by Chief Guest:** Honourable Minister of Health and Family Welfare, Mr. Sardar Md. Sakhawat Husain (***Will declare opening of the Conference***) (15 mins)

6. **Speech by Chair and Announcement of next Conference in end 2027:** Professor Syed Akram Hussain (5 mins)
7. **Vote of Thanks:** Dr. Talha Nahyan (5 mins)

Light snacks: 10:50 am to 11:15 am (25 mins)

PLENARY SESSIONS

PS-1: 11:15 pm to 1:00 pm (105 mins)

Appropriate technology for Ensuring comprehensive health of common people

1. **Sayeba's Method to stop postpartum bleeding: history, technology and dissemination:** Prof Sayeba Akhtar, Chairman, Bangladesh Medical Research Council and Founder, MAMM's Institute of Fistula and Women's Health (20 mins)
2. **Importance of communication in dissemination of technology: Experience from BRAC's Oral Rehydration Therapy Programme:** Prof Ahmed Mushtaque Raza Chowdhury, Professor of Clinical Population and Family Health, Columbia University Mailman School of Public Health and Adviser, BRAC University (20 mins)
3. **Optimizing Resource-Appropriate Neurodevelopmental Technologies for Children,** Prof. Selina Husna Banu, Professor of Pediatric Neurology, and the Founder and Head of the Department of Neurology and the Child Development Center at Dr. M R Khan Shishu Hospital (20 mins)
4. **Dry Eye Care: Advancing Through Clinical Innovation,** Prof Dr Muhammad Tarik Arafat, Department of Biomedical Engineering, BUET (20 mins)
5. **Lifestyle technology for prevention of avoidable health problems and Advanced Telemedicine Technology- experience of dissemination among rural people:** Prof K Siddique-e Rabbani, Founding Chairperson Department of Biomedical Physics & Technology (2008-15) and Honorary Professor (Post Retirement), University of Dhaka, Founding President, BIBEAT Ltd. (25 mins)

Lunch Break: 1:00 pm to 2:00 pm (60 mins)

PS-2: 2:00 pm to 3:10 pm (70 mins)

Dynamic Foot Pressure Scanning and Custom Made shoes/insoles for prevention of Diabetic Amputation

1. **Professor Abdul Basit**, Secretary General, Diabetic Association of Pakistan and President, Diabetes in Asia Study Group (DASG) (8 mins) (Recorded Video)
2. **Use of a local Dynamic Pedograph for Diabetic Footcare at Bangladesh Diabetic Wound and Foot Care Limited (BDW&FCL)**, **Dr. Md. Mahbub Alam**, Diabetic Foot Surgeon, Podiatrist & Wound Care Specialist, BDW&FCL, Dhaka (15 mins)
3. **Technology and History of development and distribution of Pedograph made in Bangladesh and necessity of foot pressure screening scans**, **Prof K Siddique-e Rabbani**, Founding Chairperson Department of Biomedical Physics & Technology (2008-15) and Honorary Professor (Post Retirement), University of Dhaka, Founding President, BIBEAT Ltd., Bangladesh. (22 mins)
4. **Techniques for making custom made insoles and shoes based on foot scan**, **Dr. Imran Shoib**, Managing Director STEP Rehabilitation Center, Dhaka. Former Head of Prosthetics and Orthotics, CRP, Savar. (15 mins)
5. **Initiation of Foot Pressure Screening Scan by RSTS**, **M A Yousuf**, Coordinator, Foot Scanning Service of Relevant Science and Technology Society, Bangladesh. (10 mins)

Tea break: 3:10pm to 3:30pm (20 mins)

PS-3: 3:30 pm to 5:00 pm (90 mins)
(6:30am in Brazil, 5:30am in USA)

Electrical Bio-Impedance & Artificial Intelligence

1. **Focused Impedance Method (FIM) and applications**: **Professor Md. Abdul Kadir**, Department of Biomedical Physics & Technology, University of Dhaka, Bangladesh. (25 mins)
2. **Mapping of Lungs using Focused Impedance Method (FIM)**: **Dr. Humayra Ferdous**, Associate Professor and Head, Department of Natural Science [Physics], American International University- Bangladesh. (10 mins)
3. **FIM and 6 Electrode TPIM with increased Depth Sensitivity**: **Dr. Mahjabin Mubarak**, Associate Professor and Coordinator, Department of Electrical and Electronic Engineering (EEE), Southeast University, Bangladesh. (10 mins)

4. **Electrical Bioimpedance – an appropriate technology for LMICs, Experience from Brazil: Prof Pedro Bertemes-Filho**, Professor of Electrical Engineering at the Santa Catarina State University (UDESC), Brazil (Recorded Video). (20 mins)
5. **Artificial Intelligence in LMIC healthcare: Prof Khondkar A Mamun**, Vice President of the School of AI, Innovation & Entrepreneurship, Washington University of Science and Technology (WUST), USA (online) (25 mins)

END OF 1st DAY

2nd Day Programme, July 6

PS-4: 9:00 am to 10:00 am (60 mins)

Appropriate Technology in Oncology and Palliative Care

1. **Prevalence of cancer among general population in Bangladesh and Cost effective remedies: Prof Syed Akram Hussain**, Chairman, Department of Clinical Oncology, Bangladesh Medical University (BMU). (25 mins)
2. **Low cost technologies for cancer prevention among farmers and remedies for bedsores: Prof K Siddique-e Rabbani**, Founding Chairperson (2008-2015), and Honorary Professor (Post Retirement), Department of Biomedical Physics & Technology University of Dhaka, and Founding President, BIBEAT Ltd., Bangladesh. (15 mins)
3. **Palliative care for underprivileged population in Bangladesh: Dr. Sunjida Shahriah**, Member Secretary, Palliative Care Society of Bangladesh (PCSB). (20 mins)

PS-5: 10:00 am to 10:40 am (40 mins)

Infection Prevention using locally innovated technologies

1. **Locally developed devices for infection prevention particularly targeting Hospital Acquired Infection: Prof K Siddique-e Rabbani**, Founding Chairperson (2008-2015), and

Honorary Professor (Post Retirement), Department of Biomedical Physics & Technology University of Dhaka, and Founding President, BIBEAT Ltd., Bangladesh (25 mins)

2. **Importance of locally developed devices for infection control in hospitals: Dr. Ariful Basher**, Senior Consultant, Infectious Diseases Hospital, Mohakhali, Dhaka, Bangladesh (15 mins)

Tea Break, 11:10 am to 11:30am (20 mins)

PS-6: 11:30 pm to 1:30 pm (120 mins)

Appropriate Technologies for LMICs

1. **Iontophoresis for Excessive sweating (Hyperhidrosis) - success of an indigenous effort in Bangladesh: Dr. Reza bin Zaid**, Former Dermatology Consultant, BIRDEM, Chief Consultant and Founder, Skin Square, Dhaka, Bangladesh (20 mins).
2. **Pulsed Electro Magnetic Field (PEMF), a new technology with high potential for healthcare at low cost: Prof K Siddique-e Rabbani**, Founding Chairperson (2008-2015), and Honorary Professor (Post Retirement), Department of Biomedical Physics & Technology University of Dhaka, and Founding President, BIBEAT Ltd., Bangladesh (30 mins)
3. **Biomedical Engineering Educational Kits for Universities made locally: Engr Kamrul Hussain**, CEO, BIBEAT Ltd., Bangladesh. (20 mins)
4. **Efforts, challenges and Outcomes of Appropriate Healthcare Technology in Africa: Dr. Yousoufa Mohammadou**, Senior Lecturer, University of Ngaoundéré, Cameroon; Founder and Chief Executive Officer, Djam Technologies, Cameroon. (25 mins) (online or recorded video)
5. **Artificial Intelligence in Healthcare: An LMIC Perspective: Prof Taufiq Hasan**, Chairman, Department of Biomedical Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka. (25 mins)

1:30pm to 2:30 pm: Lunch Break (60 mins)

ROUND TABLE DISCUSSION

2:30 pm to 4:30 pm (120 mins)

Equalisation of Global Access to Healthcare Technology

Moderator: Prof K Siddique-e Rabbani (135 mins)

Main theme: A huge global disparity exists in the access to essential Medical Devices, particularly, Electro-Medical Equipment. This session aims to get an insight into the reasons for this global failure, pointing out possible obstacles and in suggesting remedies. Regulatory Issues for Electro-Medical Devices and Entrepreneurship in LMICs would be discussed. Possible way outs through small scale production and distribution by technology innovators themselves in LMICs, at least in small scale, would be discussed. To further these objectives, establishing the following organisations would be discussed, suggesting the aims, objectives and modes of operation.

- a. **Global Institute of Appropriate Technology for Mankind (a network of institutes in different countries, starting from Bangladesh):** to carry out R&D on appropriate technology for enhancement of the quality of life (including healthcare) targeting dissemination among people through campaigns, through semi-commercial manufacture and distribution, training of capable persons from LMICs in R&D based manufacture and distribution of the products through Entrepreneurship– with the eventual objective of empowering the people globally.
- b. **Global Alliance for Equalising Access to Healthcare Technology (GAEAHT):** an alliance of people all over the world who feels that we need to find a way out to the global failure mentioned above. Also to discuss the possible role of GAEAHT in putting locally developed healthcare technology to market in LMICs, at least in small scale.

Discussants (in the process of being invited):

Local: Prof K S Rabbani, Prof Syed Akram Hussain, Prof A M Raza Chowdhury, Prof Sayeba Akhtar, Professor Selina Husna Banu, Prof Adnan Kiber, Prof M A Kadir, Prof Taufiq Hassan, Dr. Reza bin Zaid, Dr. Humayra Ferdous, Dr. Zaid bin Mahbub, Dr. Talha Nahyan, Dr. Ariful Bashar, Dr. Sunjida Shahriar, Dr. Md. Rayhan Uddin, Mr. M A Yousuf, Engr. Kamrul Hossain + more.

Foreign (online): Prof B H Brown, Prof A Basit, Dr. Cari Borrás, Prof Adrian Wilson, Dr. Yadin David, Engr. Adriana Velazquez Berumen, Dr. Tom Judd, Prof. Pedro Bertemes-Filho, Prof Franco Simini,

Dr. Ernst Groningen, Dr. Carla Puglia, Engr. Rossana Rivas Tarazona, Dr. Yousoufa Mohammadou, Dr. Jim Black, Ms. Philippa Makobore, Prof K A Mamun, Dr. Abdullah Al Amin, Dr. M Obaidur Rahman, Dr. Mainuddin Hasan + more.

**Summarising the outcomes of the RTD, suggesting way forward and
Declaration of the End of the
CONFERENCE and
Announcement for next Conference in end-2027
By Prof Khondkar Siddique-e Rabbani, Conference Chair (10 mins)**

Refreshment 4:40 pm to 5:00 pm (20 mins)
