

Simulation Reimagined: AI & BEYOND

September 16 & 17, 2026
AKU-CIME, Karachi & Nairobi

Programme Booklet

aku.edu/simpact26



SIMPACT 2026

Theme: Simulation Reimagined: AI & Beyond

SIMPACT 2026 brings together healthcare simulation leaders, educators, clinicians, researchers, innovators, technology providers, and industry partners from across East Africa, Pakistan, and beyond. This year's theme ‘Simulation Reimagined: AI & Beyond’ explores how artificial intelligence, immersive technologies, analytics, XR and next generation learning systems are reshaping healthcare education and patient safety.

Pre-Conference Workshops

CIME Karachi

Sept 04, 2026	Basics of Pediatric Critical Care
Sept 07, 2026	Basics of Crown Preparation
Sept 08, 2026	AI in Medical Education
Sept 08, 2026	Tox Simulation Summit
Sept 09, 2026	AI in Healthcare: Innovation & Enablement
Sept 09, 2026	Research Reinvented: The Power of AI
Sept 10, 2026	Simulation Reimagined: AI-powered Design, Delivery, Debriefing
Sept 14, 2026	From Intelligent Prompts to Better Patient Outcomes: Learning through AI-Driven Simulation
Sept 14, 2026	Management of Common Dermatological Disorders
Sept 16, 2026	From Injury to Recovery: Sports & Soft Tissue Injury Rehabilitation

Inter-University Medical Simulation Olympiad | SPIE IMPULSE

September 5, 2026

IMPULSE 2026, led by student-led AKU society SPIE - Society for Promoting Innovation in Education, is a first-of-its-kind, national healthcare simulation competition that brings together undergraduate medical students from across Pakistan to apply clinical knowledge in realistic, team-based healthcare scenarios.

One team from each participating university will consist of five MBBS students from Years 3 to 5. Teams rotate through simulation stations recreating real clinical scenarios by assessing patients, forming management plans, performing procedures, and working against the clock.

PARTICIPATING UNIVERSITIES

- Karachi Metropolitan University
- Liaquat University of Medical and Health Sciences, Jamshoro
- Shifa College of Medicine
- United Medical & Dental College, Karachi
- Chandka Medical College, SMBBMU, Larkana.
- Fazaia Ruth Pfau Medical College, Karachi
- Bahria University Health Sciences Campus, Karachi
- Baqai Medical University
- Ziauddin University
- Jinnah Sindh Medical University



Day One | SIMPACT Karachi

September 16, 2026

Timings	Activity	Venue
9:00 am - 2:00 pm	Workshop From Injury to Recovery: Sports & Soft Tissue Injury Rehabilitation	Multipurpose Hall
10:00 am - 5:00 pm	SIMVENTION Innovation Showcase: Jury & Exhibit	Open Learning Space
11:00 am - 12:00 pm	Abstract Presentations	PBL Rooms 8 to 11
2:00 pm to 3:00 pm	Abstract Presentations	PBL Rooms 8 to 11



SIMVENTION - Innovation Showcase

September 16 & 17, 2026

Projects Shortlisted for Display:

HEALTHCARE EDUCATION & SIMULATION

- **DentSim AI** – Virtual patient simulator for clinical reasoning
- **MedAvatar AI** – Urdu-English real-time talking avatar for training
- **Pharmulation** – Simulation-based pharmacy education

WOMEN & CHILD HEALTH

- **Umeeda** – AI-driven, culturally sensitive chatbot for adolescent sexual & reproductive health
- **Ranchhor PediCare VR** – Virtual reality for pediatric care
- **Antenatal Care Nutritional Risk Digital Dashboard** – Identify and monitor risk

DIGITAL HEALTH & CLINICAL AI

- **AuraMD** – Ambient documentation and clinical decision support
- **MedScript** – Digital prescribing, medication safety and patient records
- **Aafiya** – Telemedicine connectivity for patients and healthcare professionals
- **NeuroCare** – AI-powered decision support for diabetes care

PULMONOLOGY

- **Tuberculosis Screening with Attention-Enhanced AI Pipeline** – AI-assisted screening
- **Personalized Medicine for Lung Cancer** – Tailored treatment support
- **BronchoSim** – Simulation for bronchoscopy training

NEUROLOGY & NEURO-IMAGING

- **NeuroVision** – AI for neuro-imaging analysis
- **NeuroScan AI** – Automated brain scan interpretation
- **AI-Based Image Quality Enhancement in Low-Dose CT-Brain** – Improve image clarity
- **SAAD** – Brain MRI anomaly detection and interpretation

HEALTHCARE OPERATIONS

- **MED-EDGE** – Air-gapped simulation station & diagnostic triage
- **MDT Scribe** – AI-powered platform for multidisciplinary meetings
- **SANA Sign** – Doctor-patient communication system in Urdu Sign Language

PHYSIOTHERAPY & REHABILITATION

- **Dynamic Facilitation Splint** – Practical skills training in physiotherapy

Main Conference | SIMPACT Karachi

September 17, 2026

Timings	Activity
8:30 am - 9:00 am	Registration
9:10 am to 9:20 am	Welcome Remarks
9:20 am to 9:30 am	Tilawat & National Anthem
9:30 am to 10:30 am	Keynote Address: Professor Atta-Ur-Rahman, FRS, HI, SI, NI, TI; Professor Emeritus, University of Karachi; Former Federal Minister for Science & Technology; Former Chairman, HEC Pakistan
10:30 am to 11:00 am	Refreshments & Networking
11:00 am to 11:10 am	Joint Opening: Karachi & Nairobi
11:10 am to 11:15 am	Video Simulation Reimagined: AI & Beyond
11:15 am to 11:30 am	Chief Guest's Address
11:30 am to 12:15 pm	Keynote Address: Professor Thomas Thesen, PhD, Director, AI & Digital Health Curriculum, Giesel School of Medicine, Dartmouth.
12:15 pm to 1:30 pm	Lunch
1:30 pm to 3:00 pm	Panel Discussion (Global): AI and Beyond - Current Challenges & Future Direction in Healthcare
3:00 pm to 4:00 pm	Panel Discussion (Pakistan): The Journey Towards the Pakistan Society for Healthcare Simulation (PSHS)
4:00 pm to 4:30 pm	Awards & Recognitions
4:30 pm to 5:00 pm	Closing Ceremony: Karachi & Nairobi
5:00 pm to 5:15 pm	Partner Recognition & Vote of Thanks
5:15 pm to 5:30 pm	Networking, Photos, & High-tea

KEYNOTE SPEAKER



Professor Atta-Ur Rahman

Professor Emeritus, University of Karachi; Fellow of the Royal Society (UK); Nishan-i-Imtiaz; Hilal-i-Imtiaz; Sitara-i-Imtiaz; Tamgha-i-Imtiaz. Former Federal Minister for Science & Technology, Government of Pakistan; Former Chairman, Higher Education Commission (HEC), Pakistan

Professor Atta-ur-Rahman is one of Pakistan's most distinguished scientists, internationally renowned for his contributions to organic chemistry, higher education, and scientific research. He earned his Ph.D. in Organic Chemistry from King's College, University of Cambridge, in 1968 and was awarded Sc.D. from Cambridge University in 1987. He has since played a transformative role in advancing science and innovation in Pakistan.

He served as Federal Minister for Science and Technology (2000–2002) and later as Chairman of the Higher Education Commission (2002–2008), where he led landmark reforms that significantly strengthened Pakistan's higher education and research landscape.

A prolific researcher, Professor Atta-ur-Rahman has authored or edited more than 1,600 international scientific publications, including numerous books and patents in the field of natural product chemistry. His outstanding contributions have earned him global recognition, including election as a Fellow of the Royal Society (FRS), one of the world's highest scientific honours, and Pakistan's highest civil award, the Nishan-i-Imtiaz.

Professor Atta-ur-Rahman continues to inspire generations of scientists, educators, and innovators through his leadership, research, and unwavering commitment to scientific excellence.

KEYNOTE SPEAKER



Professor Thomas Thesen

Neuroscientist & Medical Educator | Cognitive Neuroscientist, Brain and Mind Institute (BMI), the Aga Khan University. Professor, Medical Education & Computer Science; Director, AI & Digital Health Curriculum MD Program; Giesel School of Medicine, Dartmouth, USA.

Dr Thomas Thesen, PhD, is a neuroscientist and medical educator. He obtained his PhD in cognitive neuroscience from Oxford University and further trained in brain imaging at the University of California at San Diego during his postdoctoral fellowship. His research, focusing on cognitive neuroscience, medical education, digital health, epilepsy, and global health, has received support from the National Institutes of Health, National Science Foundation, and various philanthropic organizations.

Dr Thesen is a Professor of Medical Education, and Director of the AI & Digital Health Curriculum at the Geisel School of Medicine at Dartmouth in the US, where he directs the Neuroscience & Neurology and Medical Learning Science courses in the MD program. Dr Thesen has published over 80 peer-reviewed scientific articles that have been cited over 6000 times. He is an elected Fellow of the Royal Society of Biology and during his career he has received several scientific and education awards.

CHIEF GUEST



Dr Dabeer Ahmed Khan

**Special Assistant to the Minister for Health & Population Welfare,
Government of Sindh, Pakistan**

Dr. Dabeer Ahmed Khan is a seasoned public servant with nearly 17 years of experience spanning public administration, healthcare development and governance. He has held senior positions across the Government of Sindh, including Additional Secretary Health Development, Special Secretary Health, Secretary General Administration and Director General Protocol.

Throughout his career, he has played a key role in advancing major healthcare initiatives in partnership with international development agencies, including USAID, JICA and the World Bank, as well as partners from Japan and Korea. His contributions include major hospital and health infrastructure projects across Sukkur, Jamshoro, Karachi and Jacobabad, alongside leadership of Sindh's Nutrition Support Programme for vulnerable communities.

During the COVID-19 pandemic, Dr. Khan represented Sindh at the National Command and Operation Centre (NCOC), helping coordinate vaccines, policies and communication between provincial and federal teams. He currently serves as Special Assistant to the Minister for Health & Population Welfare, with a continued focus on strengthening health systems, institutional coordination and effective delivery of healthcare services across Sindh.

PANEL DISCUSSION - *Hybrid*

Topic: AI and Beyond - Current Challenges & Future Direction in Healthcare

PANELISTS



Dr Ralf Krage

Dr Ralf Krage is Associate Professor of Anesthesia at Mohammed Bin Rashid University of Medicine and Health Sciences, Consultant Anesthesiologist at Mediclinic, and Director of the Dubai Health Simulation Center. His interests include simulation-based education, human factors, and airway management.

He has led major simulation centres in Europe and the UAE and held senior clinical and educational positions in the Netherlands and Germany. Dr Krage is Past President of the Society in Europe for Simulation Applied to Medicine (SESAM) and has served on the Global Network for Simulation in Healthcare Board. He also initiated the scientific journal Advances in Simulation.



Judith Okonkwo

Judith Okonkwo is an award-winning Technology Evangelist, Business Psychologist, and Organisation Development Consultant with experience across Africa, Asia, and Europe. She serves on the Boards of the African Deep Tech Foundation and XR Women and advises organisations on emerging technologies.

In 2016, she founded Imisi 3D, a Lagos-based creation lab advancing Africa's extended reality ecosystem and connecting XR communities across the continent. Judith is a Fellow of the Royal Society of Arts, a member of the World Economic Forum's Connected Futures Initiative, a former Chen Yidan Visiting Global Fellow at Harvard, and an industry expert for the OECD's Global Forum on Technology.



Nadeem Noordin

Nadeem Noordin is an award-winning technology executive and strategic adviser with extensive experience leading digital transformation across Africa. He has built and scaled regional technology businesses, advised boards and executive teams, and delivered complex cloud, cybersecurity, data, and artificial intelligence initiatives across the public and private sectors.

Recognised among Kenya's Business Daily Top 40 Under 40 Men, Nadeem is passionate about translating emerging technologies into practical solutions that create measurable value. His work focuses particularly on responsible AI adoption, digital capability building, and developing contextually relevant, African-led technology solutions that deliver meaningful commercial and societal impact across the continent.



Azra Naseem

Azra Naseem is Senior Instructor at the Institute for Educational Development and Director, Blended and Digital Learning at the Aga Khan University. Her work focuses on digital pedagogy, e-learning, emerging technologies, and educational transformation, particularly in low- and middle-income countries.

Her recent research explores the integration of artificial intelligence and Large Language Models into education and medical training. She has led multi-country studies examining generative AI across diverse educational contexts and has contributed to scholarship on responsible AI use in academic and scientific writing. Her work champions inclusive, innovative, and contextually relevant approaches to digital education.



Dr Marvin Jensen

Dr Marvin Jansen is Head of the Clinical Skills Centre at the University of Cape Town and Director of the African Simulation Network. He holds a PhD in Health Sciences Education and is a Harvard South Africa Fellow. His work focuses on healthcare simulation, faculty development, patient safety, clinical skills education, and sustainable simulation capacity across Africa.

He has contributed to national and international simulation initiatives and published in healthcare simulation, emergency medicine education, and clinical skills development. Through his leadership and scholarship, Dr Jansen advocates for African-led innovation, collaboration, and sustainable approaches to advancing simulation-based health professions education across the continent.



Dr Shah Jamal Alam

Dr Shah Jamal Alam is Professor of Computer Science and Associate Dean for Undergraduate Education at Habib University, Karachi. He holds a PhD in Computational Social Science from Manchester Metropolitan University and completed postdoctoral research at the University of Michigan and University of Edinburgh.

His research focuses on agent-based modelling, social network analysis, and computational social science. His health-related work includes NIH-funded modelling of HIV transmission networks, while his simulation research on drug-market policy has informed state-level legislation in the United States. His work applies computational simulation to complex challenges across health, society, and public policy.

SIMPACT 2026 Conference Chairs:



Dr Faisal Ismail

Regional Director, CIME
South Asia



Dr Michael Moneypenny

Regional Director, CIME
East Africa

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