

18th International Conference on
**Bioinformatics and Computational
Biology (BICOB 2026)**

PROGRAM

March 23 - 25, 2026

Hilton Waikiki Beach Resort
Honolulu, HI, USA

Sponsored by



International Society for
Computers and Their Applications

278 Mankato Ave. #220
Winona, MN 55987
E-mail: isca@isca-hq.org; website: www.isca-hq.org

Program at a Glance (All times in HST)

Monday 3/23	7:30 am - 8:30 am	Registration and Breakfast (Coffee and Pastry)
	8:45 am – 9:00 am	Opening (BICOB and CATA by chairs, Kaiulani II)
	9:00 am –10:00 am	Keynote I: (for BICOB-2026): <i>BICOB'26 Keynote: Creating the Next Generation of Genome Analysis Tools with Deep Learning. Keynote Speaker: Dr. Kishwar Shafin, Senior Research Scientist, Google, USA. 9:00am Monday March 23 2026</i>
	10:00 am – 10:30 am	Coffee Break (Kaiulani Rooms Lobby Area)
	10:30 am -12:00 pm	Session 1: in Kaiulani III Paper ID: 24 Paper ID: 3 Paper ID: 13
	12:00 pm – 1:30 pm Lunch Break (lunch on your own)	
	1:30 pm – 3:00 pm	Session 2: in Kaiulani III Paper ID: 7 Paper ID: 29 Paper ID: 19
	3:00 pm – 3:30 pm	Coffee Break (Kaiulani Lobby Area)
	3:30 pm – 5:00 pm	Session 3: in Kaiulani III Paper ID: 6 Paper ID: 31 Paper ID: 37

Tuesday 3/24	8:00 am – 9:00 am	Registration and Breakfast (Coffee and Pastry) In Kaiulani I, II, III, Lobby Area)
	9:00 am – 10:00 am	Keynote II: (Common to both conferences) in Kaiulani II
	10:00 am – 10:30 am	Coffee Break (Kaiulani Lobby Area)
	10:30 am -12:00 pm	Session 4: in Kaiulani III Paper ID: 9 Paper ID: 36 Paper ID: 12
	12:00 – 1:30 pm	CONFERENCE Luncheon and Best Paper Awards (Kaiulani I)
	1:30-3:00	Session 5: in Kaiulani III Paper ID: 35 Paper ID: 8 Paper ID: 25
	3:00-3:30	Coffee Break (Kaiulani II Lobby Area)
	3:30-5:00	Session 6: in Kaiulani III Paper ID: 1 Paper ID: 34 Paper ID: 33

Wednesday 3/25	8:00 am – 8:30 am	Registration and Breakfast with Coffee/Pastry) in Kaiulani II - III Lobby Area
	8:30 am – 9:30 am	Keynote III: (Common to both conferences), in Kaiulani II
	9:00 am – 9:30 am	Coffee Break
	9:30 am -11:00 am	Session 7: in Kaiulani III Paper ID: 22 Paper ID: 27 Paper ID: 32
	11:00 am	Conference ends

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SPONSOR

International Society for Computers and Their Applications (ISCA)

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Monday, March 23, 2026

***** All times are in HST Hawaii Standard Time (UTC-10:00)**

7:30 a.m. – 8:45 a.m. Registration and Breakfast (Coffee and Pastry): Bayside room

8:45 a.m. – 9:00 a.m. WELCOME By BICOB Organizers

Hisham Al-Mubaid, University of Houston-Clear Lake, USA

Kazi Lutful Kabir, George Mason University, USA

Oliver Eulenstein, Iowa State University, USA

9:00 a.m. – 10:00 a.m. KEYNOTE SPEAKER

Dr. Kishwar Shafin

Senior Research Scientist, Google, USA

**Creating the Next Generation of Genome
Analysis Tools with Deep Learning**

Room: Kaiulani II

Session Chair: Dr. Hisham Al-Mubaid, Univ. of Houston-Clear Lake.

10:00 a.m. – 10:30 a.m. 30 MINUTE BREAK

SESSION 1

SESSION TITLE: Computational Proteomics

Monday March 23, 10:30 a.m. – 12:00 p.m.

Session Chair: Alam, F.

Location: Kaiulani III

- 1. ABUS: A Framework for Evaluating Protein Language Models with Multimodal Capabilities**
Ensafitakaldani, F., Haspel, N., Haehn, D.
- 2. Fourier vs. Attention: A Re-look at Protein Sequence Generation Models**
Shah, R., Kartik Jawagal, R., Rajpurohit, S., Venkat, N., Achyuthan, N., Das, B.
- 3. Decoding the Latent Space: A Comparative Analysis of Autoencoder Representations for Protein Fold Recognition**
Patre, S., Alam, F., Tare, A.

12:00 pm – 1:30 pm Lunch break (on your own)

SESSION 2**SESSION TITLE: Machine Learning in Clinical & Healthcare Analytics**

Monday March 23, 1:30 p.m. – 3:00 p.m.

Session Chair: Al-Mubaid, H.

Location: Kaiulani III

1. **Deep Learning Based Wound Segmentation and Characterization with LLM-Assisted Clinical Interpretability**
Mehabaw Alemayoh, F., Lulseged Yimer, H., Yuan, X., Qingge, L.
2. **Predicting Obstetric and Non-obstetric Diagnoses Co-occurrences during Pregnancy**
Singh, A., Infante, S., Kim, S., Kabir, A.
3. **Integration of Supervised Machine Learning Algorithms and MALDI-TOF MS for Identifying Vancomycin-Resistant Enterococcus faecium Isolates**
King, T., Al-Mubaid, H. (Univ. of Houston-Clear Lake, USA)

3:00 p.m. – 3:30 p.m.**Coffee Break (Kaiulani Lobby Area)****SESSION 3****SESSION TITLE: Machine Learning in Structural Bioinformatics**

Monday March 23, 3:30 p.m. – 5:00 p.m.

Session Chair: Kabir, K.

Location: Kaiulani III

1. **A Structure-Aware Attention Mechanism for Protein Function Prediction**
Islam, M., Yan, C.
2. **Classification of a Post-Traumatic Stress Disorder-Related Brain Condition Using Dynamic Functional Connectivity Statistics in Functional MRI**
Sakoglu, U., Mishra, A. (University of Houston – Clear Lake, Houston, USA)
3. **Factorization-driven Representation Learning Techniques for Protein Tertiary Structure Prediction: A Comprehensive Review**
Kabir, K. (George Mason University, USA)

Tuesday, March 24, 2026

8:00 a.m. – 9:00 a.m. Registration and Breakfast with Coffee/Pastry (Kaiulani I Lobby Area)

9:00 a.m. – 10:00 a.m. KEYNOTE SPEAKER

Dr. Kim Binsted

University of Hawaii, Monoa

AI and Humor

Location: Kaiulani II

10:00 a.m. – 10:30 a.m. COFFEE BREAK (Kaiulani Lobby Area)

SESSION 4

SESSION TITLE: Healthcare Informatics and Disease Research

Tuesday March 24, 10:30 a.m. – 12:00 p.m.

Session Chair: Mondal, A.

Location: Kaiulani III

- 1. Predicting Equilibrium in a Predator–Prey System with Disease**
Ji, H., Vasilyeva, M., Sadovski, A.
- 2. SCOPE-PD: Explainable AI on Subjective and Clinical Objective Measurements of Parkinson's Disease for Precision Decision-Making**
Islam, M., Templeton, J., Sobhan, M., Poellabauer, C., Mondal, A.
- 3. A Clinical Decision Support Tool for Predicting Intensive Care Unit (ICU) Readmission After Postoperative Breast Cancer Surgery Using MIMIC-IV Data**
Nijampurkar, Y., Avramovic, S. (George Mason University, USA)

12:00 – 1:30pm Conference Luncheon & Best Paper Awards (Kaiulani I)

SESSION 5**SESSION TITLE: Graph and AI in Computational Biology**

Tuesday March 24, 1:30 p.m. – 3:00 p.m.

Session Chair: Vasilyeva, M.

Location: Kaiulani III

- 1. Graph-Regularized Embedding Refinement for Spatial Domain Identification**
Mo, B., Chen, Z., Li, H.
- 2. Averaged Dynamics of Eco-Epidemic Processes on Graph**
Vasilyeva, M., Krasnikov, A., Ji, H., Sadovski, A.
- 3. Modernizing Open-TGGATEs through Data and AI Methods**
Cong, G., Chao, F., Combs, P., Erickson, J., Auerbach, S.

3:00 p.m. – 3:30 p.m. Coffee Break (Kaiulani II Lobby Area)**SESSION 6****SESSION TITLE: Computational Modeling in Viral and Genomic Biology**

Tuesday March 24, 3:30 p.m. – 5:00 p.m.

Session Chair: Rihan, F.

Location: Kaiulani III

- 1. Modeling Virus-Tumor Interactions and Control in Oncolytic Virotherapy**
Rihan, F.
- 2. Computational Discovery of CRISPR-Cas13b GuideRNAs for Broad-Spectrum Dengue Virus Targeting**
Naqvi, S., Khan, F., Hussain, M.
- 3. scFiLM: Dynamic Fusion of Gene Identity and Expression for Single-Cell Analysis**
Li, X., Zeng, X., Tang, T., Cui, Y.

Wednesday, March 25, 2026

8:00-8:30 Registration and Breakfast with Coffee/Pastry (Kaiulani II - III Lobby Area)

8:30 a.m. – 9:30 a.m. KEYNOTE SPEAKER

Dr. Hasan Mohammad

Indiana University, USA

**Machine Learning on Hierarchical Data:
Representation, Model and Learning**

Room: Kaiulani II

Session Chair: Dr. Kazi Lutful Kabir, George Mason Univ. USA

SESSION 7

SESSION TITLE: Genomics and Multi-Omics Modeling

Wednesday March 25, 9:30 a.m. – 11:00 a.m.

Session Chair: Alam, F.

Location: Kaiulani III

1. DCJ and Indel Distance Considering Intergenic Region Information

Siqueira, G., Oliveira Alexandrino, A., Rodrigues Oliveira, A., Dias, Z.

2. SpaHMS: Dynamic Multi-Scale Integration of Multi-Batch Spatial Multi-Omics

Zhao, Y., Yang, C., Tang, T., Cui, Y.

3. PanACRpred: Predicting Accessible Chromatin Regions in Pangenomes using Motif Chaining s

Warr, M., Dinh, T., Root, B., Onstott, E., Yu, K., Mudge, J., Ramaraj, T., Kahanda, I., Mumey, B.

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