Dartmouth Health

Ophthalmology / DHMC

MACHINE-LEARNING IN OPHTHALMOLOGY & OCULAR SCIENCE EXCHANGE 2026

MOOSE

DATE	TIME	LOCATION
Monday	**5:00 – 6:50 PM**	**Auditorium G**
November 16, 2026	26 talks · awards 6:45	Dartmouth Hitchcock Medical Center

Hosted & moderated by **Dr. Benton Chuter** & **Dr. William Gensheimer**

Program on reverse

Program

Monday, November 16, 2026 · 5:00 – 6:50 PM
Auditorium G, Dartmouth Hitchcock Medical Center

5:00 PM — **Opening Remarks** · Benton Chuter, MD, MS, PGY-1 — 2 min

RAPID-FIRE PRESENTATIONS

2-minute talk + 1 minute for questions & transition

5:03	01	**Per-eye decay curves beat a neural operator for cell density forecasts in CPTS and CDS-SMAS**	August Mondragon with T. Daley, F. B. Kayarian, M. Jablonski, W. Gensheimer, B. Chuter
5:06	02	**Machine learning on Castro-Luna Pentacam data discriminates subclinical keratoconus better than the published model**	Noelle Fedor with S. Azam, C. Joe, L. Larned, W. Gensheimer, B. Chuter
5:09	03	**Interpretable measurement beats prior AI for donor endothelial counts in CPTS**	Katie Cox with D. Zhu, C. Joe, F. B. Kayarian, W. Gensheimer, B. Chuter
5:12	04	**Single-scan corneal stiffness is not fully identifiable, and shared-mesh tests overstate its recovery**	Aidan Lihari with B. Lihari, W. Gensheimer, B. Chuter
5:15	05	**Endothelial cell density and corneal thickness are inversely correlated within eyes after PKP and DSAEK**	Brian Lihari with A. Lihari, W. Gensheimer, B. Chuter
5:18	06	**Public CAMG meibography yields first reference intervals for meibomian gland structure in children**	Chloé Lawrence with A. Kangsumrith, A. Isaacs, W. Gensheimer, B. Chuter
5:21	07	**Automated corneal nerve length on Lagali mosaics correlates well with tracing but agrees less tightly**	Bailey Millis with G. Park, A. Tavasli, F. B. Kayarian, R. A. Badian, W. Gensheimer, B. Chuter
5:24	08	**Deep learning endothelial cell counts on the Freiburg specular set do not reach clinical acceptability**	Jenna Jeon with S. Bhandary, C. Ye, C. Joe, W. Gensheimer, B. Chuter
5:27	09	**A digital twin fitted to CPTS and tested on CDS separates surgical and chronic endothelial cell loss**	Shad Hassan with A. Shaadab, L. Cano-Bartolo, Z. Usman, S. Shah, F. B. Kayarian, B. Millis, M. Jablonski, W. Gensheimer, B. Chuter
5:30	10	**A corneal foundation model counts dendritic cells and keratocytes on CORN nearly as well as supervised AI**	Alanna Polyak with B. Han, H. Kaaua, M. Hoefer, W. Gensheimer, B. Chuter
5:33	11	**A GSE77938 keratoconus gene-expression classifier does not reliably transfer across tissue or cohort**	Taylor Wolfe with L. Galton, S. Yoo, W. Gensheimer, B. Chuter
5:36	12	**One network matches a published model ensemble for meibomian gland segmentation on MGD-1K**	Theo Kapogiannis with C. Joe, L. Saxena, W. Gensheimer, B. Chuter
5:39	13	**Data splits and shortcuts overstate AI for keratitis on the Essalat–Le confocal dataset**	Brandon Horn with A. Shukla, T. Zima, H. Smith, F. B. Kayarian, W. Gensheimer, B. Chuter

5:42 PM — **Break** — 8 min

5:50	14	**Corneal confocal AI inherits most of its keratitis accuracy on Essalat–Le from a general model**	Kevin He with S. Andrade, A. Huang, R. A. Badian, W. Gensheimer, B. Chuter
5:53	15	**Off-the-shelf image features match the keratoconus screening benchmark on AI-Timemy Pentacam maps**	Alanna Polyak with W. Gensheimer, B. Chuter
5:56	16	**General AI models match fundus-trained ones on Retina-SLO and RAVIR laser retinal scans**	Libby Galton with T. Surakiatchanukul, W. Gensheimer, B. Chuter
5:59	17	**One self-supervised transformer matches or outperforms established methods for visual field imputation and forecasting**	Diya Patel with C. Joe, I. Allen, W. Gensheimer, B. Chuter
6:02	18	**Disease labels, not cross-modal alignment, cut corneal AI label needs across MCOA, SLID and SUSTech-SYSU**	Asli Tavasli with C. Joe, A. Kakkera, W. Gensheimer, B. Chuter
6:05	19	**A systematic review of open globe injury detection from eye photographs**	Helena Kaaua with Y. Mustafa, Thao-Mi, B. Millis, G. Richardson, K. Alozie, F. B. Kayarian, W. Gensheimer, B. Chuter
6:08	20	**Donor endothelial grading and specular images did not measurably improve graft-failure prediction in CPTS**	Chelsea Joe with M. Jablonski, W. Gensheimer, B. Chuter
6:11	21	**Transplant center identity improves corneal graft failure prediction in CPTS**	Zofia Cieslak with C. Joe, K. Cox, W. Gensheimer, B. Chuter
6:14	22	**The Cornea Preservation Time Study's cell-loss baseline predicts its own exposure**	Shoaib Jamil with C. Joe, Y. Mustafa, T. Kapogiannis, W. Gensheimer, B. Chuter
6:17	23	**Corneal graft risk models show validation gaps and lose accuracy for new surgeons in CPTS**	Yuseph Mustafa with C. Joe, S. Jamil, T. Kapogiannis, W. Gensheimer, B. Chuter
6:20	24	**Papilledema AI accuracy on the Salaheldin OCT release depends on how the data are split**	Lori Saxena with T. Surakiatchanukul, W. Gensheimer, B. Chuter
6:23	25	**A few hundred local readings adapt automated endothelial cell density estimates to the VisionGift eye bank**	Chelsea Joe with M. Jablonski, J. Clover, W. Gensheimer, B. Chuter
6:26	26	**Published data splits inflate retinopathy of prematurity AI results across RIDIRP, A-Fundus and HVDROPDB**	Min Young Kim with A. Kakkera, I. Allen, C. Saint James, Z. Cieslak, T. Surakiatchanukul, W. Gensheimer, B. Chuter

6:29 PM — **Closing Remarks** · William Gensheimer, MD, Associate Professor — 2 min

6:31 PM — **Reception & Networking** · Students and faculty network while talks are scored — 14 min

6:45 PM — **Awards: Top 3 Talks** · Drs. Chuter & Gensheimer — 5 min