**Welcome and Introduction**

Sep.24 (Fri) 8:40~8:45 Room A (2F North Hall)

President of 2nd IOCS & 37th JSOC: **Yuichiro Ogura** (Nagoya City Univ)
President-Emeritus of IOCS: **David Huang** (Oregon Health & Science Univ)

<table>
<thead>
<tr>
<th>Session</th>
<th>Basic Science and Technology</th>
<th>Sep.24 (Fri) 8:45~9:35 Room A (2F North Hall)</th>
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<tbody>
<tr>
<td>8:45</td>
<td><strong>IO1-1</strong> Non-Doppler OCT methods for measuring blood flow in the retinal and choroidal vasculature</td>
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<td></td>
<td>○Benjamin J. Vakoc</td>
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<td>(Wellman Center for Photomedicine, Massachusetts General Hospital and Harvard Medical School, Boston, Massachusetts 02114, USA)</td>
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<td>8:55</td>
<td><strong>IO1-2</strong> Companion diagnostics in ophthalmology by Doppler holography</td>
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<td></td>
<td>Leo Puyo, Michel Paques, ○Michael Atlan</td>
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<td></td>
<td>(Langevin Institute and Quinze-Vingts Eye Hospital Paris, France)</td>
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<td>9:05</td>
<td><strong>IO1-3</strong> Direct measurement of pulse wave propagation in the human retinal capillary network</td>
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<td>○Phillip Bedggood, Andrew Metha</td>
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<td></td>
<td>(The Univ of Melbourne)</td>
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<td>9:15</td>
<td><strong>IO1-4</strong> Direct Measurement of Capillary Blood flow the Human Retinal Capillary Network</td>
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<td>○Stephen A. Burns, Raymond L. Warner, Kaitlyn Sapozenik, Alessandra Carmichael, Thomas J Gast,</td>
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<tr>
<td></td>
<td>(Indiana University, School of Optometry, Bloomington, 47405, United States of America)</td>
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<tr>
<td>9:25</td>
<td>Discussion</td>
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<tr>
<th>Session</th>
<th>OCT/OCTA Technology Updates and AI</th>
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<td></td>
<td>Sep.24 (Fri) 9:40~10:30 Room A (2F North Hall)</td>
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<tr>
<td></td>
<td>Moderators: <strong>Rainer A. Leitgeb</strong> (Medical Univ Vienna)</td>
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<td><strong>Ann E. Elsner</strong> (Indiana Univ- Bloomington)</td>
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<td><strong>David Huang</strong> (Oregon Health &amp; Science Univ)</td>
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<td>9:40</td>
<td><strong>IO2-1</strong> Quantification and dynamic characterization of intermittent retinal capillary perfusion in sickle cell disease using serial OCT angiography and adaptive optics angiography</td>
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<td></td>
<td>○Richard B. Rosen1,2, Davis B. Zhou1,2, Alexander Pinhas1, Maria V. Castanos1,2,</td>
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<td>Rishard Weitz3, Peter Gillette4, Jeffrey Glassberg5, Justin V. Migacz1,2,</td>
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<td>Toco Y.P. Chui1,2</td>
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<td>(1)New York Eye and Ear Infirmary at Mount Sinai/ Icahn Sch of Med at Mount Sinai,</td>
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<td>(2)Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY,</td>
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<td>(3)Emergency Medicine, Icahn School of Medicine at Mount Sinai, New York, NY,</td>
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<td></td>
<td>(4)Internal Medicine, Kings County Hospital Center, Brooklyn, NY)</td>
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</tbody>
</table>
9:50  IO2-2  Nonperfusion area segmentation in three retinal plexuses on wide-field OCT angiography using a deep convolutional neural network
○Yukun Guo, Tristan T. Hormel, Min Gao, Qisheng You, Jie Wang, Christina J Flaxel, Steven T. Bailey, Thomas S. Hwang, Yali Jia
(OHSU Casey Eye Inst)

10:00  IO2-3  Vessel depictability dependence on the hemodynamics in optical coherence tomography angiography: an adaptive optics scanning light ophthalmoscope study
○Masaharu Ishikura, Akihito Uji, Yuki Muraoka, Shin Kadomoto, Naomi Nishigori, Akitaka Tsujikawa
(Kyoto Univ)

10:10  IO2-4  Motion-free imaging of vasculature and pigment by Lissajous polarization OCT
○Yoshiaki Yasuno¹, Shuichi Makita², Masahiro Miura³
  (¹Univ of Tsukuba, ²Tokyo Medical University Ibaraki Medical Center, Japan)

10:20  Discussion

Refreshment Break and Exhibition  Sep.24 (Fri) 10:30～10:45 Room C (2F Central Hall)

Session3: Glaucoma & Optic Nerve Diseases  Sep.24 (Fri) 10:45～11:35 Room A (2F North Hall)

Moderators:  Yali Jia (Oregon Health & Science Univ)
              Kazuhisa Sugiyama (Kanazawa Univ)

10:45  IO3-1  Diagnosing and Monitoring Glaucoma with OCTA
○Robert N. Weinreb
  (Hamilton Glaucoma Center and Shiley Eye Institute at the University of California San Diego)

10:55  IO3-2  Relevance of ocular circulation in glaucoma-OCT angiography study ?
○Michael S Kook
  (Department of Ophthalmology, College of Medicine, Univ of Ulsan, Asan Medical Center)

11:05  IO3-3  Association between blood flow on the temporal optic nerve head and central visual function in glaucoma patients
○Toru Nakazawa
  (Tohoku Univ)

11:15  IO3-4  Prediction of the outcomes of trabecular-targeted minimally invasive glaucoma surgery using anterior segment OCTA
○Yoko Okamoto, Tadamichi Akagi, Kenji Suda, Takanori Kameda, Masahiro Miyake, Hanako Ohashi Ikeda, Shin Kadomoto, Akihito Uji, Akitaka Tsujikawa
  (Kyoto Univ)

11:25  Discussion
Session 4: Systemic Disease and Optic Nerve

Moderators: Akitaka Tsujikawa (Kyoto Univ)
Richard B. Rosen (New York Eye & Ear Infirmary of Mount Sinai)

11:40 IO4-1 Reduced blood flow and pulsatility in the choroidal watershed and peripapillary hypoperfusion zones and relation to the optic nerve circulation
   ○ Randy Kardon1,2, Sohan Hayreh1, Ryuya Hashimoto3
   (1Univ of Iowa/Iowa City VA Ctr of Excellence for the Prevention and Treatment of Visual Loss, 2Iowa City VA Center of Excellence for the Prevention and Treatment of Visual Loss, Iowa City, IA, United States)

11:50 IO4-2 Optic nerve head microarchitecture: en-face OCT and OCT angiographic imaging of lamina cribrosa, neuroretinal rim, and vasculature imaging in glaucomatous eyes
   ○ Toco Y.P. Chui1,2, Davis B. Zhou1,3, Maria V. Castanos3, Oscar Otero-Marquez4, Justin Migacz5, Rachel E. Linderman5, Joseph Carroll5,6, Donald C. Hood5,6
   (1New York Eye and Ear Infirmary of Mount Sinai/Icahn Sch of Med at Mount Sinai, 2Icahn School of Medicine at Mount Sinai, New York, NY, USA, 3Cell Biology, Neurobiology & Anatomy, Medical College of Wisconsin, Milwaukee, WI, USA, 4Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI, USA, 5Department of Psychology, Columbia University, New York, NY, USA, 6Department of Ophthalmology, Columbia University, New York, NY, USA)

12:00 IO4-3 Optic disk blood perfusion and oxygenation in glaucoma
   ○ Martin Hammer, Walthard Vilser, Thomas Riemer, Hosni Al Zoubi, Rowena Schultz
   (Univ Hosp Jena)

12:10 IO4-4 Retinal and choroidal OCTA in patients with systemic hypertension
   ○ Leo Schmetterer
   (Singapore Eye Research Institute)

12:20 Discussion

Luncheon Seminar 1

Sep.24 (Fri) 11:40～12:30 Room A (2F North Hall)

Chair: Yuichiro Ogura (Nagoya City Univ)

Secret Stories of Optical Coherence Tomography (OCT) and Optical Coherence Tomography Angiography (OCTA)

LS1-1 OCT angiography of CNV: what have we learned in 3D
   Amani A. Fawzi
   (Northwestern Univ)

LS1-2 Stories from the early history of optical coherence tomography
   David Huang
   (Oregon Health & Science Univ)

Sponsored by: Novartis Pharma K.K.
### Luncheon Seminar 2  
**Sep.24 (Fri) 12:45〜13:45 Room B (2F South Hall)**  
Chair: Mineo Kondo (Mie Univ)

**Update on Treatment Strategies for Sever RVOs**

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<thead>
<tr>
<th>LS2-1</th>
<th>Update on treatments for CRVO</th>
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<tr>
<td></td>
<td>Yasuhiro Iesato</td>
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<td>(Shinshu Univ)</td>
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<tr>
<th>LS2-2</th>
<th>Update on treatments for persistent BRVO</th>
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<tr>
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<td>Motohiro Kamei</td>
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Sponsored by: Bayer Yakuhin, Ltd./Santen Pharmaceutical Co., Ltd.

### IOCS Business Meeting – Members Only  
**Sep.24 (Fri) 14:00〜14:30 Room A (2F North Hall)**

### Session 5: Physiology & Pathophysiology  
**Sep.24 (Fri) 14:35〜15:25 Room A (2F North Hall)**

**Moderators:**  
Min Wang (Eye and ENT Hosp of Fudan Univ)  
Ann E. Elsner (Indiana Univ-Bloomington)  
Rainer A. Leitgeb (Medical Univ Vienna)

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<tr>
<th>14:35</th>
<th>IO5-1 Retinal oxygenation with a damaged choriocapillaris</th>
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<tr>
<td></td>
<td>○Robert A. Linsenmeier</td>
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<td>(Northwestern Univ)</td>
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<th>14:45</th>
<th>IO5-2 Withdraw</th>
<th>OCT and OCT angiography in optic neuropathies</th>
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<td>○Ping Wei, Julie Falardeau, Jie Wang, Liang Liu, Ou Tan, Yali Jia, David Huang</td>
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<tr>
<th>14:55</th>
<th>IO5-3 Differential reperfusion patterns in retinal vascular plexuses following increase in intraocular pressure an OCT angiography study</th>
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<tr>
<td></td>
<td>○Gemmy Cheung</td>
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<tr>
<th>15:05</th>
<th>IO5-4 Withdraw</th>
<th>Relating retinal oxygen metabolism, thickness and visual function in experimental ischemia/reperfusion</th>
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<tr>
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<td>○Mahnaz Shahidi, Nathanael Matei, Sophie Leahy, Norman P. Blair</td>
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<td>(1.Univ of Southern California, 2.Department of Ophthamology and Visual Sciences, University of Illinois at Chicago)</td>
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<th>15:05</th>
<th>Discussion</th>
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### Session 6: Diabetic Retinopathy  
**Sep.24 (Fri) 15:30〜16:20 Room A (2F North Hall)**

**Moderators:**  
Sebastian Wolf (Univ of Bern)  
Fumi Gomi (Hyogo Coll of Med)

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<tr>
<th>15:30</th>
<th>IO6-1 Deep-learning-aided detection of referable and vision threatening diabetic retinopathy based on structural and angiographic OCT</th>
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<tr>
<td></td>
<td>○Yali Jia, Pengxiao Zang, Tristan T. Hormel, Yukun Guo, Thomas S. Hwang</td>
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<td>(OHSU Casey Eye Inst)</td>
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15:40  IO6-2  Retinal blood flow regulation and neural retinal function in diabetic mice
○Taiji Nagaoka
(Nihon Univ)

15:50  IO6-3  Clinical application of single-capture 65° widefield (WF) optical coherence tomography angiography (OCTA) for detection of retinal perfusion and neovascularization in eyes of diabetic patients
○Andreas Pollreisz1, Michael Niederleithner2, Aleksandra Sedova3,
  Felix Datlinger1, Tilman Schmolz2,3, Rainer A. Leitgeb2, Ursula Schmidt-Erfurth1
(1Med Univ Vienna, 2Center for Medical Physics and Biomedical Engineering;
  Medical University Vienna, Austria, 3Carl Zeiss Meditec, Inc., Dublin, CA, USA)

16:00  IO6-4  Modified geometric perfusion deficit analysis for detecting clinically referable eyes with diabetic retinopathy
○Peter L. Nesper1,2, Amani A. Fawzi1
(1Northwestern Univ, 2Department of Ophthalmology, Chicago Medical School,
  Rosalind Franklin University of Medicine and Science, North Chicago, Illinois, USA)

16:10  Discussion

Refreshment Break and Exhibition  Sep.24 (Fri) 16:20～16:35 Room C (2F Central Hall)

Session7: PCV & Other Retinal Diseases  Sep.24 (Fri) 16:35～17:25 Room A (2F North Hall)
Moderators: Tomohiro Iida (Tokyo Women’s Med Univ)
            Amani A. Fawzi (Northwestern Univ)

16:35  IO7-1  Central Serous Chorioretinopathy and Circumscribed Choroidal Hemangiomas, a Strange Intersection
○Richard F. Spaide
(Vitreous, Retina, Macula Consultants of New York)

16:45  IO7-2  Unusual features related with pachychoroid
○Won Ki Lee
(Nune Eye Hosp)

16:55  IO7-3  Flow signal in polyps is a biomarker of early recurrence after combination therapy in polypoidal choroidal vasculopathy
○Hisashi Fukuyama, Yuki Komuku, Takashi Araki, Fumi Gomi
(Hyogo Coll of Med)

17:05  IO7-4  A clinical state-of-the-art of AI in AMD care
○Ursula Schmidt-Erfurth
(Med Uni of Vienna)

17:15  Discussion
## Session 8: PotPourri

Sep. 24 (Fri) 17:30~18:30 Room A (2F North Hall)

**Moderators:** Shih-Jen Chen (Taipei Veterans General Hosp)  
Ursula Schmidt-Erfurth (Med Univ of Vienna)

### 17:30 IO8-1 OCT and OCT angiography in optic neuropathies

- Ping Wei, Julie Falaradeau, Jie Wang, Liang Liu, Ou Tan, Yali Jia, David Huang  
  (OHSU Casey Eye Inst)

**move to IO5-2**

### 17:40 IO8-2 Narrow beam optical coherence tomography angiography

- Ramin Tadayoni, Sophie Bonnin, Stephanie Magazzeni  
  (Université de Paris, Ophthalmology Department, AP-HP, Lariboisière, Saint Louis and Fondation Rothschild Hospitals, Paris, France.)

### 17:50 IO8-3 Relating retinal oxygen metabolism, thickness and visual function in experimental ischemia/reperfusion

- Mahnaz Shahidi¹, Nathanael Matei¹, Sophie Leahy¹, Norman P. Blair²  
  (¹Univ of Southern California, ²Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago)

**move to IO5-4**

### 18:00 IO8-4 Plexus specific quantification of fluid volume in diabetic macular edema

- Kotaro Tsuboi, Qi Sheng You, Yukun Guo, Jie Wang, Christina J. Flaxel, Steven T. Bailey, David Huang, Yali Jia, Thomas S. Hwang  
  (OHSU Casey Eye Inst)

### 18:10 IO8-5 Diagnostic accuracy of optical coherence tomography angiography compared with multimodal imaging for choroidal neovascularization in central serous chorioretinopathy

- Danny Siu-Chun Ng¹, Mary Ho¹, Lijia Chen¹, Fanny Lai-Ting Yip¹, Wee Min Teh², Linbin Zhou¹, Shaheeda Mohamed¹, Chi Wai Tsang¹, Timothy Y. Y. Lai¹  
  (¹The Chinese Univ of Hong Kong, ²Hospital Melaka, Malaysia)

### 18:20 IO8-6 Discussion

### Closing Remark

Sep. 24 (Fri) 18:30~18:35 Room A (2F North Hall)

**President-Elect of IOCS:** Ursula Schmidt-Erfurth (Med Univ of Vienna)
**Evening Seminar 1**

**Sep.24** (Fri) 18:45～19:45 Room A (2F North Hall)

Chair: **Yuichiro Ogura** (Nagoya City Univ)

**Deeper Imaging into Chorioretinal Circulation with Swept Source OCT**

**ES1-1** Using deep-learning for the assessment of diabetic macular ischemia on OCT-angiography images  
Carol Cheung  
(The Chinese Univ of Hong Kong)

**ES1-2** New insights into CSC-What we have learned from swept-source OCT  
Hideki Koizumi  
(Univ of the Ryukyus)

Sponsored by : TOPCON CORPORATION/TOPCON MEDICAL JAPAN CO., LTD.

**Evening Seminar 2**

**Sep.24** (Fri) 18:45～19:45 Room B (2F South Hall)

Chair: **Toshinori Murata** (Shinshu Univ)

**Focus on Wide Field OCT & High Resolution OCT**

**ES2-1** Exploration of novel clinical benefits with high resolution OCT and OCT angiography  
Mineo Kondo  
(Mie Univ)

**ES2-2** Clinical application of novel ultra wide field SS-OCT and OCT angiography  
Takao Hirano  
(Shinshu Univ)

Sponsored by : Canon Inc./CANON MEDTECH SUPPLY CORPORATION
Poster Sessions

*There is no on-site poster presentation. They will be held only online (on-demand streaming).

### Poster Session: AI-TECH

**IP1-1** Automated region of interest selection improves the deep learning based segmentation of hyper-reflective foci in optical coherence tomography images

Minhaj Alam¹, Maximilian Pfau², Darvin Yi³, Daniel L. Rubin¹⁴, Joelle Hallak¹¹
¹Stanford Univ, ²Department of Ophthalmology, University of Bonn, Bonn, Germany, ³Illinois Eye and Ear Infirmary, Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL, USA, ⁴Department of Radiology, Stanford University, Stanford, CA, USA

**IP1-2** A deep learning-based quantitative framework for retinopathy of prematurity severity: comparison with expert diagnosis of plus disease.

J. Peter Campbell¹, RV Paul Chan², Jayashree Kalpathy-Cramer³, Michael Chiang⁴
¹OHSU Casey Eye Inst, ²University of Illinois, Chicago, Illinois, USA, ³Massachusetts General Hospital, Boston, Massachusetts, USA, ⁴National Eye Institute, Bethesda, MD, USA

**IP1-3** Reconstruction of high-resolution OCT angiograms of retinal intermediate and deep capillary plexuses using deep learning

Min Gao, Tristan T. Hormel, Jie Wang, Yukun Guo, Steven Bailey, Thomas S Hwang, Yali Jia
(OHSU Casey Eye Inst)

**IP1-4** Ultrahigh speed and widefield handheld swept source OCTA in pediatric retinal imaging

Yifan Jian, Shuibin Ni, Susan Ostmo, Ringo Ng, Xiang Wei, Yali Jia, David Huang, J. Peter Campbell
(OHSU Casey Eye Inst)

**IP1-5** Automated classification model for pachychoroid using machine learning

Hideki Shihara¹, Shozo Sonoda¹, Hiroto Terasaki¹, Guangzhou An², Hideo Yokota³, Masahiro Akiba⁴, Taiji Sakamoto¹
¹Kagoshima Univ, ²R&D Division, Topcon Corporation, Tokyo, Japan, ³Image Processing Research Team, RIKEN Center for Advanced Photonics, RIKEN, Wako, Japan

**IP1-6** Diagnosing and segmenting choroidal neovascularization in optical coherence tomographic angiography using deep learning

Jie Wang¹,², Tristan Hormel¹, Kotaro Tsuboi¹,², Xiaogang Wang⁴, Xiaoyan Ding⁵, Xiaoyan Peng⁴, Steven T. Bailey¹, Yali Jia¹,²
¹OHSU Casey Eye Inst/Oregon Health & Science Univ, ²Department of Biomedical Engineering, Oregon Health & Science University, Portland, Oregon, USA, ³Department of Ophthalmology, Aichi Medical University, Nagakute, Japan, ⁴Shanxi Eye Hospital, Taiyuan, Shanxi, China, ⁵State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China, ⁶Beijing Institute of Ophthalmology, Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University, Beijing Ophthalmology and Visual Science Key Lab, Beijing, China.)
IP1-7  Evaluation of UC Davis clinical multi-modal retinal imaging system with active retinal tracking and wavefront sensing for imaging of retinal and choroidal vasculature.
○Robert J. Zawadzki1,2, Kari V. Vienola1, Oscar Ramos-Soto3, Justin V. Migacz4, Iwona Gorczynska4, Sandra E. Balderas-Mata4, Ravi S. Jonnal1
1UC Davis, 2UC Davis Eye-Pod Small Animal Ocular Imaging Laboratory, Department of Cell Biology and Human Anatomy, UC Davis, 4320 Tupper Hall, Davis, California 95616, 3Division de Electronica y Computacion, Universidad de Guadalajara Centro Universitario de Ciencias Exactas e Ingenieria, Guadalajara, Jalisco, Mexico, 4New York Eye and Ear Infirmary of Mount Sinai, New York, NY 10003, 5Department of Biophysics and Medical Physics, Institute of Physics, Nicolaus Copernicus University, 87-100 Torun, Poland

Poster Session: Amd-Csr-Pachy-Choroid Imaging

IP2-1  Combined quantitative and qualitative optical coherence tomography angiography biomarkers for predicting active neovascular age-related macular degeneration
○Cherng-Ru Hsu1,2, Tso-Ting Lai3, Yi-Ting Hsieh4, Tzyy-Chang Ho5, Chung-May Yang6, Chang-Hao Yang1
1Nat Taiwan Univ Hosp/Tri-Service Gen Hosp, 2Department of Ophthalmology, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan

IP2-2  OCTA biomarkers of CNV secondary to aged-related macular degeneration following intravitreal aflibercept
○Junwoo Lee, Jong Beom Park, Kiyoun Kim, Eung Suk Kim, Seung-Young Yu
(Kyung Hee Univ)

IP2-3  Changes in choroidal structure in central serous chorioretinopathy with and without steroids
○Takashi Araki, Eri Tahara, Fumi Gomi
(Hyogo Coll of Med)

IP2-5  Peripheral chorioretinal imaging through a front prism on optical coherence tomography angiography
○Kentaro Kawai, Tomoaki Murakami, Saori Sakaguchi, Tatsuya Yamada, Shin Kadomoto, Akihito Uji, Akitaka Tsujikawa
(Kyoto Univ)

IP2-6  Morphological and functional analyses of the choroidal circulation in central serous chorioretinopathy
○Shoko Matsuzaki, Yuki Muraoka, Shin Kadomoto, Ayako Takahashi, Masahiro Miyake, Naoko Arakawa-Ueda, Tomotaka Wakazono, Manabu Miyata, Akihito Uji, Sotaro Ooto, Akitaka Tsujikawa
(Kyoto Univ)
**Poster Session: Ant Seg and Glaucoma**

**IP3-1**  
Short-term effects of different types of anti-glaucoma eyedrop on the sclero-conjunctival vasculature assessed using anterior segment OCTA in normal eyes: a pilot study  
○Tadamichi Akagi, Yoko Okamoto, Takanori Kameda, Kenji Suda, Masahiro Miyake, Hanako Ohashi Ikeda, Akitaka Tsujikawa  
(Kyoto Univ)

**IP3-2**  
Assessment of vascularity on the bleb surface following trabeculectomy  
○Masashi Takata1, Tomohiro Sekiya1, Atsuya Ide2, Kou Kakusho3, Takeshi Okadome3, Fumi Gomi3  
(1Hyogo Coll of Med, 2Department of Human System Interaction, Kwansei Gakuin University, Nishinomiya, Hyogo, Japan)

**IP3-3**

**IP3-4**  
Glaucoma diagnostic accuracy of doppler optical coherence tomography retinal blood flow  
○Tsubasa Abe1, Takafumi Yoshioka1, Youngseok Song1, Tomofumi Tani1, Tsuneaki Omae2, Kengo Takahashi2, Yoshitaka Takizawa2, Tomoko Ro-Mase2, Akira Tanner2, Satoshi Ishiko2, Kana Minamide2, Jun Sakai2, Masahiro Akiba2, Akitoshi Yoshida2  
(1Asahikawa Med Univ, 2Topcon corporation, Tokyo, Japan)

**IP3-5**  
Autoregulation of blood flow in the human retina, choroid and optic nerve in response to acute decrease in intraocular pressure in healthy eyes and optic neuropathy using novel vacuum goggles  
○Ryuya Hashimoto1, Zaidoon Al-Share1, Nitsan Dudevan-Strier1, Julie Nellis2,3, Jan Full1,2, Randy H Kardon1,2  
(1Univ of Iowa, 2Iowa City VA Center for the Prevention and Treatment of Visual Loss, Iowa City, IA, United States)

**IP3-6**  
Withdraw

**IP3-7**  
Ocular pulse waveform in the ONH differs between glaucomatous (GL) and glaucoma suspect (GLS) eyes in individuals with similar systemic pulse waveforms  
○Hongli Yang, Grant Gull, Cindy Albert, Lin Wang, Stuart Gardner (Legacy Health)
**Poster Session: Application**

**IP4-1** Influence of retinal and choroidal perfusion times measured using dye angiography on quantitative analysis of OCT-angiography
  - Aude Ambresin¹,²,³, Dilsah Körpe³, Rodolphe Vallée²,⁴,⁵, Daniela Gallo Castro¹,²,⁴,
  - Georgios N. Tsioropoulos¹,²,⁶
  - (¹RétinElysée Ctr/Swiss Visio Montchoisi/UNIL, ²Swiss Visio Montchoisi (Lausanne, Switzerland), ³UNIL (Lausanne, Switzerland), ⁴Swiss Glaucoma Research Foundation (Lausanne, Switzerland), ⁵LMA CNRS 7348, DACTIM team (Poitiers, France), ⁶Aristotle University of Thessaloniki (Thessaloniki, Greece)

**IP4-2** Monitoring of thermal expansion during micropulse laser therapy by phase-resolved optical coherence tomography
  - Jia-Pu Syu, Shih-Jen Chen, Wen-Chuan Kuo
  - (Nat Yang-Ming Univ)

**IP4-3** Comparison between oral and intravenous wide-field fluorescein angiography (FA) in clinical follow-up of retinopathy of prematurity (ROP) children
  - Wei-Chi Wu, Xiao Chun Ling, Hung-Da Chou, Laura Liu, Chi-Chun Lai, Kuan-Jen Chen,
  - Yih-Shiou Hwang
  - (Chang Gung Memorial Hosp)

**IP4-4** Monitoring proliferative diabetic retinopathy with optical coherence tomography angiography
  - Qi Sheng You, Yukun Guo, Christina J. Flaxel, Steven T. Bailey, David Huang, Thomas S. Hwang, Yali Jia
  - (OHSU Casey Eye Inst)

**IP4-5** Conjunctival and scleral OCT angiography of normal eyes
  - Yan Li, Yali Jia, David Huang
  - (OHSU Casey Eye Inst)

**IP4-6** Choroidal melanin thickness measurement in healthy Japanese subjects by polarization-sensitive optical coherence tomography
  - Masahiro Miura¹,¹, Shuichi Makita¹, Yoshiaki Yasuno¹, Takuya Iwasaki¹, Shinnosuke Azuma¹, Toshihiro Mino¹, Tatsuo Yamaguchi¹
  - (¹Tokyo Med Univ, ²Computational Optics Group, University of Tsukuba, Tsukuba, Japan, ³Topcon Corporation, Tokyo, Japan)

**IP4-7** Resistance Index of retinal blood flow from doppler optical coherence tomography flowmeter is associated with cardio-ankle vascular index
  - Yoshitaka Takizawa¹,¹, Youngseok Song¹,¹, Tomofumi Tani¹,¹, Tsuneaki Omae¹,¹, Takafumi Yoshioka¹,¹, Kengo Takahashi¹,¹, Tsubasa Abe¹,¹, Tomoko Ro-Mase¹,¹, Akira Tanner¹,¹, Satoshi Ishiko¹,¹, Kana Minamide¹,¹, Jun Sakai¹,¹, Masahiro Akiba¹,¹, Nobuyoshi Azuma¹,¹, Akitoshi Yoshida¹,¹
  - (¹Asahikawa Med Univ, ²Topcon corporation, Tokyo, Japan, ³Department of Surgery, Asahikawa Medical University, Asahikawa, Japan)
Poster Session: New Therapies

IP5-1 Retinal vascular effects of novel soluble guanylate cyclase activator (sGCa) runcaciguat
○Khaled Nassar⁴, William Schubert⁴, Zhenhua Xu⁵, Carsten Terjung⁵, Lingli Zhou⁵, Katja Rheindorf⁵, James Guerra⁵, Hanna Eikken⁵, Elia J. Duh⁵
(¹Bayer AG, ²Bayer AG, Wuppertal, Germany, ³Bayer U.S LLC, Cambridge, MA, USA)

IP5-2 Efficacy and safety of intravitreal Ziv-aflibercept for the treatment of patient with diabetic macula edema refractory to intravitreal bevacizumab: a pilot study
○Suthasinee Sinawat
(KKU Eye Center, Department of Ophthalmology, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand)

IP5-3 The effects of antiplatelets on anti-VEGF treatment for diabetic macular edema
○Pimpisa Vudhichaiphun, Kornwipa Hemarat, Plern Sutra, Chavisa Boonyavee, Yodpong Chantarasorn
(Vajira Hosp Navamindradhiraj Univ)

IP5-4 HORNBILL: A Phase I/IIa trial examining the safety of BI-X in patients with diabetic macular ischemia and diabetic retinopathy treated with pan-retinal photocoagulation
○Victor Chong⁶, Harsha Sen⁶, Raj Maturi⁶, Louis-Josef Bour⁶, Sobha Sivaprasad⁶, Elizabeth Pearce⁶, Quan Dong Nguyen⁶
(¹Boehringer Ingelheim, ²Trinity Research Group, Eye Center South, USA, ³Midwest Eye Institute, USA, ⁴NIHR Moorfields Biomedical Research Centre, UK, ⁵Byers Eye Institute, Stanford University School of Medicine, USA)

IP5-5 Withdraw

Poster Session: Retina-Misc

IP6-1 Microstructure of nonjuxtapapillary microvasculature dropout in healthy myopic eyes
○Gyu-Nam Kim⁷, Eun Ji Lee⁷, Tae-Woo Kim⁷
(¹Gyeongsang Nat Univ Hosp, ²Seoul National University Bundang Hospital, Seongnam, South Korea)

IP6-2 Assessment of microvascular changes using OCTA post phacoemulsification surgery in an Indian population
○Tos TJM Berendschot⁷, Supriya Dabir⁷, Vaidehi Bhatt⁷, Rakesh Barot⁷, Sujatha Mohan⁷, Mohan Rajan⁷, Carroll AB Webers⁷
(¹Univ Eye Cl Maastricht, ²Department of Retina, Rajan Eye Care Pvt Ltd, Chennai, India, ³Department of Ophthalmology, Rajiv Gandhi Medical College, Thane, India, ⁴Department of Cataract & Refractive Surgery, Rajan Eye Care Pvt Ltd, Chennai, India)

IP6-3 Essential thrombocythemia manifesting as ophthalmic artery occlusion
○Yodpong Chantarasorn
(Navamindradhiraj Univ)

IP6-4 New knowledge came with high-resolution cross-sectional optical coherence tomography angiography
○Xiaoling Liu, Weiwei Zheng
(Wenzhou Med Univ)
IP6-5  Decreased thickness of peripapillary retinal nerve fiber layer (pRNFL) and ganglion cell complex (GCC) in patients with werner syndrome.  
Mizuki Ikeda, Hirotaka Yokouchi, Takayuki Baba, Shuichi Yamamoto  
(Chiba Univ)

IP6-6  Evaluating macular telangiectasia with OCT/OCTA  
Min Wang, Yao Zhou, Chen Zou  
(Eye and ENT Hosp of Fudan Univ)

IP6-7  Deposits on retinal surface seen on optical coherence tomography in ocular amyloidosis  
Shinji Kakihara, Takao Hirano, Yorishige Matsuda, Daiki Takano, Akira Imai,  
Teruyoshi Miyahara, Toshinori Murata  
(Shinshu Univ)

IP6-8  Quantitative OCT and OCTA of retinal neurovascular degeneration in an Alzheimer’s disease model  
Tae-Hoon Kim¹, Taeyoon Son¹, Xincheng Yao²  
(¹Richard and Loan Hill Department of Bioengineering, Univ of Illinois at Chicago, ²Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, Illinois, USA)

Poster Session: Surgery

IP7-1  The associations between macular structure and idiopathic epiretinal membrane formation – a matched comparison study  
Yi-Ting Hsieh, Hsin Ma, Chung-May Yang  
(Natl Taiwan Univ Hosp)

IP7-2  Characteristics and surgical outcomes of rhegmatogenous retinal detachments that develop after intravitreal injections  
Ikuko Mizunoya, Takayuki Baba, Gen Miura, Tomoaki Tatsumi, Madoka Sakurai,  
Shuichi Yamamoto  
(Chiba Univ)

IP7-3  Surgical outcomes of vitrectomy for breakthrough vitreous hemorrhage in eyes with exudative age-related macular degeneration  
Yuya Saito, Takayuki Baba, Takehito Iwase, Tomohiro Nizawa, Hirotaka Yokouchi,  
Mariko Kubota-Taniai, Masayasu Kitahashi, Shuichi Yamamoto  
(Chiba Univ)

IP7-4  Retinal Microvascular Changes following Internal Limiting Membrane Peeling Surgery for Epiretinal Membrane versus Macular Hole  
Seung-Young Yu, Kyungwoo Yoon, Eung Suk Kim, Kyoung Kim  
(Kyung Hee Univ)
Poster Session: Vein Occlusion and DR

**IP8-1** A novel biomarker for good visual prognosis in eyes with BRVO
- Motohiro Kamei, Hiroshi Sasajima
  (Aichi Med Univ)

**IP8-2** Relationship between Reflectivity Changes on Optical Coherence Tomography Angiography and Vascular Leakage of Retinal Vein Occlusion Associated-Microaneurysms
- Naomi Nishigori, Yuki Muraoka, Shin Kadomoto, Akihito Uji, Masaharu Ishikura,
  Tomoaki Murakami, Sotaro Ooto, Akitaka Tsujikawa
  (Kyoto Univ)

**IP8-3** Comparison of detecting microaneurysms using fluorescein angiography, indocyanine green angiography and OCT angiography in diabetic macular edema
- Miho Nozaki, Yuichiro Ogura
  (Nagoya City Univ)

**IP8-4** Anteroposterior positions of retinal arterial macroaneurysms and their association with the visual prognosis
- Saori Sakaguchi, Yuki Muraoka, Sotaro Ooto, Tomoaki Murakami, Manabu Miyata,
  Akihito Uji, Shin Kadomoto, Naomi Nishigori, Akitaka Tsujikawa
  (Kyoto Univ)

**IP8-5** Withdraw

**IP8-6** Prevalence and distribution of venous loops and association with retinal ischemia in diabetic retinopathy using widefield swept-source optical coherence tomography angiography (WF SS-OCTA)
- John B Miller, Rongrong Le, Ying Cui, Edward S Lu, Ying Zhu, Raviv Katz, Itika Garg,
  Jay Wang, Yifan Lu, Ines Lains, Dean Elliott, Deeba Husain, Joan W Miller, Leo A Kim,
  David M. Wu, Demetrios G Vavvas
  (Massachusetts Eye and Ear Infirmary)