## **ASCRS Instructional Courses**

Title	Name	Nature of Relevant Financial Relationship (s)
IC-002 Astigmatism management in practice	Tina Khanam, FRCOphth, MBBS, BSc, MSc	No relevant financial relationships.
	Sharmina R Khan, MBBS, MSc, FRCOphth	No relevant financial relationships.
	Mayank A. Nanavaty, PhD	Alcon, R, C, S; Johnson & Johnson, R, C, S; Ziemer, IC
	Soosan Jacob, MS, DNB, FRCS	Ziemer, C
	Milind V. Pande, FRCS, FRCOphth	Hoya Surgical Optics, C; Johnson & Johnson, C
	Marwan Ghabra, FRCSEd	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-003 Refractive	Tushar Grover, MS	No relevant financial relationships.
Surgery Conundrums: Solving the toughest cases	Rushad C. Shroff, MS	No relevant financial relationships.
cases	Bhupesh Singh, DOMS	No relevant financial relationships.
	Pooja Khamar, MD, PhD	No relevant financial relationships.
	Madhu Uddaraju, MS	No relevant financial relationships.
	Divya Manohar, MS	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-101 Ocular surface in-office procedures	Clara C. Chan, MD, FRCSC	abbvie, C; Aurion biotech, A, IC; Bausch & Lomb, C; Claris bio, IC; Corneat, IC; Johnson & Johnson, C, IC; Kala Ophthalmics, A; Labtician, C, IC; Sun Ophthalmics, C, IC; Thea, C, IC; Vital Tears, IC
	Joshua C. Teichman, MD, MPH	Aequus, C, A; Alcon, C, A; Allergan, C, A; Aurion, R; Azura, R; Bausch and Lomb, R, C; Kowa, R; Labtician Thea, A; Novartis, C, A; Santen, A; Shire, A; Sun Pharma, A; Thea Pharma, C, A

	Neera Singal, FRCSC, MD	No relevant financial relationships.
	Manokamna Agarwal, MD	No relevant financial relationships.
	Allan R. Slomovic, MD, FRCS, MSc, ABO	Abbott, C; AiZtech, C; Alcon Labs, C; Bausch and Lomb, C; Johnson and Johnson, C; Labtician/Thea, S; Santen, S; Sun Pharma, S
	Ae Ra Kee, MBBS, FRCOphth	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-102 The Wonderful World of Iris Prostheses: A Case-	Michael E. Snyder, MD, ABO	HumanOptics, C
Based Compendium	Nicole R. Fram, MD, ABO	AbbVie, C; Alcon Laboratories, C, S; Alderya, C; Aurion Biotechnology, C, A; Beaver-Visitec International, C; Centricity Vision, C; Johnson & Johnson Vision, C, A, S; LayerBio, A; Microsurgical Technology, S; RxSight, C, S
	David R. Hardten, MD, FACS	Johnson & Johnson, C
	Samuel Masket, MD, ABO	CAPSULaser, A, SO; Morcher, RP
	Kevin M. Miller, MD	AbbVie, SU; Alcon, R, C; BVI, C; Johnson & Johnson, C, SU
	Kimberly Mangan	No relevant financial relationships.
IC-103 Optimising Toric IOL Outcomes	Ronald Yeoh, FRCSEd, FRCOphth	alcon, A, S; Johnson &Johnson, A, S; Rayner, A, S; Zeiss, A, S
	Tetsuro Oshika, MD, PhD	Alcon, R, C, S; HOYA Medical, R, C, S; Japan Focus, S; Johnson & Johnson Vision, R, C, S; Kowa, S; Novartis, R, S
	Graham D. Barrett, FRANZCO	Alcon, C, RP; Rayner, C, RP; Zeiss, C, RP
		No relevant financial relationships
	Kimberly Mangan	No relevant financial relationships.
	Kimberly Mangan Rania MS Zaki, MD, FRCSEd	No relevant financial relationships.
	Rania MS Zaki, MD,	

**IC-106 Mastering** Ike K. Ahmed, MD, Abbvie, R, C, A, S; Ace Vision, C, SO; Alcon, R, **Complex Anterior** FRCSC, ABO C, A, S; Aliph Medical, C, A; Apellis **Segment Surgery:** Pharmaceutical, C; Aquea Health, C, SO; ArcScan, C, SO; Avellino Lab, C, A; Avisi, C, Approach, Instrumentation. SO; Balance Ophthalmics, C; Baush and Lomb, **Ergonomics and** C, S; Beaver Visitec, C; Belkin Vision, C, SO; **Techniques** Beyeonics, C; Bionode, R, C; Carl Zeiss, C, S; Centricity Vision, C: CiliaTech, C: Corneat Vision, C, SO; Custom Surgical, C; Elios Vision, C, S; Elutimed, C; Exhaura Ltd, C, SO; Eye Q Technologies, C, SO; eyeFlow, Inc, C, SO; Glaukos, R, C, A, S; Gore, R, C, A; Hexiris Pharma, C, A, SO; lantrek, C, A, S; iCare, C, S; Implandata, C, A, SO; InjectSense, C, A, SO; Iridex, C, S; iStar, R, C, A; Johnson & Johnson Vision, C, A, S; LayerBio, C, SO; Liqid Medical, C; Long Bridge Medical, C, SO; Medicontur, C, S; MST Surgical, C; Myra Vision, R, C, A, S; New World Medical, C, A, S; Nova Eye, C, A, S; Ocular Instruments, C; Ocular Therapeutix, C; Oculus Surgical, C, A; OcuSciences, C; Omega Ophtalmics, C, SO; Ophthalmic Therapeutic Innovations, LLC, C, SO; Peripherex, C, SO; PolyActiva, C; PulseMedica, C, SO; Radiance Therapeutics, C; RadiusXr, C, A, SO; Rheon Medical, C; Ripple Therapeutics, C; Sanoculis, C, SO; Santen, C, S; Shifamed, C; Sight Sciences, C, A, S; Smartlens, C, SO; Stroma, C, SO; TFS Health Sciences, C; Thea Pharma, C, A; Vialase, R, C, A, S; Visci Ltd, C; Visus Therapeutics, C, A, SO; Zilia Inc, C, SO Abbvie, C, S; Alcon, C; Elios, C; EyeD Pharma, Ticiana De Francesco, C; Glaukos, C, S; lantrek, C; Myra Vision, C; MD Nova Eye Medical, C, S; Sight Sciences, C; ViaLase, C; Zeiss, C Maniool M Shah. MD. Abbvie, C; Alcon, C; Bausch and Lomb, C; ABO Corza, C; Glaukos, C; Nova, C Arsham Sheybani, MD, Abbvie, C; Alcon, C; Elios, C; Glaukos, C; Nova **ABO** Eve. C Kimberly Mangan No relevant financial relationships. **IC-108 Art of Correcting** Arun C. Gulani, MD, No relevant financial relationships. Laser Refractive and **ABO Premium Cataract Surgery Complications** Ashraf Armia AJL Ophthalmic, C, A, S; Cristalens, C, A, S; to 20/20/Happy. Balamoun, MD, FRCS, Rayner, C, A, S MSc, FACS Mitch A Jackson, MD, ACE Vision Group, SO; Bausch & Lomb, C; Johnson & Johnson, C; Lensar, C; Ocular ABO

Therapeutix, C; Oculus, C; RxSight, C; Zeiss, C

	William B. Trattler, MD, ABO	Alcon, C; Allergan, C; Aperta Bio, C; Bausch + Lomb, C, S; BVI, C; Carl Zeiss Meditec, C; Dompe, C; Johnson & Johnson, C; Lensar, C, SU; Ocular Science, C; Omega Ophthalmics, C; Raynor, C; STAAR, C; Sun, C; Thea, C; Tissue Tech, C; Versea, C; Visiox, C; Visus, C
	Arjan Hura, MD	Alcon, R, C, A, S; Allergan/AbbVie, A; B+L/AcuFocus, C, S; Bruder, A; BVI, C;H asaOptix, A; Johnson & Johnson Vision, C; LENSAR, C, S; Rayner, C, S; STAAR, C, S; Tarsus, C, A, S; Visus, A; Zeiss, C, A, S
	Inder P. Singh, MD	??
	Kimberly Mangan	No relevant financial relationships.
IC-110 Biometry Conundrums:	Rushad C. Shroff, MS	No relevant financial relationships.
Demystifying IOL power calculation in different scenarios	Mathew K. Kummelil, MS	No relevant financial relationships.
Scenarios	Tushar Grover, MS	No relevant financial relationships.
	Bhupesh Singh, DOMS	No relevant financial relationships.
	Pooja Khamar, MD, PhD	No relevant financial relationships.
	Reshma R Ranade, DNB	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-111 Pupilloplasty: Multiple methods to repair iris defects and	Zeba A. Syed, MD, ABO	Bio-Lattice, A; Bio-Tissue, C, S; Glaukos, R, C
achieve maximum visual performance	Steven B. Siepser, MD, FACS, ABO	Gulden Ophthalmics, RP
	Brandon D. Ayres, MD, ABO	Alcon, C; Baush and Lomb, C, S; Carl Zeiss Meditech, C; Microsurgical Technology, C; SightScience, C, S; Sun Pharma, C, S; Tarsus, C, S; Thea, C
	Hazem M. Yassin, MD	No relevant financial relationships.
	Beeran Meghpara, MD, ABO	Allergan, C; BioTissue, C; Dompe, C, S; Glaukos, C; Johnson & Johnson, C, S; Kala, C; Oculus, C; Orasis, C; Sight Sciences, C; Sun, C, S; Tarsus, C; Thea, C; WL Gore & Associates, C; Zeiss, C
	Marisa Schoen, MD, ABO	No relevant financial relationships.

	Kimberly Mangan	No relevant financial relationships.
IC-112 Customized Refractive and	Despoina Karadimou, MD	No relevant financial relationships.
Therapeutic Ablations in Regular and Irregular Eyes: A Didactic and Live Treatment-Designing Course	A. John Kanellopoulos, MD, ABO	Alcon, R; BioGentek, R; Zeiss, C
	Edward E. Manche, MD, ABO	Alcon, R; Allergan, R; Carl Zeiss Meditec, R; Johnson & Johnson Surgical, R, C; Novartis, R; Recordati RAlcon, R; Allergan, R; Carl Zeiss Meditec, R; Johnson & Johnson Surgical, R, C; Novartis, R; RxSight, SU
	Gregory Pamel, MD	No relevant financial relationships.
	Renato Ambrósio Jr., MD, PhD	Alcon, C; Zeiss, C
	Aleksandar D Stojanovic, MD, PhD	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-113 Challenging scenarios in keratoconus	Mayank A. Nanavaty, PhD	Alcon, R, C, S; Johnson & Johnson, R, C, S; Scope Pharmaceuticals, C; Thea Pharmaceuticals, S; Ziemer, IC
management	Kanwal K. Nischal, MBBS, FRCOphth	No relevant financial relationships.
	Gaurav Prakash, MD, FRCS	No relevant financial relationships.
	Roger Zaldivar, MD, MBA, MSc	Alcon, C, S; Arcscan, C, A, S; BVI, RP; Oculus, C, A, S; Revai Care LLC, A, S, RP; Staar Surgical, C, A, S; Trukera, S
	Kimberly Mangan	No relevant financial relationships.
IC-114 Save Thyself:	Kumar J. Doctor, MD	No relevant financial relationships.
Tackling the toughest iatrogenic complications of the	Amar Agarwal, MS, FRCS, FRCOphth	No relevant financial relationships.
year	Ramamurthy Dandapani, MD	No relevant financial relationships.
	Ike K. Ahmed, MD, FRCSC, ABO	Abbvie, R, C, A, S; Alcon, R, C, A, S; Baush and Lomb, C, S; Beaver Visitec, C; Belkin Vision, C, SO; Carl Zeiss, C, S; Centricity Vision, C;Gore, R, C, A; Johnson & Johnson Vision, C, A, S; LayerBio, C, SO; Long Bridge Medical, C, SO; Medicontur, C, S; MST Surgical, C; Ocular

Instruments, C, A; Omega Ophtalmics, C, SO;
Santen, C, S; Smartlens, C, SO; Visus
Therapeutics, C, A, SO

		Santen, C, S; Smartlens, C, SO; Visus Therapeutics, C, A, SO
	Soon-Phaik Chee, FRCSEd, FRCOphth	Alcon Laboratories, Inc., A, S; Bausch + Lomb, A, S; Kowa Asia Pacific, S; Ziemer Ophthalmics AG, C, A, S
	Samaresh Srivastava, MD	Alcon Laboratories, USA, R
	Kimberly Mangan	No relevant financial relationships.
IC-115 Femtosecond Intrastromal Lenticule	Osama S. Ibrahim, MD, PhD	No relevant financial relationships.
Extraction Beyond Virgin Eyes	Ramy A Elbassiouny, PhD, MRCSEd	No relevant financial relationships.
	Khaled A Elbassiouny, PhD, MRCSEd	No relevant financial relationships.
	Moones F. Abdalla, MD	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-116 Conundrums of the narrow space- Deal Angle Closure with ease	Nimrita Nagdev, MS, MBBS	No relevant financial relationships.
	Devendra Maheshwari, MD	No relevant financial relationships.
	Madhavi R Pillai, DNB, MBBS	No relevant financial relationships.
	Ganesh Venkataraman, MS, DNB	No relevant financial relationships.
	Prasanna V Ramesh, MS, DNB	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-117 VKC Unveiled: From Symptoms to Solutions	Parul Chawla Gupta, MS	No relevant financial relationships.
	Amit Gupta, MS	No relevant financial relationships.
	Jitender Jinagal, MBBS	No relevant financial relationships.
	Rohit Om Parkash, MS	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.

IC-118 Cornea Lumps and Bumps	Sumitra S. Khandelwal, MD, ABO	Abbvie, C; Bausch & Lomb, C; Carl Zeiss, C; Dompe, C; Johnson and Johnson, C; Tarsus, C
	Kourtney H. Houser, MD, ABO	Alcon, C, A; Bausch and Lomb, C; Carl Zeiss Meditec, A; CorneaGen, A; Dompe, C; Rayner, C
	Claudia E Perez- Straziota, MD, ABO	No relevant financial relationships.
	Julie M Schallhorn, MD, ABO	Abbvie, C; Glaukos, C; Greenman, SO; J&J Vision, C; Novus Vision, SO; Zeiss, C
	Zaina Al-Mohtaseb, MD, ABO	Alcon, C, A; Allergan, C, A; Bausch + Lomb, C, A; BVI, C, A; Carl Zeiss Meditec, C, A; Johnson & Johnson, C, A; Tarsus, C, A
	Kimberly Mangan	No relevant financial relationships.
IC-119 Learning Manual Small-Incision Cataract	Geoffrey C Tabin, MD	No relevant financial relationships.
Surgery: The Aravind Experience	Rengaraj Venkatesh, MD	No relevant financial relationships.
	Haripriya Aravind, MD	No relevant financial relationships.
	Keri F. Allen, MD, ABO	No relevant financial relationships.
	Divya Manohar, MS	No relevant financial relationships.
	Kapil Mishra, MD	Zeiss, C
	Kimberly Mangan	No relevant financial relationships.
IC-120 Learning Phaco Chop - Pearls & Pitfalls	Barry S. Seibel, MD, ABO	Bausch & Lomb, C, S, RP; Corza, RP; Zeiss, C
		Bausch & Lomb, C, S, RP; Corza, RP; Zeiss, C  Alcon, C; Carl Zeiss Meditec, C; Centricity, C, SO; Forsight Robotics, C, SO; ForSight V6, C, SO; Jellisee, C, SO; Johnson & Johnson Vision, C; Longbridge Medical, C, SO; Perfect Lens, C, SO; RxSight, C, SU
	ABO David F. Chang, MD,	Alcon, C; Carl Zeiss Meditec, C; Centricity, C, SO; Forsight Robotics, C, SO; ForSight V6, C, SO; Jellisee, C, SO; Johnson & Johnson Vision, C; Longbridge Medical, C, SO; Perfect Lens, C,
Chop - Pearls & Pitfalls  IC-121 Secondary IOL Implantation: What I	ABO David F. Chang, MD, ABO	Alcon, C; Carl Zeiss Meditec, C; Centricity, C, SO; Forsight Robotics, C, SO; ForSight V6, C, SO; Jellisee, C, SO; Johnson & Johnson Vision, C; Longbridge Medical, C, SO; Perfect Lens, C, SO; RxSight, C, SU
Chop - Pearls & Pitfalls  IC-121 Secondary IOL	ABO  David F. Chang, MD, ABO  Kimberly Mangan  Sergio F. Canabrava,	Alcon, C; Carl Zeiss Meditec, C; Centricity, C, SO; Forsight Robotics, C, SO; ForSight V6, C, SO; Jellisee, C, SO; Johnson & Johnson Vision, C; Longbridge Medical, C, SO; Perfect Lens, C, SO; RxSight, C, SU  No relevant financial relationships.

	Shin Yamane, MD	Alcon, S; HOYA, S
	John C. Hart Jr., MD, FACS	No relevant financial relationships.
	Kiranjit Singh, MS	No relevant financial relationships.
	Soon-Phaik Chee, FRCSEd, FRCOphth	Alcon Laboratories, Inc., A, S; Bausch + Lomb, A, S; Kowa Asia Pacific, S; Ziemer Ophthalmics AG, C, A, S
	Kimberly Mangan	No relevant financial relationships.
IC-123 Premium IOLs in Imperfect Eyes 2025	Kavitha R. Sivaraman, MD, ABO	Bausch & Lomb, C, S
	Michael E. Snyder, MD, ABO	Alcon, R; Bausch & Lomb, R; BVI, C; DORC, C; HumanOptics, C, RP; Johnson & Johnson, R; VEO Ophthalmics, RP; W.L. Gore & Associates, C
	Dagny Zhu, MD, ABO	Alcon, R, C, A, S; Bausch & Lomb, C, A; Bruder, A; Epion Therapeutics, R, A; Johnson & Johnson, C, A, S; Lenstec, C, S; Oculotix, C, A, SO; STAAR, C
	Leo A. Kim, MD, PhD, ABO	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-124 Advanced Corneal Topography for	Ming X Wang, MD, PhD, ABO	No relevant financial relationships.
Refractive Corneal and Refractive Lens Surgeons		
	Arun C. Gulani, MD, ABO	Glint, C, S
		Glint, C, S  No relevant financial relationships.
	ABO	
	ABO Kimberly Mangan Reza Razeghinejad,	No relevant financial relationships.
	ABO Kimberly Mangan Reza Razeghinejad, MD, ABO Arsham Sheybani, MD,	No relevant financial relationships.  Equinox, R; Olleyes, R  Abbvie, C; Alcon, C; Elios, C; Glaukos, C; Nova
	ABO Kimberly Mangan Reza Razeghinejad, MD, ABO Arsham Sheybani, MD, ABO Manjool M Shah, MD,	No relevant financial relationships.  Equinox, R; Olleyes, R  Abbvie, C; Alcon, C; Elios, C; Glaukos, C; Nova Eye, C  Abbvie, C; Alcon, C; Bausch and Lomb, C; Corza, C; Glaukos, C; Nova, C; ONL
	ABO Kimberly Mangan Reza Razeghinejad, MD, ABO Arsham Sheybani, MD, ABO Manjool M Shah, MD, ABO	No relevant financial relationships.  Equinox, R; Olleyes, R  Abbvie, C; Alcon, C; Elios, C; Glaukos, C; Nova Eye, C  Abbvie, C; Alcon, C; Bausch and Lomb, C; Corza, C; Glaukos, C; Nova, C; ONL Therapeutics, C

IC-129 Solving the Problems of Complex Cataract Surgery (Interactive Video-	Francis S. Mah, MD	Alcon, A; ClearSight, A; Horizon Surgical Systems, SO; Johnson & Johnson, A; Staar, A; Zeiss, A
Based Presentation)	Tae-im Kim, MD, PhD	No relevant financial relationships.
	Jimmy K. Lee, MD, ABO	No relevant financial relationships.
	Hun Lee, MD, PhD	No relevant financial relationships.
	Seong Jae Kim, MD	No relevant financial relationships.
	Martin Heur, MD, PhD, ABO	No relevant financial relationships.
	Junhun Lee	Alcon, S; HOYA, S; Carl Zeiss, C, S
	Youngsub Eom	Ophtec, R
	Kimberly Mangan	No relevant financial relationships.
IC-130 From Surface to Surgery: A Case-Based, Interactive & Hands-on	Gaurav Prakash, MD, FRCS	No relevant financial relationships.
Guide to Corneal Tomography andTopography in	Soosan Jacob, MS, DNB, FRCS	No relevant financial relationships.
Anterior Segment Surgery.	Mayank A. Nanavaty, PhD	Alcon, R, C, S; Johnson & Johnson, R, C, S; Thea Pharmaceuticals, S; Ziemer, IC
	Ivan Gabric, MD	Johnson & Johnson Surgical Vision, S, IC; Schwind Eye Tech Solutions, C, A, S; SIFI, S, IC
	Kimberly Mangan	No relevant financial relationships.
IC-131 Mastering corneal infiltrations and	Mohammad Soleimani, MD	No relevant financial relationships.
Infectious Keratitis after refractive surgeries including CXL; From A to Z	Ali R. Djalilian, MD, ABO	Brightstar Therapeutics, C
10 2	Elmer Y. Tu, MD, ABO	Oyster Point, C; Santen, C; Sifi, C
	Christopher J. Rapuano, MD, ABO	BioLattice, C, A; Sight Sciences, C, A
	Thomas Dohlman, MD, ABO	Alcon, R
	Albert Y. Cheung, MD	Brightstar Therapeutics, C
	Anthony J. Aldave, MD, ABO	Alcon, C; Combangio (Kala), C; Dompe, C

	Emine Esra Karaca, MD	No relevant financial relationships.
	Ozlem Evren Kemer, MD	No relevant financial relationships.
	Hajirah N. Saeed, MD, MPH, ABO	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-132 Keratoplasty in Inflamed Eyes: Tips and	Olivia L. Lee, MD, ABO	CorneaGen, C; Dompe, S; Harrow, C
Considerations	Wendy W Huang, MD, ABO	No relevant financial relationships.
	Miel Sundararajan, MD, ABO	No relevant financial relationships.
	Sanjay Kedhar, MD, ABO	??
	Kimberly Mangan	No relevant financial relationships.
IC-133 The Good, The Bad, and The Ugly in Complex Cataract	Gerard L Sutton, FRANZCO	No relevant financial relationships.
Cases	Karl G. Stonecipher, MD, ABO	AbbVie, R, C, A, S; AbbVie, R, C, A, S; Alcon, R, C, A, S; Alcon, R, C, A, S; Alcon, R, C, A, S, SO; Bausch and Lomb, R, C, A, S; CSI, R, C, A, S, SO; Dompe, C, A, S; Johnson & Johnson, C, A, S; Presbia, R, C; Rayner, R, C, A, S; Staar, C, A, S; Surface Pharmaceuticals, R; Tarsus, C, S
	Audrey R. Rostov, MD	Alcon, R; Bausch and Lomb, C, S; LENSAR, C; MST, A, S; STAAR, C; Zeiss, C, S
	Graham D. Barrett, FRANZCO	Alcon, C, RP; Rayner, C, RP; Zeiss, C, RP
	Daniel A Black, MD	Johnson & Johnson, C
	Cathleen M. McCabe, MD	Alcon, R, A, S; Allergan, C, S; Atia Vision, A; Bausch + Lomb, C, S, SU; Carl Zeiss Meditec,
		A, S; Jellisee, A, SO; Johnson & Johnson, R; LENSAR, R, A, S; Omeros Corporation, A, S; Rayner, R, A, S; RxSight, A, S
	Ben R. LaHood, MD, PhD, FRANZCO	LENSAR, R, A, S; Omeros Corporation, A, S;

	Kimberly Mangan	No relevant financial relationships.
IC-134 Introduction to Small-Incision Cataract	Sila B Bal, MD, MPH	Johnson and Johnson, C, S
Surgery for the Phaco Surgeon	Geoffrey C. Tabin, MD	No relevant financial relationships.
ourgeon	Jeff Pettey, MD, MBA	alcon, C; zeiss, C
	Rengaraj Venkatesh, MD	No relevant financial relationships.
	Sarah Amanullah, MD	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-135 Is This Case Keratoconus? Quantitative and	A. John Kanellopoulos, MD, ABO	Alcon, R; Zeiss, C
Qualitative Early Diagnosis and	Gregory Pamel, MD	No relevant financial relationships.
Progression Criteria using Modern Corneal Diagnostics: For	Stephen D. Klyce, PhD	Bausch, C; NIDEK, C; Optical Express, C; VIS, LLC, C
Cornea Experts and Refractive Surgeons	Renato Ambrósio Jr., MD, PhD	Alcon, C; Oculus, C; Zeiss, C
	Kimberly Mangan	No relevant financial relationships.
IC-200 Transitioning from LASIK to SMILE -	Aadithreya Varman, MS	No relevant financial relationships.
Nuances to Optimise Outcomes with Small	Arulmozhi Varman, MD	No relevant financial relationships.
Incision Lenticule Extraction	Sri Ganesh, FRCS, MS, DNB	Biotech vision care, A, S; Carl Zeiss Meditec, R, C, A, S; Medicel, C; Teleon, S; Zeimer, S
	Yugandhara Patade, MS, MBBS	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-201 What Went Wrong? Sleuthing Refractive Surprises	Seth M Pantanelli, MD, MS, ABO	Bausch & Lomb, R, C; Carl Zeiss Meditec, R, C, A; Hoya Surgical Optics, C
After Cataract Surgery	David L. Cooke, MD	Heidelberg Engineering, S; Moptim, RP
	Mitchell P. Weikert, MD, MS, ABO	Alcon Surgical, Inc, C; Carl Zeiss Medical, Inc, C; Epion Therapeutics, Inc, R, C
	Kimberly Mangan	No relevant financial relationships.

IC-203 Management of	Namrata Sharma, MD,	No relevant financial relationships.
Pre-existing and Post- operative Corneal and	FRCSEd, FRCOphth	The state of the s
Ocular Surface Problems during	Aafreen Bari, MD	No relevant financial relationships.
Phacoemulsification	Mark A. Terry, MD	Bausch and Lomb Surgical, RP
	Jodhbir S. Mehta, MBBS, FRCSEd, PhD	No relevant financial relationships.
	Anthony J. Aldave, MD, ABO	AcuraStem, C; Alcon, C; Ascidian Therapeutics, C; Avellino Laboratories, C; Combangio (Kala), C; Dompe, C; Guidepoint, C; Surrozen, C; Tarsus, C; Thea Pharmaceuticals, C; W. L. Gore & Associates, C
	Kimberly Mangan	No relevant financial relationships.
IC-204 Late complications of IOL	Siddhartha Ghosh, MS	No relevant financial relationships.
implantation	Kumar J. Doctor, MD	No relevant financial relationships.
	Debashis Dutta, MS	No relevant financial relationships.
	Arup Bhaumik, MS	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-205 Lessons From	Rohit Om Parkash, MS	No relevant financial relationships.
Cataract Surgical Errors : Identifying Causes,Prevention Strategies, and	David F. Chang, MD, ABO	Alcon, C; Carl Zeiss Meditec, C; Jellisee, C, SO; Johnson & Johnson Vision, C
Effective Management	Ronald Yeoh, FRCSEd, FRCOphth	alcon, A, S; Johnson & Johnson, A, S; Rayner, A, S; Zeiss, A, S
	Surendra Basti, MD, ABO	Johnson and Johnson Vision, C
	Richard Tipperman, MD	Alcon, A; BVI, A
	Tushya Om Parkash, MS	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-206 New Instruments and Devices in Cataract	Sergio F. Canabrava, MD, ABO	AJL Ophthalmic, RP
and Glaucoma Surgery	Durval M. Carvalho Jr., PhD	Alcon, S; Hoya, S; Jonhson&Jonhson, S; Zeiss, S

Michael Amon, PhD, Hoya, KOWA, Humanoptics, R; Rayner, Geuder, MD, FEBO Morcher, C, RP Michael E. Snyder, MD, Alcon, R; Bausch & Lomb, R; BVI, C; DORC, C; ABO HumanOptics, C, RP; Johnson & Johnson, R; VEO Ophthalmics, RP; W.L. Gore & Associates, С Ashraf Armia AJL Ophthalmic, C, A, S; cristalens, C, A, S; Balamoun, MD, FRCS, Rayner, C, A, S MSc, FACS Ike K. Ahmed, MD, Abbvie, R, C, A, S; Alcon, R, C, A, S; Baush and FRCSC, ABO Lomb, C, S; Carl Zeiss, C, S; Elios Vision, C, S; Glaukos, R, C, A, S; Gore, R, C, A; Hexiris Pharma, C, A, SO; Iridex, C, S; iStar, R, C, A; Johnson & Johnson Vision, C, A, S; Liquid Medical, C; Medicontur, C, S; Myra Vision, R, C, A, S; New World Medical, C, A, S; Nova Eye, C, A, S; Santen, C, S; Sight Sciences, C, A, S; Thea Pharma, C, A; Vialase, R, C, A, S; Visus Therapeutics, C, A, SO; Kimberly Mangan No relevant financial relationships. **IC-207 Cataract Surgery** Abhay R. Vasavada, Alcon Laboratories, Forthworth, USA, R **Crisis Management 101** MS, FRCS Robert H. Osher, MD Lenz, C 1stQ, R; Alcon, R, C, A, S; Carl zeiss Meditec, Gerd U. Auffarth, MD, PhD R, C, S; Contamac, R; Cristalens, R, C, S; Eyebright, S; EyeD, R; Eyedeal, R; Hanita, R, C, A, S; Johnson&Johnson, R, C, A, S; Kowa, R; Rayner, R, C, S; Teleon, R, S Nicole R. Fram, MD, AbbVie, C; Alcon Laboratories, C, S; Aurion Biotechnology, C, A; Beaver-Visitec ABO International, C; Carl Zeiss Meditec, R, C, S; Centricity Vision, C; Johnson & Johnson Vision, C, A, S; LayerBio, A; Microsurgical Technology, S RxSight, C, S Michael E. Snyder, MD, Alcon, R; Bausch & Lomb, R; BVI, C; DORC, C; **ABO** Haag-Streit, C; Johnson & Johnson, R; VEO Ophthalmics, RP; W.L. Gore & Associates, C

Kevin M. Miller, MD

Kimberly Mangan

AbbVie, SU; Alcon, R, C; BVI, C; Johnson &

No relevant financial relationships.

Johnson, C. SU

IC-208 Adopting Phakic IOLs to Correct High Myopia	Dimitrii D. Dementiev, MD	No relevant financial relationships.
	Matteo Piovella, MD	CARL ZEISS MEDITECH, C; CENTRICITY VISION, C; JOHNSON & JOHNSON, C
	David R. Hardten, MD, FACS	Johnson & Johnson, C
	Roger Zaldivar, MD, MBA, MSc	Alcon, C, S; Arcscan, C, A, S; Oculus, C, A, S; Quantel, A, S; Sonomed, A, S, RP; Staar Surgical, C, A, S; Teleon, C, A, S; Trukera, S
	Barbara Kusa, MD	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-210 Achieving refractive perfection of 20/20 vision after	Dana Barequet, MD, MHA	No relevant financial relationships.
penetrating and anterior lamellar keratoplasty	David S. Rootman, MD, FRCS	No relevant financial relationships.
	Clara C. Chan, MD, FRCSC	Bausch & Lomb, C; Claris bio, IC; Johnson & Johnson, C, IC; Kala Ophthalmics, A; Labtician, C, IC
	Randall Ulate, MD	No relevant financial relationships.
	Manokamna Agarwal, MD	No relevant financial relationships.
	Neera Singal	No relevant financial relationships.
	Ae Ra Kee	No relevant financial relationships.
	Mor Bareket	No relevant financial relationships.
	Joshua C. Teichman, MD, MPH	Alcon, C, A; Allergan, C, A; Aurion, R; Bausch and Lomb, R, C; Kowa, R; Labtician Thea, A
	Kimberly Mangan	No relevant financial relationships.
IC-213 Fundamentals of	Arthur C. Kurz, BSc	No relevant financial relationships.
transitioning from traditional to novel UT- DSAEK techniques in eyes with complex	Roberto Pineda II, MD, ABO	Alcon, C; Johnson and Johnson, C
anterior segment	Benjamin K. Lambright, MD, ABO	No relevant financial relationships.
	Leonard G Heydenrych, FRCOphth	No relevant financial relationships.

	Eric Abdullayev, MD, MBA, CEBT	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-214 An Update on Lenticule-Based Refractive Surgery (KLEX)	Raghav Malik, MD, FRCS	No relevant financial relationships.
(	D Ramamurthy, MD	No relevant financial relationships.
	Sri Ganesh, FRCS, MS, DNB	Biotech vision care, A, S; Carl Zeiss Meditec, R, C, A, S; Hoya surgicals, A, S; Medicel, C; Teleon, S; Zeimer, S
	Rohit Shetty, FRCS	No relevant financial relationships.
	Soosan Jacob, MS, DNB, FRCS	Madhu, RP; Ziemer, C
	Kimberly Mangan	No relevant financial relationships.
IC-216 All Things YAG: YAG Laser Pearls for Advanced Technology IOLs, Vitreous Floaters, Epithelial Cell Ingrowth,	Dagny Zhu, MD, ABO	AbbVie, C, A, S; Alcon, R, C, A, S; Bausch & Lomb, C, A; Johnson & Johnson, C, A, S; Lensar, R, C, A; Lenstec, C, S; STAAR, C; Visus, A
and other Complex Cases	Audrey R. Rostov, MD	Alcon, R; Bausch and Lomb, C, S; LENSAR, C; MST, A, S; STAAR, C; Zeiss, C, S
	Mitchell C. Shultz, MD, ABO	AbbVie, C, S; Alcon, C, IC; Bausch and Lomb, C, A, S, IC; BVI, C, IC; Johnson and Johnson, C; Nordic Pharm, C, S; RxSight, C, IC; Zeiss, C, IC
	Karl G. Stonecipher, MD, ABO	AbbVie, R, C, A, S; Alcon, R, C, A, S; Atia Vision, R, C, A, S, SO; Bausch, R, C, A, S; Johnson & Johnson, C, A, S; Rayner, R, C, A, S; Refocus, R STAAR, C, A, S
	Inder P. Singh, MD	Abbvie, C, A, S; Alcon, R, C, S; Bausch + Lomb, R, C, A, S; BVI, A; Glaukos, R, C, A, S; iStar Medical, R, A, S; New World Medical, R, A, S; Nova Eye, C, A, S; Ocuscience, A; Rayner, C, S; Rx Sight, S; Sight Sciences, S; Thea, C; Vista Ophthalmics, C, S; Zeiss, R, C, A, S
	Kimberly Mangan	No relevant financial relationships.

IC-217 YAG Laser Vitreolysis - a Comprehensive Instructional Course for treating patients with the acute onset of unexpected Obstructive Vitreous Opacities after refractive lens exchange or early	Scott L. Geller, MD, ABO	No relevant financial relationships.
cataract surgery	Kimberly Mangan	No relevant financial relationships.
IC-219 Vitrectomy for the Anterior Segment Surgeon	Greg SH Ogawa, MD, ABO	No relevant financial relationships.
9	Lorenzo Cervantes, MD	Bausch and Lomb, S
	Kimberly Mangan	No relevant financial relationships.
IC-222 Artificial Intelligence – A Salutary Asset to	Tulika Chauhan, MD, FRCOphth	No relevant financial relationships.
Cataract and Refractive Procedures	Raghav Malik, MD, FRCS	No relevant financial relationships.
	Garvita Dabas, MBBS, MS	No relevant financial relationships.
	Kanika Bhardwaj, MBBS, DNB	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-223 Corneal Topography and Tomography for the Cataract Surgeon: What	Jascha A. Wendelstein, MD	Alcon, S; Bausch and Lomb, S; Carl Zeiss Meditec AG, R, C, A, S; Heidelberg Engineering, S; Johnson & Johnson Vision, R
Do I Need to Know and Why Do I Need to Know It?  KAMRAN M. RIA ABO Seth M. Pantane MS, ABO	KAMRAN M. RIAZ, MD, ABO	Bausch and Lomb, C, S
	Seth M. Pantanelli, MD, MS, ABO	Bausch & Lomb, R, C; Carl Zeiss Meditec, R, C, A
	Kimberly Mangan	No relevant financial relationships.
IC-225 Management of Complications	Robert H. Osher, MD	Lenz, C
Encountered during Cataract Surgery	Kimberly Mangan	No relevant financial relationships.

IC-228 Early Diagnosis and Management of Low-Tension Glaucoma in High Risk Population	Hosam El Sheha, MD, PhD	No relevant financial relationships.
iii nigii kisk Population	Kimberly Mangan	No relevant financial relationships.
IC-229 Understanding topography and corneal aberrations.	Warren E. Hill, MD, FACS	Alcon, C
doctrations.	Kimberly Mangan	No relevant financial relationships.
IC-230 Emerging Alternatives to Human Donor Tissue for	Namrata Sharma, MD, FRCSEd, FRCOphth	No relevant financial relationships.
Management of Corneal Opacification	Anthony J. Aldave, MD, ABO	Alcon, C; Combangio (Kala), C; Dompe, C
	Sophie X. Deng, MD, PhD, ABO	Cellusion, C
	Esen K. Akpek, MD	No relevant financial relationships.
	David S. Rootman, MD, FRCS	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-231 Simulation- Based Education in	Kimberly Mangan  Helena Filipe, MD, M.Ed	No relevant financial relationships.  No relevant financial relationships.
	Helena Filipe, MD,	
Based Education in	Helena Filipe, MD, M.Ed	No relevant financial relationships.
Based Education in	Helena Filipe, MD, M.Ed Prashant Garg, MD Van C Lansingh, MD,	No relevant financial relationships.  No relevant financial relationships.
Based Education in	Helena Filipe, MD, M.Ed Prashant Garg, MD Van C Lansingh, MD, PhD, MBA, FACS	No relevant financial relationships.  No relevant financial relationships.  No relevant financial relationships.
Based Education in Ophthalmology  IC-301 Therapeutic and Refractive Approach to	Helena Filipe, MD, M.Ed  Prashant Garg, MD  Van C Lansingh, MD, PhD, MBA, FACS  Hunter Cherwek, MD	No relevant financial relationships.  No relevant financial relationships.  No relevant financial relationships.  No relevant financial relationships.
Based Education in Ophthalmology  IC-301 Therapeutic and	Helena Filipe, MD, M.Ed  Prashant Garg, MD  Van C Lansingh, MD, PhD, MBA, FACS  Hunter Cherwek, MD  Kimberly Mangan  Chitra R. Ramamurthy,	No relevant financial relationships.
Based Education in Ophthalmology  IC-301 Therapeutic and Refractive Approach to	Helena Filipe, MD, M.Ed  Prashant Garg, MD  Van C Lansingh, MD, PhD, MBA, FACS  Hunter Cherwek, MD  Kimberly Mangan  Chitra R. Ramamurthy, DO  Sri Ganesh, FRCS, MS,	No relevant financial relationships.  No relevant financial relationships.

	Kumar J. Doctor, MD	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC 202 Fundamentals of	Arthur C. Kurr D.C.	No relevant financial relations him -
IC-302 Fundamentals of transitioning from	Arthur C. Kurz, BSc	No relevant financial relationships.
traditional to novel DMEK techniques in eyes with complex anterior segment	Ellen H. Koo, MD, ABO	Emmecell, R
	Leonard G Heydenrych, FRCOphth	No relevant financial relationships.
	Benjamin K. Lambright, MD, ABO	No relevant financial relationships.
	Takahiko Hayashi, MD, PhD, MBA	No relevant financial relationships.
	Eric Abdullayev, MD, MBA, CEBT	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-303 When Phaco is	Sathya T. Ravilla, MS	No relevant financial relationships.
not an Option, MSICS to the rescue!	Divya Manohar, MS	No relevant financial relationships.
	Haripriya Aravind, MD	No relevant financial relationships.
		·
	Rengaraj Venkatesh, MD	No relevant financial relationships.
	Ashok Vardhan Sundara Varadhan, DNB, MBBS	No relevant financial relationships.
	Vivekanandan VR Ramakrishnan, MS	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-305 Calm Through Chaos: Techniques to Manage Surgical Stress, Reduce Burnout, and Enhance Engagement	Erin S. Seefeldt, MD, ABO	No relevant financial relationships.
	Eric A Bean, PhD	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-306 Best of ASCRS 2024 (Presented in	Manuel Nicoli, MD	No relevant financial relationships.
Spanish)	Carlos Palomino, FEBO, PhD, MD	No relevant financial relationships.

	William De La Peña, MD	No relevant financial relationships.
	Fernanda Corzo- Camberos, MD	No relevant financial relationships.
	Valentina Cortina Revelli, MD	No relevant financial relationships.
	Agustin Carron, MD	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-307 Symposium of Challenging Cases - Sponsored by	Durval M Carvalho, MD	Alcon, S; Zeiss, S; Hoya, S; Johnson & Johnson, S
BRASCRS (Brazilian Association of Cataract and Refractive	Newton Andrade Jr., MD, PhD	No relevant financial relationships.
Surgery).	David R Lucena, MD, PhD	No relevant financial relationships.
	Gustavo V Baptista, MD, PhD	No relevant financial relationships.
	Beeran Meghpara, MD, ABO	Allergan, C; BioTissue, C; Dompe, C, S; Glaukos, C; Johnson & Johnson, C, S; Kala, C; Oculus, C; Orasis, C; Sight Sciences, C; Sun, C, S; Tarsus, C; Thea, C; WL Gore & Associates, C; Zeiss, C
	Roberto Pineda II, MD, ABO	Alcon, C; Johnson and Johnson, C
	Kevin M. Miller, MD	AbbVie, SU; Alcon, R, C; BVI, C; Horizon Medical, SO; Johnson & Johnson, C, SU
	Leila S Gouvea, MD	Alcon, S
	Roberto P. Coelho, MD	No relevant financial relationships.
	Sandro A. Coscarelli, MD	No relevant financial relationships.
	Leonardo C Gontijo, MD	No relevant financial relationships.
	Bruno C. Trindade, MD, PhD	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.

IC-308 An Intraoperative Neophyte Gonioscopist's	Prasanna V Ramesh, MS, DNB	No relevant financial relationships.
Videographic Atlas With Practical Focal Points On Various MIGS / Ticket To Excellence For Developing World With 4D Self-Built, Smart & Portable Holographic Surgical Simulation Module -	Rengaraj Venkatesh, MD	No relevant financial relationships.
	Sathyan Parthasarathi, DNB	No relevant financial relationships.
	Devendra Maheshwari, MD	No relevant financial relationships.
Live Demonstration!	Madhavi R Pillai, DNB, MBBS	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-309 Eye and Contact Lens Association	Natalie A. Afshari, MD, FACS	No relevant financial relationships.
Symposium; Update on Infections: What Every Refractive Surgeon	Joann J. Kang, MD	Sanofi, C
Needs to Know	Gerami Seitzman, MD, ABO	Dompé Pharmaceuticals, C
	Jennifer R. Rose- Nussbaumer, MD	No relevant financial relationships.
	Roberto Pineda II, MD, ABO	Alcon, C; Johnson and Johnson, C; Sanofi Genzyme, C
	Deepinder K. Dhaliwal, MD	Aurion Biotech, A; Bausch and Lomb, A; CSI Dry Eye, A; Epion, R, A; EyeYon, A; Johnson and Johnson, A; Kala, R; Scope, A; Trefoil, A
	Kimberly Mangan	No relevant financial relationships.
IC-310 Choose Your Own Adventure:	David A. Crandall, MD, ABO	No relevant financial relationships.
Challenging Anterior Segment Cases	Pagment Cases  Nicole R. Fram, MD, ABO  AbbVie, C; Alcon Laboratories, C Aurion Biotechnology, C, A; Bear International, C; Carl Zeiss Medir Centricity Vision, C; Dompe, S; C Johnson & Johnson Vision, C, A Microsurgical Technology, S; Ne Medical, C, S; Ocular Theraputix	AbbVie, C; Alcon Laboratories, C, S; Alderya, C; Aurion Biotechnology, C, A; Beaver-Visitec International, C; Carl Zeiss Meditec, R, C, S; Centricity Vision, C; Dompe, S; Glaukos, C; Johnson & Johnson Vision, C, A, S; LayerBio, A; Microsurgical Technology, S; New World Medical, C, S; Ocular Theraputix, R; Orasis, A, SO; OSRX, A, SO; RxSight, C, S; Tarsus, C, S
	Kourtney H. Houser, MD, ABO	Alcon, C, A; Bausch and Lomb, C; Carl Zeiss Meditec, A; CorneaGen, A; Dompe, C; Rayner, C; Sight Sciences, C, A

	Manjool M Shah, MD, ABO	Abbvie, C; Alcon, C; Bausch and Lomb, C; Corza, C; Glaukos, C; Nova, C; ONL Therapeutics, C
	Arsham Sheybani, MD, ABO	Abbvie, C; Alcon, C; Elios, C; Glaukos, C; Nova Eye, C
	Kimberly Mangan	No relevant financial relationships.
IC-311 Posterior	Bharathi D Megur, MS	No relevant financial relationships.
Capsule tear - All is not lost	Deepak u Megur, FRCSEd	No relevant financial relationships.
	Soon-Phaik Chee, FRCSEd, FRCOphth	Alcon Laboratories, Inc., A, S; Bausch + Lomb, A, S; Kowa Asia Pacific, S
	Jason J. Jones, MD	Alcon, IC; Johnson & Johnson Vision, C, A, S, IC; SpyGlass, IC; Zeiss, S
	Neto Rosatelli, BSc	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.
IC-312 Complex Cataract Scenarios - Made Simple	Vivekanandan VR Ramakrishnan, MS	No relevant financial relationships.
	Haripriya Aravind, MD	No relevant financial relationships.
	Cathleen M. McCabe, MD	Alcon, R, A, S; Atia Vision, A; Bausch + Lomb, C, S, SU; Carl Zeiss Meditec, A, S; Jellisee, A, SO; Johnson & Johnson, R; LENSAR, R, A, S; Rayner, R, A, S; RxSight, A, S; Visus, A, SO
	Nivean M Madhivanan Sr., MS	No relevant financial relationships.
	Ashok Vardhan Sundara Varadhan, DNB, MBBS	No relevant financial relationships.
	Divya Manohar, MS	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.

IC-313 Best of ASCRS: Sponsored by BRASCRS (Brazilian Society of Cataract and Refractive Surgery); Presented in Portuguese	Newton Andrade Jr., MD, PhD	No relevant financial relationships.
	David R Lucena, MD, PhD	No relevant financial relationships.
	Gustavo V Baptista, MD, PhD	No relevant financial relationships.
	Durval M. Carvalho Jr., PhD	Alcon, S; Hoya, S; Jonhson&Jonhson, S; Zeiss, S
	Leila S Gouvea, MD	Alcon, S
	Kimberly Mangan	No relevant financial relationships.
IC-314 DMEK in challenging situations	Hazem M. Yassin, MD	No relevant financial relationships.
	Rania MS Zaki, MD, FRCSEd	No relevant financial relationships.
	Audrey R. Rostov, MD	Bausch and Lomb, C, S
	Namrata Sharma, MD, FRCSEd, FRCOphth	No relevant financial relationships.
	Kimberly Mangan	No relevant financial relationships.