Workshop A: Continuous Glucose Monitoring
Location: Grand Ballroom Salon D

Panel 1: Technical

8:00  Moderators
Naomi Schwartz, MS
United States Food and Drug Administration, Silver Spring, Maryland
Koji Sode, PhD
University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

8:05  Technology to Improve Performance
Peter Simpson, MS
Dexcom, San Diego, California

8:20  Technology to Improve Performance
Robert Mucic, PhD
Medtronic Diabetes, Northridge, California

8:35  Technology to Improve Performance
Yanan Zhang, PhD
Zhejiang POCTech Co., Ltd., Huzhou, China

8:50  A Novel Implanted Osmotic Glucose Sensor
Andreas Pfützner, MD, PhD
Pfützner Science and Health Institute, Mainz, Germany

9:05  Technology to Improve Performance
Alex Ghesquiere, BS
Senseonics, Germantown, Maryland

9:20  Q & A

9:35  Break

Panel 2: Interstitial Fluid

9:55  Moderators
Jeff Labelle, PhD
Grand Canyon University, Phoenix, Arizona
Dorian Liepmann, PhD
University of California, Berkeley, Berkeley, California

10:00  Interstitial Fluid Physiology
Sanjiv Sharma, PhD
Swansea University, Wales, United Kingdom

10:15  Limitations of Current Transdermal CGM Devices from a Tissue Perspective
Ulrike Klueh, PhD
Wayne State University, Detroit, Michigan

10:30  Sampling Interstitial Fluid from Skin Using a Microneedle Patch
Mark Prausnitz, PhD
Georgia Institute of Technology, Atlanta, Georgia

10:45  Harvesting and Assaying ISF Using Microneedles
Philip Mach, PhD, MRSC
US Army, Aberdeen Proving Ground, Maryland

11:00  Q & A

11:30  End of Workshop/Lunch
Workshop B: Diabetic Complications: Success and Failure
Location: White Flint Amphitheater

Panel 1: Success with Foot Ulcers

8:00  Moderators
Robert Burk, MD
Albert Einstein College of Medicine, Bronx, New York
Jerry Sydorak, MD
Campus Surgery Center, Burlingame, California

8:05  NIH Programs for Diabetes Foot Wound Technology
Teresa Jones, PhD
National Institutes of Health, Bethesda, Maryland

8:20  Will Smart Technologies Make Our Treatment Smarter? The Promise and Barriers of Digital Health to Manage Diabetic Foot Complications
Bijan Najafi, PhD
Baylor College of Medicine, Houston, Texas

8:35  Smart Shoes and DFU Prevention
Josh White
Sensoria Inc., Redmond, Washington

8:50  Smart Mat Platform and Prevention of DFU
Jon Bloom, MD
Podimetrics, Cambridge, Massachusetts

9:05  Q & A

9:35  Break

Panel 2: Overcoming Barriers

9:55  Moderators
Stacey Anderson, MD, CDTC
University of Virginia, Charlottesville, Virginia
Ilias Spanakis, MD
University of Maryland, Baltimore, Maryland

10:00  Hypoglycemia Alarms
Bruce Buckingham, MD
Stanford University, Palo Alto, California

10:15  Insulin Pump Occlusions
Guido Freckmann, MD
Institute for Diabetes Technology GmbH, Ulm, Germany

10:30  Modeling CGM or AP Failure
Eyal Dassau, PhD
Harvard University, Cambridge, Massachusetts

10:45  Local Temperature Control of Insulin Absorption
Gabriel Bitton, PhD, MS
InsuLine Medical Ltd, Petah Tikva, Israel

11:00  Q & A

11:30  End of Workshop/Lunch
Workshop C: Digital Health  
Location: Grand Ballroom Salon D

Panel 1: Insulin Dosing

12:30 Moderators  
Rosemarie Oshinsky, RN, CDE  
Sibley Memorial Hospital, Bethesda, Maryland  
Kayo Waki, MD, PhD, MPH  
University of Tokyo, Tokyo, Japan

12:35 Potential Benefits of Smart Insulin Pens  
David Kerr, MD  
Sansum Diabetes Research Institute, Santa Barbara, California

12:55 Insulin Pen Technology  
Anders Toft, MD, PhD, eMBA  
Novo Nordisk, Copenhagen, Denmark

13:15 Mobile Apps for Insulin Dosing  
Jessica Castle, MD  
Oregon Health Sciences University, Portland, Oregon

13:35 Insulin Dosing Metrics  
Jennal Johnson, FNP, MS  
Eli Lilly, Indianapolis, Indiana

13:55 Q & A

14:05 Break

Panel 2: Lifestyle

14:25 Moderators  
David Kerr, MD  
Sansum Diabetes Research Institute, Santa Barbara, California  
Andrzej Kropwnicki, MA  
Alfa Communications, Warsaw, Poland

14:30 Person-Centered Diabetes Technology: Why We Have to Do Better  
Korey Hood, PhD  
Stanford University, Palo Alto, California

14:45 Using Digital Health to Increase Adherence  
Maureen Monaghan, PhD, CDE  
Children’s National Hospital, Washington, DC

15:00 The Benefits of Integrated Care  
Chris Boulton, BSc  
Sanofi, Bridgewater, New Jersey

15:15 Cybersecurity of Medical Devices  
Aiman Abdel-Malek, PhD  
ThirdwayV Inc., Irvine, California

15:30 Q & A

16:00 End of Workshop

16:30 Poster Session Night One, Startup Showcase, and Inauguration of the 19th Annual Diabetes Technology Meeting

18:30 Posters Remain on Display for Viewing
Location: White Flint Amphitheater

Panel 1: Glucose Data
12:30  Moderators
Mark Arnold, PhD
University of Iowa, Iowa City, Iowa
Anant Nigam, MD, FRCP
Nigam Diabetes Center, Jaipur, India

12:35  Strategies to Enhance the Value of Glucose Data: Integrating – Sharing – Expanding Access
Rolf Hinzmann, MD, PhD
Roche Diagnostics, Mannheim, Germany

12:50  The Need for a Standard for Color-Coded Blood Glucose Values
Larry Katz, PhD
LifeScan, Wayne, Pennsylvania

13:05  Glycemic Variability Metrics: Comparison of SMBG and CGM
David Rodbard, MD
Biomedical Informatics Consultants LLC, Potomac, Maryland

13:20  Glucose Meter Adverse Events
Jan Krouwer, PhD
Krouwer Consulting, Sherborn, Massachusetts

13:35  Q & A

14:05  Break

Panel 2: The Future
14:25  Moderators
Kong Chen, PhD
NIDDK/NIH, Bethesda, Maryland
Robert Gabbay, MD, PhD
Joslin Diabetes Center, Boston, Massachusetts

14:30  Debate: Does SMBG Have a Future?
Nick Argento, MD, FACE
Maryland Endocrine and Diabetes, Columbia, Maryland
Timothy Bailey, MD, FACE, FACP, CPI
AMCR Institute, Escondido, California

15:20  New Technology for BGM
Andreas Pfützner, MD, PhD
Pfützner Science and Health Institute, Mainz, Germany

15:35  What Do We Want from the Future?
John Pickup, MA, BM, DPhil, DSc, FRCPath
King’s College London, London, United Kingdom

15:50  Importance of Cybersecurity for BGMs
Robert Hurtz, MS
Ascensia Diabetes Care, Tarrytown, New York

16:05  Q & A

16:25  End of Workshop

16:30  Poster Session Night One, Startup Showcase, and Inauguration of the 19th Annual Diabetes Technology Meeting

18:30  Posters Remain on Display for Viewing
7:00  Continental Breakfast

Session 1: Biosensing and Diabetes Data Science

8:00  Welcome/Opening Remarks
David Klonoff, MD, FACP, FRCP (Edin), Fellow AIMBE
Mills-Peninsula Medical Center, San Mateo, California
UCSF, San Francisco, California

8:05  KEYNOTE: Research Opportunities for Diabetes Using Bioengineered Tools
Bruce Tromberg, PhD
Director, National Institute of Biomedical Imaging and Bioengineering, Bethesda, Maryland

8:30  Moderators
Wayne Bequette, PhD
Rensselaer Polytechnic Institute, Troy, New York
Robert Gabbay, MD, PhD
Joslin Diabetes Center, Boston, Massachusetts

8:35  Optimizing Glycemic Outcomes Through New Biosensors, Machine Learning, and Adaptive Control
Peter Jacobs, PhD
Oregon Health and Science University, Portland, Oregon

8:50  Accelerating Product Innovation via Simulation
Stephen Patek, PhD
Dexcom, Charlottesville, Virginia

9:05  Using Big Data for Diabetes Technology Research
Ashutosh Sabharwal, PhD
Rice University, Houston, Texas

9:20  Q & A

9:40  Break
Session 2: Regulation of Diabetes Technology

10:05 Moderators
Zan Fleming, MD
Kinexum, Harpers Ferry, West Virginia
Alberto Gutierrez, PhD
NDA Partners, LLC, Bethesda, Maryland

10:10 MAUDE Database
Alain Silk, PhD
United States Food and Drug Administration, Silver Spring, Maryland

10:20 Real World Evidence for Clinical Trials
Yiduo Wu, PhD
United States Food and Drug Administration, Silver Spring, Maryland

10:30 Interoperable Devices – iCGM and ACE Designation
Joshua Balsam, PhD
United States Food and Drug Administration, Silver Spring, Maryland

10:40 Cybersecurity
Naomi Schwartz, MS
United States Food and Drug Administration, Silver Spring, Maryland

10:50 SaMD/Precertification Program
Bakul Patel, MSEE, MBA
United States Food and Drug Administration, Silver Spring, Maryland

11:00 Navigating the FDA Process
Yarmela Pavlovic, JD
Hogan Lovells, San Francisco, California

11:10 Q & A
11:35 End of Session/Lunch

Session 3: CGM Data Analysis

12:35 DTS Leadership Award

12:40 Moderators
Will Cefalu, MD
NIDDK/NIH, Bethesda, Maryland
John Melish, MD
University of Hawaii, Kailua, Hawaii

12:45 Time in Range: A Critical Appraisal
Lutz Heinemann, PhD
Science & Co., Düsseldorf, Germany

13:00 The Importance of Time-In-Range in Assessing Glycemic Control
Richard Bergenstal, MD
International Diabetes Center, Minneapolis, Minnesota

13:15 CGM Data Structure and Analysis of Time-In-Range and Other Metrics of Glycemic Control
Boris Kovatchev, PhD
University of Virginia, Charlottesville, Virginia

13:30 FDA Perspective on CGM-Based Biomarkers
Courtney Lias, PhD
United States Food and Drug Administration, Silver Spring, Maryland

13:40 Q & A
Session 4: Artificial Pancreas

13:45  Moderators
Guillermo Arreaza-Rubin, MD
NIDDK/NIH, Bethesda, Maryland
Jeffrey Joseph, DO
Thomas Jefferson University, Philadelphia, Pennsylvania

13:50  Artificial Pancreas Award

13:55  An Overview of Recent Studies
Boris Kovatchev, PhD
University of Virginia, Charlottesville, Virginia

14:05  Project Nightlight
Sue Brown, MD
University of Virginia, Charlottesville, Virginia

14:15  CamAPS FX – Taking Forward the Cambridge Artificial Pancreas Experience
Roman Hovorka, PhD
University of Cambridge, Cambridge, United Kingdom

14:25  Advances in Closed Loop Therapies
Patrick Weydt, MBA
Medtronic Diabetes, Northridge, California

14:35  Closed Loop Without a Meal Announcement
Ali Cinar, PhD
Illinois Institute of Technology, Chicago, Illinois

14:45  Did We Get What We Ordered? Insulin, Infusion Lines, Modeling, and Control
Geoff Chase, PhD
University of Canterbury, Christchurch, New Zealand

14:55  Q & A

15:10  End of Session/Break
Session 5: How to Increase Use of CGM

15:35  Moderators
      Sammy Choi, MD
      Womack Army Medical Center, Fort Bragg, North Carolina
      Ronnie Goodstein, PhD
      Georgetown University, Washington, District of Columbia

15:40  How to Increase Use of CGM
      Roy Beck, MD, PhD
      JAEB Center for Health Research, Tampa, Florida
      Bruce Buckingham, MD
      Stanford University, Palo Alto, California
      Francine Kaufman, MD
      Senseonics, Germantown, Maryland
      David Price, MD
      Dexcom, San Diego, California
      Andreas Stuhr, MD, MBA
      Ascensia Diabetes Care, Parsippany, New Jersey
      Robert Vigersky, MD
      Medtronic Diabetes, Washington, District of Columbia

16:15  Q & A

16:25  End of Session

16:30  Poster Session Night Two and Startup Showcase

18:30  Posters Remain on Display for Viewing
7:00  Continental Breakfast

Session 6: Novel Insulins

8:00  Moderators
     Gerold Grodsky, PhD
     UCSF, San Francisco, California
     Nestoras Mathioudakis, MD
     Johns Hopkins University, Baltimore, Maryland

8:05  Welcome/Recap of First Day and Presentation of Student Award
     David Klonoff, MD, FACP, FRCP (Edin), Fellow AIMBE
     Mills-Peninsula Medical Center, San Mateo, California
     UCSF, San Francisco, California

8:10  Gold Prize Student Presentation: A Comparison of Macronutrient and Energy Content Estimates by goFOOD™ vs Dietitians: A Preliminary Analysis
     Maria Vasiloglou, MSc
     University of Bern, Bern, Switzerland

8:25  Novel Glucagon Formulations
     Jessica Castle, MD
     Oregon Health Sciences University, Portland, Oregon

8:45  Future Insulins: Gazing into a Crystal Ball
     Tim Heise, MD
     Profil, Neuss, Germany

9:05  An Ultra-Stable Single Chain Insulin Analog
     Michael Weiss, MD
     Case Western University, Cleveland, Ohio

9:25  Hepatic Directed Insulin
     Doug Muchmore, MD
     Diasome, Cleveland, Ohio

9:45  Q & A

10:05  Break
Session 7: Novel Insulin Delivery Technology

10:25  Moderators
Andrew Bremer, MD, PhD  
NICHD/NIH, Bethesda, Maryland  
Julia Mader, MD, PhD  
Medical University of Graz, Graz, Austria

10:30  Technologies for Improved Insulin Delivery Are Necessary, but Are They Sufficient?  
David Harlan, MD  
University of Massachusetts, Worcester, Massachusetts

10:45  Smart Insulin  
Sanjoy Dutta, PhD  
JDRF, New York, New York

11:00  An Insulin Pill That Delivers: Micro-Injections in the Gut  
Alex Abramson, PhD  
Stanford University, Palo Alto, California

11:15  Inhaled Insulin  
David Kendall, MD  
MannKind Corporation, Thousand Oaks, California

11:30  Critical Factors for Insulin Delivery: Towards an Understanding of Uptake Variability  
Ron Pettis, PhD  
BD, Research Triangle Park, New Jersey

11:45  Q & A

12:00  End of Session/Lunch

Session 8: Disposal of Waste from Diabetes Products

13:00  Moderators  
Hubert Vesper, PhD  
Centers for Disease Control and Prevention, Atlanta, Georgia  
Alicia Warnock, MD  
Stability Health, Worcester, Massachusetts

13:05  Waste and Diabetes Technology: A Call for Action  
Lutz Heinemann, PhD  
Science & Co., Düsseldorf, Germany

13:20  Global Burden of Diabetes – from an Environmental Perspective  
Ed Krisiunas, MPH  
WNWN International, Burlington, Connecticut

13:35  Challenges for a Manufacturer to Reduce Waste Production  
Tobias Stumpe, BS  
Convatec, Copenhagen, Denmark

13:50  Q & A
Session 9: Hot Topics

14:05 Moderators
Thanh Hoang, DO
Walter Reed National Military Medical Center, Bethesda, Maryland
Victor Schneider, MD
NASA Headquarters, Washington, District of Columbia

14:10 Environmental Causes of Diabetes
Sultan Ayoub Meo, MD, PhD, FRCP
King Saud University, Riyadh, Saudi Arabia

14:25 Hypoglycemia Reduction as an End Point for Trials of Diabetes Products
Alexander Fleming, MD
Kinexum Services LLC, Harpers Ferry, West Virginia

14:40 A New Mathematical Link Between A1C and Blood Glucose
Yongjin Xu, PhD
Abbott Diabetes Care, Alameda, California

14:55 Q & A

15:10 Break

Session 10: Do It Yourself

15:35 Moderators
Carol Levy, MD, CDE
Icahn School of Medicine at Mount Sinai, New York, New York
John Pickup, MA, BM, DPhil, DSc, FRCPath
King’s College London, London, United Kingdom

15:40 Factors Affecting Support of DIY Systems in Routine Clinical Care
Katharine Barnard, PhD
Bournemouth University, Hampshire, United Kingdom

15:55 The Bleeding Edge: Open Source Algorithms, Research, and What’s Next
Dana Lewis, BA
OpenAPS, Seattle, Washington

16:10 Q & A

Session 11: Live Demonstrations

16:20 Moderator
John Pickup, MA, BM, DPhil, DSc, FRCPath
King’s College London, London, United Kingdom

16:25 Glooko – The Standard for Diabetes Data Management
Dave Conn, BA
Glooko, Inc., Mountain View, California
Mark Clements, MD, PhD
Glooko, Inc., Mountain View, California

16:40 Duodenal Mucosa Resurfacing for the Treatment of Type 2 Diabetes
Juan Carlos Lopez-Talavera, MD, PhD
Fractyl Laboratories, Inc., Lexington, Massachusetts

17:00 Adjourn