Tuesday 13th of December 2016
morning

		Opening and Morning Keynote Session (9.30 – 10.45)					
		Effectenbeurszaal					
Chair	**09.30-09.45**	**Peter Munk,** TI-Coast					
Keynote	**09.45-10.15**	Regeneration-on-a-chip: application of novel tools to advance the field of tissue and organ regeneration **Pamela Habibovic**, MERLN Institute for Technology-Inspired Regenerative Medicine (UM)					
Keynote	**10.15-10.45**	Modern Medicine: Crossing the Bridge from Microfluidics to Connected Health & Blended Reality for Life **Ali Tinazli** – Global Head of Healthcare and Life Sciences Strategy CTO Office - Strategy & Incubation, HP, USA					
Break	**10.45-11.15**	***Break/exhibition/poster session – Grote Zaal***					
		Parallel sessions (11.15 – 12.45)					**Workshops***
			Effectenbeurszaal	*Berlage zaal*	*Veilingzaal*	*Administratiezaal*	
Morning session	**11.15 - 12.45**	*Session title*	*Microfluidics & Lab- on-Chip (1)*	*Nano Instrumentation & Metrology*	*Organ-on-a-Chip (1)*	*Entrepreneurial Session (1) Scaling Up in MicroNano Business*	
		Chair	**Peter van Stiphout**, Bionchip	**Martijn Fransen**, PANalytical	**Janny van den Eijnden-van Raaij**, Institute for human Organ and Disease Model Technologies	**Willem van den Berg,** Value Creation Capital	
	11.15-11.45	*Invited speaker*	Microfluidics Without Borders – Acoustic Droplet Ejection Technology and Applications **Sammy Datwani**, Labcyte, USA	Direct-Write 3D Nanoprinting using Focused Electron Beams **Harald Plank**, Graz University of Technology, Austria	Towards a Human-on-a-Chip – Where Are We? **Eva Dehne**. TissUse GmbH, Germany	Industry, Academia & Growing a high tech SME – lessons learned **Rob Santilli**, AML ltd / Imperial College London, UK *Start-up Pitches:* - CarbonX, **Maurizio Dieci** - Confocal, **Peter Drent** - Electric Ants Lab, **Eric Lorenz**	
	11.45-12.00		From RNA Extraction to Microarray Based Readout:	A Nano-Opto-Electro-Mechanical-System with	Organ-on-a-chip : The Commercialisation Report	Scaling Up from Starting Up in Technology Business, the	

			Biofunctionalization of a Microfluidic Cartridge for Fully Integrated microRNA Analysis **Wilfried Weigel,** Scienion AG, Germany	Integrated Photodetector for Nanometrology and Microspectrometry **Rob van der Heijden,** Eindhoven University of Technology	Card 2016 **Malcolm Wilkinson,** Kirkstall Ltd., UK	Challenge **Ard Jol,** Brooklyn Ventures	
	12.00-12.15		Development of a Microfluidic Platform with Integrated Optical CMOS Sensor for Bead-Based DNA Assays **Sandro Meucci**, Micronit Microtechnologies	Metrology for Single Nanometer Manufacturing **Marijn van Veghel,** VSL	Stretchable Membranes on Silicon **Govert Nieuwland**, Philips Innovation Services	*Start-up pitches:* - Bether Encapsulates, **Albert Poortinga** - DENSsolutions, **Eric Kievit** - Eurokite, **Pavel Cholakov**	
	12.15-12.30		Automated Analytical System for Sensitive Detection of Bacterial Spores **Remco den Dulk,** CEA-Leti, France	Towards Real-Time Monitoring of Cytokine Secretion in Microfluidic Endothelial Cell Culture Using a Calibration-Curve-Free Microarray Approach **Mengyun Xu,** University of Groningen	Microfluidic Platform Technology Developments and Solutions for Organ-on-chip Applications **Thibaut Thupnot**, Fluigent, France	Scaling Up and Public Funding in Technology Business, the Opportunities for SMEs in Europe: Horizon 2020 and EuroStars ***Arnold Meijer,*** *Government Agency RvO*	
	12.30-12.45		Laminar flow Microfluidic Sperm Sorting Device for pre-concentration of sperms for effective In-Vitro-Fertilisation, **Harikrishnan Sekar,** National University of Singapore, Singapore	3D Lock-In Thermography, a Tool for Fault Localization in Advanced 3D IC & MEMS Packages **Kees Revenberg**,MASER Engineering	Integration of 3D Fibrous Membranes in a Microfluidic Chip: A Systematic Control over Matrix Properties to Study Cancer Cell Migration **Hossein Eslami Amirabadi**, Eindhoven University of Technology	*Start-up Pitches:* - Dutch Scientific, **Robert Derlage** - Eyesiu Medicines, **Pieter J.Gaillard** - HiFiBiO, **Fred Dom**, France - NanoNow, **Vincent Franken**	
Break	**12.45-14.00**	***Break/exhibition/poster session – Grote Zaal***					

Tuesday 13 of December 2016
afternoon

		Parallel Sessions (14.00 – 15.30)					Workshops (14.00 – 15.30)	
			Effectenbeurszaal	*Berlage zaal*	*Veilingzaal*	*Administratiezaal*	*Grote Zaal*	*Mendes Da Costa kamer*
Afternoon session	**14.00 - 15.30**	*Session title*	*Control of Microfluidic Flows*	*Integrated Photonic Devices*	*Surface Technology*	*Entrepreneurial session (2) "How Do You Do?" Welcome in the MicroNano Market Place*	***Workshop Organ-on-a-Chip*** *Demo Setups of:* **Delft University of Technology** (group Ronald Dekker) - Cytostretch technology, a universal platform for organ-on-chip application. **Eindhoven University of Technology** (group Jaap den Toonder) - microfluidic devices to understand the development of cancer, Cancer-on-a-Chip. **University of Twente** (group Andries van der Meer) - technological innovations to realistically mimic and	***Workshop Microfluidic Standardization*** The Microfluidic Manufacturing (MFM) project is to bring the manufacturing of microfluidic devices to the same level of maturity as electronic devices, enabling them to address more widely in the healthcare needs. Important results will be presented and microfluidic experts are invited to actively participate in further standardization efforts. Hosted by:
		Chair	**Joost Groen**, VSL	**Bart Verbeek**, PhotonicsNL	**Frank van de Scheur**, Philips Innovation Services	**Job Elders,** Nanotech Ventures B.V.		
	14.00-14.30	*Invited speaker*	Tuning Flow Rate Sensing in Deformable Channels **Darwin Reyes Hernandez**, NIST, USA	Novel Biosensing & Imaging Modalities Based on Photonic Crystals **Thomas Krauss**, University of York, Photonics research group, UK	Porous crystals from the vapor phase: metal-organic frameworks via chemical vapor deposition (MOF-CVD) **Rob Ameloot**, KU Leuven, Belgium	Building a World Impact Business on NanoTubes **Peter Antoinette**, NanoComp Technologies INC., USA *Start-up Pitches:* - Lipocoat, **Jasper van Weerd** - MilliDrop Instruments, **Laurent Boitard**, France - Nandatec GmbH **Dagmar Schneider**, Germany		
	14.30-14.45		Recent Innovations in the Field of Traceable Calibration of Liquid Milli-Flow Rates with Liquids	Narrow-Linewidth Widely Tunable Integrated InP-Si3N4 Hybrid Laser **Douwe Geuzenbroek,** Satrax	Cleaning of Nanometer Scale Deposited Contamination from Molybdenum Mirror	Entrepreneurship in the Technology Market **Mike Klinkenberg**, Future Diagnostics		

			Other Than Water **Hugo Bissig,** Federal Institute of Metrology METAS, Switzerland	B.V.	Surface Using Selective RF Plasma Etching **Rob Ebeling,** TNO		analyze blood vessels in organs-on-chips **Micronit Microtechnologies-** a 4-dock Organ-on-a-Chip system with a pump and flow-rate control integrated.	**CEA LETI, Micronit Microtechnologies, Philips, PhoeniX Software** and **TNO**
	14.45-15.00		Microfluidic Dosing and Fluid Control Circuits **Thomas Hahn,** Bürkert Werke GmbH, Germany	Low Cost Swept Light Source Development for OCT **Jan Mink,** VTEC	Developing Antibacterial Nanofinishing for Textiles in Health Care **Martin Bennink,** Saxion University of Applied Science	*Start-up Pitches:* - Nano4Imaging, **Paul Borm,** Germany - Nearfield Instruments, **Roland van Vliet** - Nestegg Biotech, **Tim Gauldin**		
	15.00-15.15		Microfluidic Monitoring of Intravenous Drug Delivery **Aleksandar Andreski,** Saxion University of Applied Sciences	Modelling the Post Release Deformation of Suspended Photonic Waveguide Beams **Kai Wu,** Delft University of Technology	Patterned Nanocoatings by Fast, One-Step Surface Modification **Wout Knoben,** Surfix	Selecting Tomorrow's Winners **Thomas Mensink,** Golden Egg Check		
	15.15-15.30		Intravenous Flow Monitoring: Controlling Low Flow-Rate Flows **Micha Disselkoen,** Delft University of Technology	Aberration Control in Adaptive Optics: Electrically Tunable Optofluidic Lenses for Perfect Imaging **Frieder Mugele**, University of Twente	Digital Surface Modifications for Microfluidics and Biosensor Applications **Alquin Stevens,** InnoPhysics	*Start-up Pitches* **-** Spectral Industries, **Marijn Sandtke / Ad Maas** - Venneos, **Jonas Lehmann**, Germany - NanoBay **Gregor Luthe**, Germany		
Break	**15.30-16.00**	***Break/exhibition/poster session – Grote Zaal***						
		Afternoon Keynote Session and Closure of the Day 16.00 – 17.00)						
		Effectenbeurszaal						
Chair		**Ronny van 't Oever**, Micronit Microtechnologies						
Keynote	**16.00-16.30**	Ultra-High Throughput Single Cell Analysis: Towards Microfluidic Imaging Flow Cytometry **Andrew deMello,** ETH Zurich, Switzerland						
Keynote	**16.30-**	Chemical Assembly Systems – From Fundamental Flow Chemistry to Affordable Drugs						

	17.00	**Peter Seeberger**, Max-Planck Institute for Colloids and Surfaces, Germany
	17.00-18.30	***Drinks/Exhibition/Poster Sessions - Grote Zaal***
	18.30-22.00	***Conference Dinner and Social Programme – The Art of Banksy*** Location: Grand Cafe Beurs van Berlage

Wednesday 14th of December 2016
morning

		Opening and Morning Keynote Session (8.55 – 10.00)					
		Effectenbeurszaal					
Chair	**08.55-09.00**	**Sabeth Verpoorte**, University of Groningen					
Keynote	**09.00-09.30**	Nanotechnology for a Genomic Revolution **Shane Bowen**, Illumina					
Keynote	**09.30-10.00**	Talking to the Brain with Light: MEMS Tools for Optogenetics **Oliver Paul**, IMTEK University of Freiburg					
Break	**10.00-10.45**	*Break/exhibition/poster session – Grote Zaal*					
		Parallel Sessions (10.45 – 12.15)					**Workshop (10.45 – 12.15)**
			Effectenbeurszaal	*Administratiezaal*	*Veilingzaal*	*Verwey kamer*	*Effectenbeurszaal*
Morning session	***10.45-12.15***	*Session title*	*Microfluidics Design and Fabrication*	*Creating Nano Photonic & Nano Electronic Devices*	*(Bio-)sensing*	*Processing with Microfluidics*	***Workshop Photonics, Microscopy, Spectroscopy*** *Demo setups of:* **LioniX** develops full optofluidic systems based on their core technology. They will show a demonstrator of an optofluidic sensing system with integrated automated fluidic handling. **Confocal.nl** will demonstrate their Re-scan Confocal Microscope (RCM)
		Chair	**Sammy Datwani**, Labcyte, USA	**Willem Vos**, University of Twente	**Urs Staufer**, University of Delft	**Volker Hessel**, University Eindhoven	
	10.45-11.15	*Invited speaker*	OSTE Polymers Create Novel Opportunities in Biomedical Microsystems **Tommy Haraldsson** KTH Royal Institute of Technology, Department of Micro and Nanosystems, Sweden	Biomedical Photonic Imaging **Ivo Vellekoop**, University of Twente	Sensing the Nanostructure of Tissue with Light **Ton van Leeuwen**, Academic Medical Center, University of Amsterdam	Microfluidics from the perspective of a large chemical company **Christian Holtze,** BASF, SE	
	11.15-11.30		Design of an Immobalized-Enzyme Microfluidic Reactor for Rapid Online Digestion of Various Natural Macromolecules **Bert Wouters,** University of	Semiconductor Quantum Dot – Metal Nanoparticle Heterodimer as a Source of Coherent Ultrashort Pulses on the Nanoscale **Jasper Knoester,** Zernike	Stress-Optic Modulator in TriPleX Platform Using a Piezoelectric Lead Zirconate Titanate (PZT) Thin Film **Denys Marchenko,** LioniX B.V.	Nanoparticles in Flow: from Lab to Production **Mohamed Moalin,** Zuyd University of Applied Sciences	

			Amsterdam	Institute for Advanced Materials, University of Groningen			which has an improved resolution and strongly improved sensitivity as compared to most confocal microscopes. **PhenomWorld**, with their Phenom XL desktop scanning electron microscope. No SEM specialist is required to operate the system, basic operations can be taught to anyone within 15 minutes **TNO** will demonstrate a desktop unit for **optical biosensing**. This unit allows the user to establish a robust multi-channel optical connection to an optical biosensor chip (based on Silicon On Insulator ring resonators) with a flow cell. The user can then perform bio-chemical tests by supplying various liquid samples to the sensor. Any lab analist can learn to work with this unit in 30 minutes, and exchange samples within a few minutes.
	11.30-11.45		Microfluidic Mechanism to Enrich Pathogenic Organisms in Drinking Water by Interfacial Transfer from Non-Newtonian to Newtonian Fluids **Mareike Bürger,** Fraunhofer ICT-IMM	Stabilisation of an Optical Frequency Comb Generated by a Monolithically Integrated Semiconductor Ring Mode-Locked Laser operating at 1567 nm **Mònica Llorens Revull,** Eindhoven University of Technology	Control the Light Where You Need It; New Development in Accurate Delivery of Visible Laser Light **Arne Leinse**, Xio Photonics	Microfluidic Synthesis of Precision Microspheres **Wim van Hoeve,** Tide Microfluidics	
	11.45-12.00		Manipulating Femtoliter Volumes With a Hollow AFM Cantilever **Eleonoor Verlinden,** Delft University of Technology	Tunnel Field Effect Transistor Based on Semimetal Nanowire **Lida Ansari,** Tyndall national institute, Ireland	Single-Chip Mass Flow Controller With Integrated Coriolis Flow Sensor and Proportional Control Valve **Remco Wiegerink**, University of Twente	An Analytical Approach to the Shape of a Sessile Drop **Co van Veen,** Mat-Tech BV	
	12.00-12.15		Scalable Safer Level Production of Microfluidic Components Made of Non-CMOS Compatible Materials, Challenges and Opportunities Utilizing a Foundry Concept **Alexios Paul Tzannis,** IMT Masken und Teilungen AG, Switzerland	Graphene for MEMS devices, **Jos Giesbers,** Philips Innovation Services	Electrochemical NADH Sensor Based on Graphene/Dye Nanocomposites **Murat Alanyalioglu,** Ataturk University, Turkey	Pulsed, High-T laser-Mediated Process for the Production of Vitamin D3 **Marc Escribà Gelonch**, Eindhoven University of Technology	
Break	***12.15-13.30***	*Break/exhibition/poster session – Grote Zaal*					

* *For all Special Activities, Pre-registration is Needed! (no extra costs)*

Wednesday 14th of December 2016
Afternoon

		Parallel Sessions (13.30 – 15.00)					Workshop (13.30 – 15.00)
			Effectenbeurszaal	*Administratiezaal*	*Veilingzaal*	*Verwey kamer*	*Effectenbeurszaal*
Afternoon session	***13.30-15.00***	*Session title*	*Optofluidics*	*Nano characterization*	*Organ-on-a-Chip (2) Systems & Models*	*Fabrication of Micro Nano Products*	***Bubbles & Droplets Innovative liquid handling in Life Sciences & Diagnostics***
		Chair	**Han Gardeniers**, University Twente	**Peter Munk,** TI-Coast	**Anna Salvati,** University of Groningen	**Nicolas Verplanck**, Leti, France	
	13.30-14.00	*Invited speaker*	Photonic Integrated Circuits: From Telecom to Sensor Applications **Martin Schell** –Optics and Optoelectronic Integration Technical University of Berlin, Germany	Atomic Control of Oxide Heterostructures Imaged by High-Resolution Electron Microscopy **Guus Rijnders**, MESA+, University of Twente	Brain-on-a-Chip **Regina Luttge**, University Eindhoven	Electron beam lithography – key enabling technology in nanofabrication **Frank Dirne**, Kavli Nanolab	*Demo setups of:* **Scienion**, a life science company well positioned in the markets of ultra-low volume liquid handling systems and microarray technologies **Dolomite**, specialized in the design and manufacture of high quality innovative microfluidic products **Fluigent**, developer and manufacturer of innovative fluid handling solutions for a variety of rapidly growing applications where fluid control is critical.
	14.00-14.15		Integrated Opto-Fluidic Platforms for Diagnostic and Analysis Applications in Health, Food and Environment **Erik Schreuder**, Lionix B.V.	Refractive Index and Size Determination of Extracellular Vesicles in a Nano-Fluidic Optical Fiber **Edwin van der Pol,** Academic Medical Center, University of Amsterdam	Enzymatic Digestion in Chaotic Mixers as Microreactors for a Fully Integrated Gut-on-a-Chip **Pim de Haan,** University of Groningen	A 3D Printed Polypropylene Microreactor With Integrated Magnetic Stirring and Electrospray Lonization Functions for Mass Spectrometric Chemical Reaction Monitoring **Gianmario Scotti,** University of Helsinki, Finland	
	14.15-14.30		High-throughput Fluorescence Detection of Single Biomolecules in a Novel Nanofluidic Mixing Device	Correlative in-situ AFM/SEM Analysis of Free-Standing Grapheme Films at High AFM Scanning Speed **Ernest Fantner**, GETec	Human Gut-on-a-Chip as a Predictive Model for Oral Exposure **Hans Bouwmeester,** RIKILT	Development and Prototyping of a MEMS Inkjet Device **Elise Rodenburg**, Philips Innovation Services	

			Klaus Mathwig, University of Groningen	Microscopy, Austria			
	14.30-14.45		Optical Biosensing System Based on Ring Resonators **Peter Harmsma,** TNO	Characterization of Nanomaterials With Hyphenated Techniques **Ruud Peters,** RIKILT	Gut Function-on-a-Chip: Towards a More Physiological In Vitro Intestinal Barrier Model **Evita van der Steeg,** TNO	Novel Fabrication of 3D Taper Coupler of Optical Sensing Waveguide **Yu Xin,** Delft University of Technology	
	14.45-15.00		CMOS Reconfigurable Opto-Fluidics: Towards on-Chip Architecting of Metadevices **Anna Baldycheva,** University of Exeter, UK	Characterization of Nano-Materials from Sub-Angstrom to Micrometer Scale Using X-rays, **Martijn Fransen**, PANalytical	Unravelling Macular Degeneration: An Organ-on-a-Chip Model to Study Outer Retinal Layers of the Human Eye **Yusuf Arik,** University of Twente	Non-Destructive Thickness Measurement of up to 8 Transparent Layers on Highly Reflective Surfaces for Microfluidic Device Design **Richard Bijlard,** Zeta Instruments	
Break	***15.00-15.30***	*Break/exhibition/poster session – Grote Zaal*					
		Afternoon Keynote Session and Closure of the Day (15.30 – 16.45)					
		Effectenbeurszaal					
Chair		**Cas Damen**, Saxion University					
Keynote	**15.30-16.00**	Subcellular-resolution interfacing of neurons to highly integrated CMOS microelectrode systems **Andreas Hierlemann**, ETH Zürich, Switzerland					
Keynote	**16.00-16.30**	Looking at Angstroms to Measure and Fix Nanometers **Frank de Jong,** FEI					
Closing	**16.30-16.45**	**Ronny van 't Oever**, Micronit Microtechnologies					
	16.45-18.00	***Drinks/Exhibition/Poster Sessions - Grote Zaal***					