

Wednesday, 13 September

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| 8:30 | Registration Open |
| 9:30 - 10:30 | Opening Ceremony and Plenary session |
| Chair: Rogério Nogueira, Instituto de Telecomunicações, Portugal | |
| Capillary of POF Network in 8K Era <u>Yasuhiro Koike</u> Keio University, Japan | |
| 10:30 – 11:00 | Coffee break |
| 11:00 - 12:30 | Sensors I |
| Chair: Marcelo Werneck, Universidade Federal do Rio de Janeiro, Brazil | |
| POF as radiation sensors? (<i>Invited</i>) <u>P. Stajanca</u> , K. Kriebber Bundesanstalt für Materialforschung und -prüfung (BAM), Germany | |
| Real-Time Two-Dimensional Pressure Sensing for Patient Monitoring based on Optical Coupling between Crossing Polymer Optical Fibers H. van den Boom, S. Overeem, <u>F. Forni</u> , T. Koonen Eindhoven University of Technology, The Netherlands | |
| Low- cost pressure sensor based on POF embedded in mattress D. Sartiano, <u>J. Madrigal</u> and S. Sales Universitat Politècnica de València, Spain | |
| Versatile Hardware Platform for Polymer-Fibre Sensors <u>B. Offenbeck</u> , H. Kragl OBTIS GmbH, Germany | |
| 12:30 – 14:00 | Lunch break |
| 14:00 – 15:30 | Materials and Fiber Technologies |
| Chair: Yosuke Mizuno, Tokyo Institute of Technology, Japan | |
| Double-Doped Polymer Optical Fibers for High Performance Fluorescent Fiber Applications <u>I. Parola</u> , D. Zaremba, R. Evert, J. Kielhorn, M. A. Illarramendi, J. Zubia, W. Kowalsky, H.-H. Johannes Labor für Elektrooptik, Germany | |
| A Study on the Effect of Misalignment on a System Comprising GI-POF Interconnected with BallPoint Pen Collimators <u>T. Bach</u> , A. Mitsui, Y. Koike Keio University, Japan | |
| Materials for Fluorescent Fibers - Molecular Weight Inconsistence in Perylene/Lumogen doped PMMA <u>D. Zaremba</u> , J. Kielhorn, R. Evert, F. Jakobs, I. Parola, R. Caspary, W. Kowalsky, HH. Johannes Technische Universität Braunschweig, Germany | |
| Significant Improvement of Durability for Repeated Plugging in and out by Ballpoint-pen Interconnect of Graded-index Plastic Optical Fiber <u>Y. Kaseda</u> , A. Inoue, A. Mitsui, H. Suzuki, Y. Koike Keio University, Japan | |
| 15:30 – 17:00 | Coffee break & Poster session |
| 17:00 – 18:05 | Optical Techniques |
| Chair: Katerina Kriebber, Federal Institute for Materials Research and Testing (BAM), Germany | |
| Stellar interferometry with polymer optical fibers (<i>Invited</i>) <u>J. Zubia</u> Universidad del País Vasco, Spain | |
| Long-term stability enhancement of POF-based Brillouin measurement by mitigating multiple Fresnel reflections using CYTOP <u>N. Matsutani</u> , H. Lee, Y. Mizuno, K. Nakamura Tokyo Institute of Technology, Japan | |
| Review of Optical Frequency Domain Reflectometry Methods for Optical Fiber Sensors <u>R. Engelbrecht</u> , S. Werzinger, M. Koeppel, G. Saur, B. Schmauss POF Application Center Nürnberg, Germany | |
| 18:30 | Moliceiro Tour and Aveiro Flavours Tasting |

Thursday, 14 September

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| 8:30 | Registration Open |
| 9:00 – 10:30 | POF Technologies |
| Chair: Joseba Zubia, Universidad del País Vasco, Spain | |
| Plastic optical fiber fuse: observation, characterization, and applications (<i>Invited</i>) <u>Y. Mizuno</u> Tokyo Institute of Technology, Japan | |
| Experimental Investigation of the Influence of Tempering Processes on the Scattering Behavior of Step-Index Polymer Optical Fibers M. Gehrke, B. Schmauss, <u>T. Becker</u> , E. Nkiwane, R. Engelbrecht, O. Ziemann POF Application Center Nürnberg, Germany | |
| The Noise Reduction Effect for Graded-index Plastic Optical Fiber based on Acrylic Polymer <u>T. Omuro</u> , A. Inoue, Y. Koike Keio University, Japan | |
| Angle and Skewness dependent Scattering and Attenuation Measurement of Step-Index Polymer Optical Fibers <u>T. Becker</u> , B. Schmauss, M. Gehrke, E. Nkiwane, R. Engelbrecht, O. Ziemann POF Application Center Nürnberg, Germany | |
| 10:30 – 11:00 | Coffee break |
| 11:00 – 12:30 | Devices |
| Chair: David Webb, Aston University, UK | |
| Fabrication of Bragg gratings in polymer optical fibers using 248 nm UV radiation (<i>Invited</i>) <u>R. Oliveira</u> , L. Bilro, R. N. Nogueira Instituto de Telecomunicações, Portugal | |
| Study of Bragg grating inscription mechanisms in PMMA POFs using 400 nm femtosecond pulses <u>X. Hu</u> , D. Kinet, C.-F. J. Pun, H.-Y. Tam, C. Caucheteur University of Mons, Belgium | |
| Hydrostatic pressure dependence of FBG inscribed in perfluorinated GI-POF <u>R. Ishikawa</u> , H. Lee, A. Lacraz, A. Theodosiou, K. Kalli, Y. Mizuno, K. Nakamura Tokyo Institute of Technology, Japan | |
| First Demonstration of POF Taper Fabrication Using Hot Water Y. Mizuno, <u>H. Lee</u> , H. Ujihara, N. Hayashi, K. Nakamura Tokyo Institute of Technology, Japan | |
| 12:30 – 14:00 | Lunch break & ICPOF meeting |
| 14:00 - 15:05 | Sensors II |
| Chair: Luigi Zeni, University of Campania Luigi Vanvitelli, Italy | |
| POF Biosensors (<i>Invited</i>) <u>M. M. Werneck</u> Universidade Federal do Rio de Janeiro, Brazil | |
| U-Shaped POF sensor coated with gold thin film for E. coli detection A. S. Arcas, R. C. S. B. Allil, <u>M. M. Werneck</u> Nanotechnology Program/COPPE, Brazil | |
| Application of a Compact F-SAS Sensor System Using POF for Pediatric Sleep Apnea Syndrome <u>S. Mitachi</u> , M. Hayashi, Ryo Saito, T. Sugiyama Tokyo University of Technology, Japan | |
| 15:05 - 16:45 | Data Communications |
| Chair: Olaf Ziemann, POF Application Center Nürnberg, Germany | |
| Low-noise Graded-index Plastic Optical Fiber Enabling Low-cost Optical Modules for Consumer-friendly 4K/8K Interfaces <u>A. Inoue</u> , Y. Koike Keio University, Japan | |
| Digitized Radio Over Plastic Optical Fiber for In-Home Network Applications <u>J. Heidarialamdarloo</u> , A.N. Sousa, E. F. J. Silva, R.S. Oliveira, R. M. Ferreira, A. Shahpari, R.N.Nogueira, J. C.W.A. Costa and A. J. Teixeira Instituto de Telecomunicações, Portugal | |
| WLAN and Multiband LTE-A Simultaneous Transmission over 50 m Thick-core GI-POF for In-home Distributed Antenna Systems <u>F. Forni</u> , Y. Shi, H. P. A. van den Boom, E. Tangdiongga, A. M. J. Koonen Eindhoven University of Technology, The Netherlands | |

POF over WDM - beyond the dispersion limit
U. H. P. Fischer, S. Höll, M. Haupt, M. Joncic
Harz University of Applied Sciences, Germany

Efficient WDM Transmission over SI-POF with a 4-channel LED Module
R. Kruglov, J. Vinogradov, W. Huber, R. Engelbrecht, O. Ziemann
POF Application Center Nürnberg, Germany

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| 16:45 – 17:15 | Coffee break |
| 17:15 - 18:00 | Tutorial |
| Installation 4.0, with Plastic Optical Fibre <u>J. Faller</u> homefibre digital network gmbh, Austria | |
| 18:30 | Conference Dinner |

Friday, 15 September

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| 8:30 | Registration Open |
| 9:00 – 10:30 | Sensors III |
| Chair: Lúcia Bilro, Instituto de Telecomunicações, Portugal | |
| Selective POF sensors based on surface plasmon resonance exploiting aptamers, MIPs and antibodies as receptors (<i>Invited</i>) <u>N. Cennamo</u> , S. D'Auria, A. Variiale, M. Pesavento, L. Pasquardini, L. De Maria, L. Zeni University of Campania Luigi Vanvitelli, Italy | |
| POF Immunosensor with Antibodies Immobilization for Escherichia coli R.N. Lopes, D.M.C. Rodrigues, <u>A.S. Allil</u> , R.C.S.B. Allil, M.M. Werneck Universidade Federal do Rio de Janeiro, Brazil | |
| Detection of 5-mm-long heated section in plastic optical fiber using slope-assisted BOCDR <u>H. Lee</u> , Y. Mizuno, K. Nakamura Tokyo Institute of Technology, Japan | |
| Surface Plasmon Resonance sensor read out system based on the Field Programmable Gate Array <u>Y.S. Ong</u> , I. Grout, E. Lewis, W. Mohammed University of Limerick, Ireland | |
| 10:30 – 11:00 | Coffee break |
| 11:00 – 12:30 | Light Transmission |
| Chair: Yasuiro Koike, Keio University, Japan | |
| Remote Powering of low Power Electronics via Polymer Optical Fibers using LED (<i>Invited</i>) <u>Olaf Ziemann</u> POF Application Center Nürnberg, Germany | |
| Side-emitting fibres with a non-circular cross section <u>C.-A. Bunge</u> , B. Mohr, M. Beckers, T. Vad, M. Chochol, T. Gries Hochschule für Telekommunikation Leipzig, Germany | |
| Solar Tracker Development Applied to Ambiences Illumination and Microalgae Cultivation <u>A. S. Allil</u> , A. O. C. Manchego, I.V. Rodrigues, R. C. S. B. Allil, M. M. Werneck Universidade Federal do Rio de Janeiro, Brazil | |
| Integrated POF Illumination & Data Communication System <u>M. Li</u> Hakko Opto Limited, Hong Kong | |

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| 12:30 – 13:00 | Closing Session |
| Awards Ceremony | |
| Closing Remarks | |
| 13:00 – 14:30 | Lunch |