

Monday 14.9.2020

12:30- Registration

13:00-14:00 Lunch

14:00 Opening

14:10-18:30 Sessions 1, 2

19:00-22:00 Welcome party

Wednesday 16.9.2020

8:00-18:00 Social program

18:00-19:00 Dinner

Tuesday 15.9.2020

8:10-10:10 Session 3

10:30-12:45 Session 4 (student competition)

13:00-14:30 Lunch

14:30-16:30 Sessions 5 (student competition)

17:00-18:30 Sessions 6 (posters)

18:30 Conclusion

19:00 Conference Dinner

Thursday 17.9.2020

8:00-10:00 Departure

session 1

Monday, September 14

• Advanced semiconductor materials technology and characterization methods •

14:00 *CONFERENCE OPENING*

14:10 **Bremond G.** **Determination of doping profiles in semiconductor nanowires by electrical modes from scanning probe microscopy (online)**

14:50 Kijaszek W. Investigation of mechanical, optical and electrical properties of DLC films deposited by RF ICP PECVD method (online)

15:10 Sojkova M. High carrier mobility epitaxially aligned PtSe₂ films grown by one-zone selenization

15:30 Hulman M. Structural and electronic properties of thin PtSe₂ films

15:50 Müllerová J. Considering absorptance limits of PECVD deposited hydrogenated silicon thin films

16:10 *Coffee break*

session 2

Monday, September 14

• **Nanostructures and nanotechnologies** •

- 16:40 **Luby Š.** **Graphene at the crossroads**
- 17:20 Novák J. MoS₂/GaP heterojunction - formation and properties
- 17:40 Pudiš D. Near-field emission from polymer based nanopyramids and nanocones.
- 18:00 Huran J. Photo-induced electron emission at different electric field of nanostructured carbon thin film based transmission photocathodes (online)
- 18:20 Vanko G. High temperature operation of the MEMS piezoelectric sensor based on AlGa_N/Ga_N heterostructure
- 19:00 **Welcome Party**

session 3

Tuesday, September 15

• **Electronic and photonic devices and circuits design, modeling, simulation and testing** •

8:10 Stuchlíková L. Study of emission and capture processes in AlGa_N/Ga_N HEMTs for 5G

8:30 Florovič M. Channel temperature analysis utilized for Ga_N-based HEMT

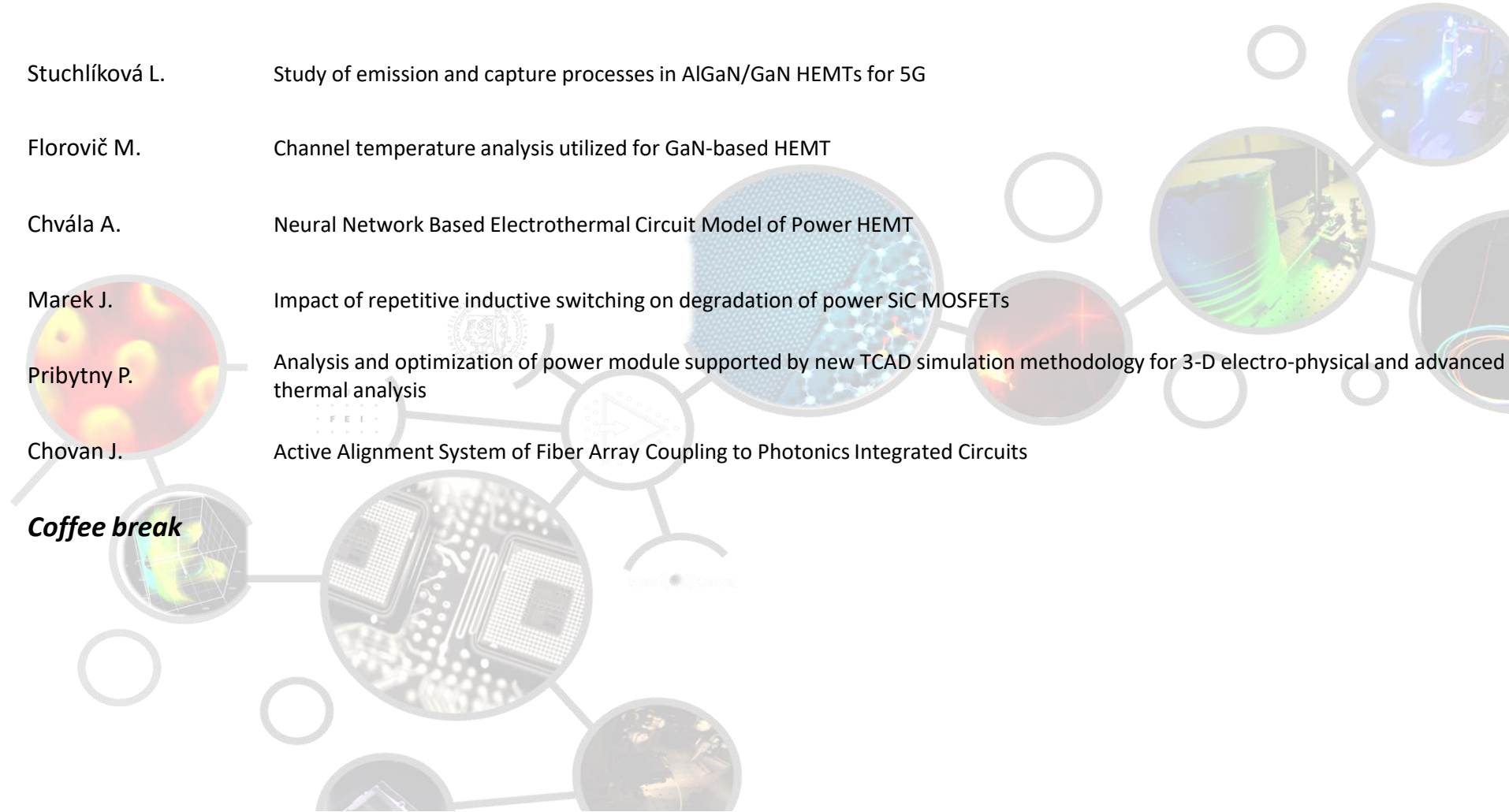
8:50 Chvála A. Neural Network Based Electrothermal Circuit Model of Power HEMT

9:10 Marek J. Impact of repetitive inductive switching on degradation of power SiC MOSFETs

9:30 Pribytný P. Analysis and optimization of power module supported by new TCAD simulation methodology for 3-D electro-physical and advanced thermal analysis

9:50 Chovan J. Active Alignment System of Fiber Array Coupling to Photonics Integrated Circuits

10:10 **Coffee break**



session 4

Tuesday, September 15

• Student competition •

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|-------|----------------|--|
| 10:30 | Stępnia M. | Control of growth uniformity in selective area epitaxy of AlGa _N /Ga _N grown by MOVPE technique (online) |
| 10:45 | Zawadzka A | Numerical and experimental aspects of Electron Beam Lithography process for various technological factors (online) |
| 11:00 | Kaczmarczyk B. | Thermal annealing of reactively etched Ga _N with different capping layers (online) |
| 11:15 | Ilgiewicz G. | Applicability of Scandium for ohmic contacts to AlGa _N /Ga _N heterostructures (online) |
| 11:30 | Vincze T. | Fabrication of copper oxide thin-film transistor |
| 11:45 | Podlucý Ľ. | Fabrication and characterization of ultra-thin dielectric films for plasmonics |
| 12:00 | Mizera T. | Fabrication 3D Polymer Based 1x4 Beam Splitter |
| 12:15 | Glinkowski M. | Imprefections in AlGa _N /Ga _N type HEMT heterostructures (online) |
| 12:30 | Micek P. | Nanostructures and nanoarrays for plasmonic and solar cells applications |
| 13:00 | Lunch | |

session 5

Tuesday, September 15

• Student competition •

- 14:30 Ramdani R. Investigation of metallic atoms interaction with the N-vacancy in III-V nitrides
- 14:45 Drobný J. DLTS study of emission and capture processes in InAlGaN/GaN HEMT heterostructures with different passivation schemes
- 15:00 Łozińska A. Theoretical concern of influence of InGaAs plasmonic waveguide design on quantum cascade laser mode parameters (online)
- 15:15 Ceballos G. Electron optical simulations of the α -SDA energy analyser applied to energy-selective k-space imaging at Fermi edge (online)
- 15:30 Feiler M. Progressive materials for integrated photonics
- 15:45 Kozárik J. Design of Double-Pulse Tester for On-Die Measurement of GaN HEMT Dynamic On-Resistance
- 16:00 Urbancová P. SPR-based refractive index sensor for lab-on-a-chip
- 16:15 Ziman M. Phase-transition materials for integrated photonics
- 16:30 **Coffee Break**

session 6

17:00 - 18:30

Tuesday, September 15

• Posters •

- 1 Ďurišová J. Extinction measurement of GaP nanocones
- 2 Vavrinský E. Modern holters in telemedicine
- 3 Jandura D. MHCs in polymer material
- 4 Lettrichova I. Will be announced later
- 5 Uherek F. SIMULATIONS AND CHARACTERIZATIONS OF 2D POLYMER/METAL STRUCTURES FOR SURFACE PLASMON RESONANCE
- 6 Režo V. LED SOLAR SIMULATOR FOR ORGANIC DEVICES
- 7 Vardžák A. INKJET PRINTING FOR TEMPERATURE SENSOR ON FLEXIBLE SUBSTRATE
- 8 Sobota M. THE IMPACT OF VARIOUS GATE DIELECTRIC LAYER ON PROPERTIES OF ORGANIC PENTACENE AND FULLERENE C60 INVERTERS
- 9 Gašo P. Ip-Dip based 1:4 branch splitter
- 10 Suslik Ľ. Will be announced later

session 6

17:00 - 18:30

Tuesday, September 15

• **Posters** •

- 11 Cernaj Ľ. Modeling of HEMT device using neural network.
- 12 Debnár T. Research of methodology for indirect measurements of bending force on high voltage insulators
- 13 Gašparek K. Testing and comparison of electrochemical nitrogen dioxide gas sensors for autonomous environmental monitoring systems based on Internet of Things
- 14 Luby Š. Thermally stable Fe₂O₃ nanoparticles with low size dispersion for gas sensing applications
- 15 Vadovský J. Investigation of the quality of semiconductor structures based on InAlGa_n/Ga_n

18:30 **CONFERENCE CONCLUSION**

19:00 **Conference dinner**