

# Monday August 28, 2017

08:00 – 09:00	Registration
09:00 – 09:15	Opening Session <i>Petr PÁTA</i>
09:15 – 10:45	Plenary Session <span style="float: right;">Chair: <i>Petr PÁTA</i></span>
09:15 – 10:00	From advanced methods of preform fabrication to specialty coated fibers – Material and Technology <i>Kay SCHUSTER</i>
10:00 – 10:45	Forces of light: from solar sails to nanoparticle cooling <i>Pavel ZEMÁNEK</i>
10:45 – 11:15	Coffee Break
11:15 – 12:00	Laser in Industry <span style="float: right;">Chair: Steve Smith</span>
11:15 – 11:30	A Practical Model of Thin Disk Regenerative Amplifier Based on Analytical Expression of ASE Lifetime <i>Huang ZHOU, Michal Chyla, Siva Sankar Nagisetty, Liyuan Chen, Akira Endo, Martin Smrz and Tomáš Mocek</i>
11:30 – 11:45	Advanced Injection Seeder for Various Applications - from LIDARs to Supercontinuum Sources <i>Pawel GRZES, Maria Michalska, Jacek Swiderski</i>
11:45 – 12:00	A novel method for fabrication of size controlled metallic nanoparticles by laser ablation <i>Kaushik Choudhury, R. K. Singh, Mukesh Ranjan, Ajai Kumar, Atul Srivastava</i>
12:00 – 12:30	Organic Photonic Materials and Devices <span style="float: right;">Chair: <i>Pavel PETERKA</i></span>
12:00 – 12:15	Single-mode distributed feedback laser operation from gain media with arbitrary morphologies <i>Kyungtaek MIN, Muhammad Umar, and Sunghwan Kim</i>
12:15 – 12:30	Degradation/Oxidation Susceptibility of ZnO/PEDOT:PSS/Graphite Organic Photovoltaic Cells in Aqueous Solutions <i>Khaled Habib</i>
12:30 – 14:00	Lunch Break

<b>14:00 – 14:45</b>	<b>Plenary Session</b>	<b>Chair: Petr PÁTA</b>
<b>14:00 – 14:45</b>	<b>Latest advances in Biophotonics</b> <i>Alžběta MARČEK CHORVÁTOVÁ</i>	
<b>14:45 – 15:30</b>	<b>Life Science and Biophotonics</b>	<b>Chair: Petr PÁTA</b>
<b>14:45 – 15:00</b>	<b>Optical propagation analysis in photobioreactor measurements on cyanobacteria</b> <i>Félix FANJUL-VÉLEZ, José Luis Arce-Diego</i>	
<b>15:00 – 15:15</b>	<b>Assessing resolution in live cell structured illumination microscopy</b> <i>Jakub POSPÍŠIL, Karel Fliegel, Miloš Klíma</i>	
<b>15:15 – 15:30</b>	<b>Correlated Fluorescence-Atomic Force Microscopy Studies of the Clathrin Mediated Endocytosis in SKMEL Cells</b> <i>Amy Hor, Anh Luu, Lin Kang, Brandon Scott, Elizabeth Bailey, Adam Hoppe, and Steve SMITH</i>	
<b>15:30 – 16:00</b>	<b>Coffee Break</b>	
<b>16:00 – 17:00</b>	<b>Metrology and Sensors</b>	<b>Chair: Ivan KAŠÍK</b>
<b>16:00 – 16:15</b>	<b>Fibre optic gyroscope with single-mode fibre and loop-back phase shift compensation</b> <i>Michal SKALSKÝ, Zdenek Havránek, Jiří Fialka</i>	
<b>16:15 – 16:30</b>	<b>Resolution enhancement of digital holographic microscopy using angular-polarization multiplexing</b> <i>Chau-Jern CHENG, Varvara Semenova, Xin-Ji Lai, Yu-Chih Lin, Han-Yen Tu</i>	
<b>16:30 – 16:45</b>	<b>Large displacement and deformation measurement by frequency scanning digital holography</b> <i>Pavel PSOTA, Vít Lédl, František Kaván</i>	
<b>16:45 – 17:00</b>	<b>Camera-based micro interferometer for distance sensing</b> <i>Matthias WILL, Martin Schädel, Thomas Ortlepp</i>	
<b>18.15</b>	<b>Meeting Point by the Hotel Reception</b>	
<b>19.00</b>	<b>Welcome Dinner &amp; Brewery Excursion at Staroprament Restaurant</b> Pivovarská 9, Prague 5 - Smíchov	

# Tuesday August 29, 2017

<b>09:00 – 10:30</b>	<b>Solar Cells, Solid State Lighting &amp; LED, LD, OLED</b> <b>Chair: TBA</b>
<b>09:00 – 09:15</b>	<b>Energy-Efficient, Color-Saturated Green Light Emitting Diodes Based on Quantum Confined Perovskites</b> <i>Sudhir KUMAR, Jakub Jagielski, Chih-Jen Shih</i>
<b>09:15 – 09:30</b>	<b>Efficient conceptual design of an LED-based pixel light vehicle headlamp</b> <i>M. P. HELD, R. Lachmayer</i>
<b>09:30 – 09:45</b>	<b>Survey test runs with pixel light systems</b> <i>Sadiq RIZVI, Roland Lachmayer</i>
<b>09:45 – 10:00</b>	<b>Optical properties of bulk heterojunctions based on TiO<sub>2</sub> and MoS<sub>2</sub></b> <i>Łukasz JAROSIŃSKI, Kamila Kollbek, Marek Przybylski</i>
<b>10:00 – 10:15</b>	<b>Fabrication of 365nm UV-polarized LEDs using metallic nano-grating structure</b> <i>Soo-Hyun KANG, Changil Park, Eun Kyung Chu, Kyoung-Kook Kim</i>
<b>10:15 – 10:30</b>	<b>Solar-pumped passively mode-locked Nd:Cr:YAG laser for laser ablation applications</b> <i>Birger SEIFERT, R. Rojas-Aedo, R. A. Wheatley, S. Wallentowitz, U. Volkmann</i>
<b>10:30 – 11:00</b>	<b>Coffee Break</b>
<b>11.00 – 12.30</b>	<b>Poster Session I.</b>
	<b>Laser in Industry</b>
<b>1</b>	<b>Laser beam distribution system for the HiLASE center</b> <i>Karolina MACÚCHOVÁ, Jan Hermánek, Jan Kaufmann, Tomáš Mocek, Mihai-George Muresan, Jan Ružicka, Martina Reháková, Ludek Švandrlík</i>
<b>2</b>	<b>Cryogenic cooled Tm:SBN tunable laser</b> <i>Richard ŠVEJKAR, Jan Šulc, Michal Němec, Helena Jelínková, Maxim E. Doroshenko, Alexander G. Papashvili, Sergei H. Batygov, Vyacheslav V. Osiko</i>
<b>3</b>	<b>High-efficient Nd:YAG microchip laser for optical surface scanning</b> <i>Jan ŠULC, Helena Jelínková, Karel Nejezchleb, Václav Škoda</i>
<b>4</b>	<b>Q-switched Nd:YAG/V:YAG microchip 1338 nm laser for laser-induced breakdown spectroscopy</b>

*Jan ŠULC, Helena Jelínková, Karel Nejezchleb, Václav Škoda*

## **Metrology and Sensors**

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### **Optical fiber strain sensor using active mode locking FBG laser cavity**

*Gyeong Hun KIM, Chang Hyun Park, Chang-Seok Kim, Hwi Don Lee, Youngjoo Chung*

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### **Point distinguish using multiple partial reflector**

*Chang Hyun PARK, Gyeong Hun Kim, Chang-Seok Kim, Hwi Don Lee, Youngjoo Chung*

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### **Synthetic aperture common-path spiral digital holographic microscopy**

*Varvara SEMENOVA, Xian-Ru Wu, Chau-Jern Cheng*

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### **Investigation of refractive index increment of different proteins by Kretschmann Ellipsometry**

*Benjamin KALAS, Judit Nádor, Miklós Fried, Péter Petrik*

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### **Steps towards Analytical Reconstruction of two different Pulses from double Spectrograms alone**

*Ricardo ROJAS-AEDO, B. Seifert, R. A. Wheatley, S. Wallentowitz, U. Volkmann, K. Sperlich, H. Stolz*

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### **The ZnO nanowire-based gas sensor with Ultraviolet-LEDs**

*Nam-Woo KANG, Soae Jeong, Hee-Jung Choi, Kyoung-Kook Kim*

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### **Some possibilities in digital holographic vibrometry for non-harmonic vibration measurement**

*Pavel Psota, Vít Lédl, Pavel Mokrý, Jan Václavík*

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### **Quality assessment of glass jewellery stones**

*Maria NASYROVA, Stanislav Vitek*

## **Solar Cells, Solid State Lighting & LED, LD, OLED**

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### **Thermal stability of gallium arsenide solar cells**

*Nikola PAPEŽ, Lubomír Škvarenina, Pavel Tofel, Ondrej Šik, Dinara Sobola*

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### **High Flexible Transparent Conducting Film of amorphous structure**

*Gyu-Jae YOHN, Ji-Yeon Jo, Eung-Hyuk Lee, Kyoung-Kook Kim*

<b>15</b>	<b>A study on the growth of high quality phosphorus doped p-type ZnO</b> <i>Soae JEONG, Joon-Sung Kwon, Si-Won Kim, Kyoung-Kook Kim, Eung-Hyuk Lee</i>
<b>16</b>	<b>Fabrication of quantum-dot light-emitting diodes using an RF-sputtered transparent-metal-oxide electron-transporting layer</b> <i>Lee HO-NYEON, Dong-Jin Kim</i>
<b>17</b>	<b>Modeling of photoluminescence in laser-based lighting systems</b> <i>Elisavet CHATZIZYRLI, Nadine Tinne, Roland Lachmayer, Jörg Neumann, Dietmar Kracht</i>
<b>18</b>	<b>Microscale localization and isolation of light emitting imperfections in monocrystalline silicon solar cells</b> <i>Adam GAJDOŠ, Lubomír Škvarenina, Pavel Škarvada, Robert Macku</i>
<b>19</b>	<b>High Efficiency UV-LEDs based on One-Dimensional Nitride Semiconductor using Nanoparticles</b> <i>Gyu-Jae YOHN, Soo-Hyun Kang, Changil Park, Beom-Rae Noh, Kyoung-Kook Kim</i>
<b>Life Science and Biophotonics</b>	
<b>20</b>	<b>The study on In-VIVO biomedical applications of fluorescence lifetime signal detection</b> <i>Sang-Kyeong Park, Byungyeon Kim, Byungjun Park, Seungrag Lee, Youngjae Won, and Taegeon Kang</i>
<b>21</b>	<b>Real-time photoacoustic imaging using high-speed red region laser</b> <i>Soon-Woo CHO, Sang Min Park, Heesung Kang, Sang-Won Lee, Chang-Seok Kim</i>
<b>22</b>	<b>Wavelength-Comb-Swept Laser based on AOTF</b> <i>Soo Kyung CHUN, Nam Su Park, Chang-Seok Kim</i>
<b>23</b>	<b>A study of photothermal effect and multi-photon fluorescence for a cancer cell targeting agent</b> <i>Soo Kyung CHUN, Hyun Soo Jung, Junyoung Kwon, Hyun Ah Lee, Jaebeom Lee, Dae Youn Hwang, and Chang-Seok Kim</i>
<b>24</b>	<b>Near-infrared intensity-modulated wavelength-swept laser for diffuse optical spectroscopy</b> <i>Gyeong Hun KIM, Chang-Seok Kim</i>

<b>25</b>	<b>Dual-wavelength laser using stimulated Raman scattering for photoacoustic effect</b> <i>Sang Min PARK, Soon-Woo Cho, Sang-Won Lee, Chang-Seok Kim</i>
<b>Organic Photonic Materials and Devices</b>	
<b>26</b>	<b>Infrared wire-grid polarizer with sol-gel antireflection films on both sides</b> <i>Itsunari YAMADA and Yoshiro Ishihara</i>
<b>27</b>	<b>Properties of new designed thermo- and photo- reacting materials having fluorans and porphirins</b> <i>Younga SON, Kyeongsu Min, Myeongjin Kim, Ramalingam Manivannan, Rangaraju Satish Kumar</i>
<b>12:30 – 14:00</b>	<b>Lunch break</b>
<b>14:00 – 15:30</b>	<b>Nanophotonics and Nanooptics</b> <span style="float: right;"><b>Chair: František UHEREK</b></span>
<b>14:00 – 14:15</b>	<b>Reflectance analysis of porosity gradient in nanostructured silicon layers</b> <i>Stanislav JUREČKA, Kentaro Imamura, Taketoshi Matsumoto, Hikaru Kobayashi</i>
<b>14:15 – 14:30</b>	<b>Performance of light-emitting Si nanostructures - almost perfect near-infrared emitters</b> <i>Jan VALENTA, M. Greben, S. Gutsch, J. Laube, D. Hiller, M. Zacharias, and S. Dyakov</i>
<b>14:30 – 14:45</b>	<b>Photonic crystal patterning of LED surfaces</b> <i>František UHEREK, P. Hronec, D. Pudiš, J. Škriniarová, J. Kováč, L. Šušlik, J. Kováč jr., I. Lettrichová</i>
<b>14:45 – 15:00</b>	<b>Experimental vizualization of 2D PC equi-frequency surfaces</b> <i>Dagmar SENDEKOVÁ, Milan Drzik, Matej Pisarcik</i>
<b>15:00 – 15:15</b>	<b>Formation of Au and Au/Ag nanostructures in surfaces of silicate glasses by ArF excimer laser irradiation</b> <i>Manfred DUBIEL, Maximilian Heinz, Joerg Meinertz, Juergen Ihlemann, Armin Hoell</i>
<b>15:15 – 15:30</b>	<b>Multi Fano resonance in plasmonic nanocrescent dolmen-shaped structures</b> <i>Mohammad Sabaieian, Yaser Hajati, Mahyar Judaki</i>
<b>15:30 – 16:00</b>	<b>Coffee Break</b>

<b>16.00 – 17.30</b>	<b>Poster Session II.</b>
	<b>Nanophotonics and Nanooptics</b>
<b>28</b>	<b>Graphene plasmonic-assisted enhancements in optical absorption and short-circuit current density of solar cells</b> <i>Mohammad Sabaeian, Kurosh Rezaei, Yaser Hajati, Mahyar Judaki</i>
<b>29</b>	<b>Optical force and torque due to birefringence</b> <i>Oleg Angelsky, Claudia Zenkova and Dmytro Ivanskyi</i>
<b>30</b>	<b>Microobject's motion due to the optical forces of evanescent wave</b> <i>Peter Maksimyak, Andrew Maksimyak and Dmytro Ivanskyi</i>
<b>31</b>	<b>The electromagnetic centroid, the problem of focus in the microscopy of real thick samples and superresolution</b> <i>Renata RYCHTÁRIKOVÁ, Dalibor Štys</i>
	<b>Waveguide Photonics</b>
<b>32</b>	<b>Highly tunable and confined mid-IR plasmons in graphene-buffer-SiO<sub>2</sub>-Si multilayer nanostructures</b> <i>Yaser Hajati</i>
<b>33</b>	<b>The behavior of the geometrical parameters of optical beam of optical passive components under the long time temperature loading</b> <i>František PERECAR, Jan Látal, Lukáš Bednarek, Lukáš Hájek, David Hrubý, Vladimír Vašínek, Jan Nedoma, Jakub Jaroš</i>
<b>34</b>	<b>Formation of 2D bright spatial solitons in Lithium Niobate with photovoltaic response and incoherent background</b> <i>A. Pustozerov, and Vladimir SHANDAROV</i>
<b>35</b>	<b>Optical properties of Na<sub>2</sub>O-TiO<sub>2</sub>-SiO<sub>2</sub> glass films prepared by the sol-gel method</b> <i>Ivo BARTOŇ, Vlastimil Matějec, Jan Mrázek, Luminita Predoana, Maria Zaharescu</i>
<b>36</b>	<b>Measurement of attenuation coefficient of core and cladding modes in Bragg fiber</b> <i>Milan FRANK, Michal Jelínek, Václav Kubeček, Vlastimil Matějec, Ondrej Podrazký, Ivan Kašík</i>
<b>37</b>	<b>Gain Determination of Optical Active Doped Planar Waveguides</b> <i>Jiří ŠMEJCKÝ, Vítězslav Jeřábek, P. Nekvindová, David Mareš</i>

Simulation of Photonic Devices	
38	<b>Analysis and Observers Survey for Reduction of Sea Glint Reflection</b> <i>Roy AVRAHAMY, M. Zohar, S. Hava, B. Milgrom</i>
39	<b>Optical RRH working in an all-optical fronthaul network</b> <i>Zbigniew ZAKRZEWSKI</i>
40	<b>Design and optimization of the silver nanograting structure utilizing surface plasmon-polariton for increase of SERS sensor response</b> <i>David MAREŠ, Vítězslav Jeřábek, Jiří Šmejcký, Yevgeniya Kalachyova, Oleksiy Lyutakov</i>
41	<b>Evaluation of energy transfer coefficients in Tm-doped fibers for fiber lasers</b> <i>Jakub CAJZL, Pavel Peterka, Pavel Honzátko, O. Podrazký, Michal Kamrádek, Jan Aubrecht, J. Proboštová, Ivan Kašík</i>
Non-linear Materials, Devices and Applications	
42	<b>Efficiency enhancement of the MIR DFG laser source based on periodically poled KTP crystal by optimal focusing conditions</b> <i>Yauhen BARAVETS, P. Koska, Pavel Honzátko</i>
43	<b>Optical self-action of bright soliton beams in photorefractive lithium niobate samples with pyroelectric mechanism of nonlinear response</b> <i>A.S. Perin, B.M. Budaev B.M., T.L. Grigoryan, V.M. SHANDAROV</i>
44	<b>Analyses of resource reservation schemes for optical burst switching networks</b> <i>Lubomír SCHOLTZ, Libor Ladanyi, Jarmila Mullerová</i>
45	<b>Power requirements reducing of FBG based all-optical switching</b> <i>Lubomir Scholtz, Michaela SOLANSKA, Libor Ladanyi, Jarmila Mullerová</i>
46	<b>Generation of 120 ps, 1168 nm anti-Stokes pulses from the all-solid-state, self-mode-locked, parametric Raman CaCO<sub>3</sub> laser with intracavity pumping by 1338 nm Nd:YAG laser</b> <i>Michal JELÍNEK, Václav Kubeček, Sergei Smetanin</i>

<b>47</b>	<b>All-solid-state, synchronously pumped, ultrafast BaWO<sub>4</sub> Raman laser with long and short Raman shifts generating at 1180, 1225, and 1323 nm</b> <i>Milan FRANK, Michal Jelínek, Václav Kubecek, L.I. Ivleva, Sergei Smetanin</i>
<b>48</b>	<b>Formation of Photonic Structures in Photorefractive Lithium Niobate by 1D and 2D Bessel-like Optical Fields</b> <i>A.V. Inyushov, P.K. Safronova, A.A. Sarkyt, V.M. Shandarov</i>
<b>49</b>	<b>Diode-pumped Cr-doped ZnMnSe and ZnMgSe lasers</b> <i>Adam ŘÍHA, M. Němec, H. Jelínková, M. E. Doroshenko, V. K. Komar, A. S. Gerasimenko</i>
<b>Diffraction Optical Devices</b>	
<b>50</b>	<b>Theoretical model of a polarization diffractive elements for the light beams conversion holographic formation in PDLCS</b> <i>Sergey N. SHARANGOVICH, A.O. Semkin</i>
<b>Education and Multimedia in Photonics</b>	
<b>51</b>	<b>A new generation of real-time weather monitoring cameras</b> <i>Petr JANOUT, Martin Blažek, Petr Páta</i>
<b>52</b>	<b>Considerations of education in the field of biophotonics in engineering: the experience of the subject Fundamentals of Biophotonics</b> <i>Félix Fanjul-Vélez, José Luis Arce-Diego</i>

## Wednesday August 30, 2017

<b>09:00 – 10:15</b>	<b>Waveguide Photonics</b>	<b>Chair: Dagmar SENDERAKOVÁ</b>
<b>09:00 – 09:15</b>	<b>Phase noise measurements of single-frequency widely tunable ytterbium fiber laser</b> <i>Yauhen BARAVETS, Ashwin Kumar MYAKALWAR, Pavel Honzátko</i>	
<b>09:15 – 09:30</b>	<b>Multimode Optical Polymer Planar Waveguides for Optical Interconnections</b> <i>Václav PRAJZLER, Miloš Neruda, Ivana Beshajova Pelikanová, Marian Knietel, Pavla Nekvindová</i>	
<b>09:30 – 09:45</b>	<b>Channel waveguides and phase diffraction gratings optically formed in photorefractive surface layers of lithium niobate</b> <i>A. Bezpaly, A. Verkhoturov, and V. SHANDAROV</i>	

09:45 – 10:00	<b>Arsenic sulfide layers for dielectric reflection mirrors prepared from solutions</b> <i>Vlastimil MATĚJEC, Jitka Pedlíková, Ivo Bartoň, Ondřej Podrazký</i>
10:00 – 10:15	<b>Design, fabrication and characterization of SiO<sub>x</sub>/SiON/SiO<sub>2</sub>/Si structures for passive optical waveguides realization</b> <i>Jozef CHOVAN, Daniel Figura, Juraj Chlpík, Dušan Lorenc, Vlastimil Řeháček, František Uherek</i>
10:15 – 10:30	<b>Monolithic thulium-doped fiber lasers</b> <i>Jan Aubrecht, Pavel Peterka, Pavel Honzátko, Ondřej Podrazký, Michal Kamrádek, Jana Proboštová, Ivan Kašík</i>
10:30 – 11:00	<b>Coffee Break</b>
11:00 – 11:15	<b>Simulation of Photonic Devices</b> <b>Chair: Dagmar SENDERAKOVÁ</b>
11:00 – 10:15	<b>Thin films structural properties: results of the full-atomistic supercomputer simulation</b> <i>Fedor V. GRIGORIEV, V. B. Sulimov, A. V. Tikhonravov</i>
11:15 – 11:30	<b>Diffraction Optical Devices</b> <b>Chair: Dagmar SENDERAKOVÁ</b>
11:15 – 11:30	<b>Fiber facet gratings for high power fiber lasers</b> <i>Martin VANĚK, Jan Vaniš, Yauhen Baravets, Fedor Todorov, Jiří Čtyroký, Pavel Honzátko</i>
11:30 – 12:30	<b>Non-linear Materials, Devices and Applications</b> <b>Chair: Pavel HONZÁTKO</b>
11:30 – 11:45	<b>Mode-locking peculiarities in an all-fiber erbium-doped ring ultrashort pulse laser with a highly-nonlinear resonator</b> <i>Dmitriy A. DVORETSKIY, Stanislav G. Sazonkin, Igor S. Kudelin, Ilya O. Orekhov, Alexey B. Pnev, Valeriy E. Karasik, Lev K. Denisov</i>
11:45 – 12:00	<b>Thulium-doped optical fibers for fiber lasers</b> <i>Jan Aubrecht, Pavel PETERKA, Ondřej Podrazký, Pavel Honzátko, Jakub Cajzl, Jan Mrázek, Václav Kubeček, Ivan Kašík</i>
12:00 – 12:15	<b>Analyses of electronic and optical properties of new TTF-based azine derivatives</b> <i>Lucia MYDLOVA, Awatef Ayadi, Abdelkirm El-Ghyoury, Bouchta Sahaoui, Malgorzata Makowska-Janusik</i>
12:15 – 12:30	<b>Laser fabrication of mechanical traps for sensitive atomic force microscopy investigation of the local nanomechanical properties of living cells</b> <i>Inam Mirza, Jan Pokorný, Yoann Levy, Radek Machulka, Ondřej Haderka, Nadezhda M. Bulgakova and Tomáš Mocek</i>

**12:30 – 12:45**

**Closing Session**

*Petr PÁTA*