Program

The Mathematics Meet Pharmacy 2019 workshop takes place at Charles University, Faculty of Pharmacy in Hradec Kralove, Akademika Heyrovskeho 1203, Lecture hall C.

Monday, 23 September, 2019, Lecture hall C

8:30–9:30	Registration
9:30–9:35	Organizers: Opening words
9:35–10:15	**Pavek, P.**; Duintjer Tebbens, J. (Charles University, Czech Republic) *Mathematics in pharmacology and beyond*
10:15–11:00	**Meldgaard Lund, T.** (University of Copenhagen, Denmark) *An introduction to population PKPD modelling*
11:00–11:30	Coffee break
11:30–13:00	**Contributed talks**
11:30–12:00	Ratschan, S. (Czech Academy of Sciences, Czech Republic) *Formal verification and its potential application in pharmacy*
12:00–12:30	Michalickova, D. (Charles University, Czech Republic) *Pharmacokinetics of phenobarbital in neonates on extracorporeal membrane oxygenation*
12:30–13:00	Zitko, J. (Charles University, Czech Republic) *Computer-aided drug design in medicinal chemistry*
13:00–15:00	Lunch: Tereziansky dvur
15:00–16:30	**Contributed talks**
15:00–15:30	Kindermann, S. (Johannes Kepler University Linz, Austria) *Parameter identification for a mathematical model of xenobiotic metabolizing enzyme induction*
15:30–16:00	Papacek, S. (University of South Bohemia in Ceske Budejovice, Czech Republic) *Modeling of drug-induced enzyme production in pharmacotherapy (with special attention to the dose-dependent behavior, periodic dosing and slow-fast decomposition)*
16:00-16:30	Lanzendörfer, M. (Charles University, Czech Republic) *Extending a pharmacodynamic model: towards compartments with spatial resolution*

16:30–17:00	Coffee break
17:00–18:00	**Contributed talks**
17:00–17:30	Kopecz, S. (University of Kassel, Germany)
	Modified Patankar-Runge-Kutta schemes for the solution of positive production-destruction systems
17:30–18:00	Svihlova, H. (Charles University, Czech Republic)
	Computational fluid dynamics in cerebral aneurysms: our experience
19:15	Workshop dinner: Pivovarske domy

Tuesday, 24 September, 2019, Lecture hall C

9:00–9:45	**Ferreira, J. A.** (Coimbra University, Portugal)
	A cardiologist meets a mathematician: the effect of atherosclerotic plaques on the pharmacokinetics of a drug released from a DES
9:45–10:30	Silva, P. (Coimbra Institute of Engineering, Portugal)
	Ophthalmologists meet mathematicians
10:30–11:00	Coffee break
11:00–12:00	**Contributed talks**
11:00–11:30	Olkhovskiy, V. (Heidelberg University, Germany)
	Modeling and simulation of the aqueous humor flow in the anterior chamber
11:30–12:00	Stein, J. (Heidelberg University, Germany)
	Modeling of drug distribution in the human vitreous
12:00–14:00	Lunch: Tereziansky dvur
14:00–15:00	**Contributed talks**
14:00–14:30	Dörsam, S. (Heidelberg University, Germany)
	Finite element simulation of drug distribution in the human vitreous
14:30–15:00	Drobny, A. (Heidelberg University, Germany)
	Numerical solution of viscoelastic fluid-structure-diffusion systems with applications in ophthalmology