

DIGITAL SIGNAL AND IMAGE PROCESSING WITH APPLICATIONS

(<http://uprt.vscht.cz/prochazka/pedag/ATHENSE.htm>)

Prof. Aleš Procházka

Programme ATHENS: CTU15 - November 17-21, 2025
Advanced Technology Higher Education Networks, Socrates



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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | ATHENS | 15 |
| 1. Théophile NADIEDJOA (TP, Paris) | 2. Yunxi CHEN (TUM, Munich) | 3. Arsene MALLET (TP, Paris) | 4. Manuel TENAZINHA GONCALVES FERREIRA (IST, Lisbon) | 5. Karol GODLEWSKI (WUT, Warsaw) | 6. Maxence GUINZIEMBA (TP, Paris) | 7. Sophie CARLIER (Mines, Paris) | 8. Théo PALAGI (TP, Paris) | 9. Yasmin MELO SILVA (ENSAM, Paris) | 10. Mykhailo NATAROV (WUT, Warsaw) | 11. Mario CABALLERO (TUM, Munich) | 12. Martin SCHÄTZ (UCT, Prague) | 13. Pedro LOPES (IST, Lisbon) | 14. Carolina FITAS (IST, Lisbon) | 15. Tereza TUMOVÁ (UCT, Prague) | 16. David LOPES (IST, Lisbon) | 17. Irena ŠINDELÁŘOVÁ (CTU, Prague) | 18. Aleš PROCHÁZKA (UCT, Prague) | | |

FINAL MEETING AND PRESENTATIONS

Friday 21 November 2025, Room A40

Department of Mathematics, Informatics and Cybernetics ICT Prague

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|-------|-------------------------------------|--|
| 12:00 | Pedro ALEXANDRE FERREIRA DIAS LOPES | Optimal state estimation in image processing by Kalman filtering |
| 12:15 | Mario CABALLERO YUS | Von Neumann stability analysis of finite difference schemes |
| 12:30 | Sophie CARLIER | Principles of artificial neural networks and computational intelligence |
| 12:45 | Yunxi CHEN | Peak-to-Average power ratio reduction techniques in OFDM systems |
| 13:00 | Karol GODLEWSKI | DCT techniques in image compression, digital watermarking, and steganography |
| 13:15 | Maxence GUINZIEMBA-PROKOP | Explanation of convolution and its use in spectral analysis and filtering |
| 13:30 | David LOPES | Application of filtering in biosignals |
| 13:45 | Arsene MALLET | Wavelet decomposition and de-noising in image processing |
| 14:00 | Yasmin MELO SILVA | Introduction to Image processing and histogram normalization |
| 14:15 | Théophile NADIEDJOA | Principle of the mean square method for data approximation |
| 14:30 | Mykhailo NATAROV | Application of autoregressive modeling to predict energy consumption |
| 14:45 | Théo PALAGI | Z-transform, its definition, basic properties, and applications |
| 15:00 | Carolina PALMA FITAS | Autoregressive signal modelling and prediction |
| 15:15 | Manuel TENAZINHA GONÇALVES FERREIRA | Two-dimensional and three-dimensional graphics in MATLAB |