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University of Rijeka  
PhD University of Zagreb, 2004

Research interest: Numerical approximations of hyperbolic conservation and balance laws;  
Shallow water and open channel flow, flooding, sediment transport; Object oriented  
programming; Optimization

## Recent publications:

[1] Mujaković, N., Črnjarić-Žic, N., *Convergent finite difference scheme for 1D flow of a compressible micropolar fluid with homogeneous boundary conditions*, **International Journal of Numerical Analysis and Modelling**, 12 (2015), pp. 94-124

[2] Valentine, D.L., Mezić, I., Maćešić, S., Črnjarić-Žic, N., Ivić, S., Hogan, P.J., *Dynamic autoinoculation and the microbial ecology of a deep water hydrocarbon irruption*, **Proceedings of the National Academy of Sciences**, 109 (2012), pp. 20286-20291

[3] Crnković, B., Črnjarić-Žic, N., *Binary weighted essentially non-oscillatory (BWENO) approximation*, **Journal of computational and applied mathematics** 236 (2012), pp. 2431-2451

[4] Črnjarić-Žic, N., Crnković, B., *High order accurate semi-implicit WENO schemes for hyperbolic balance laws*, **Applied mathematics and computation**, 217 (2011), pp. 8611-8629

[5] Črnjarić-Žic, N., Crnković, B., Maćešić, S., *A numerical study of SSP time integration methods for hyperbolic conservation laws*, **Mathematical communications**, 15 (2010), pp. 613-633

## Selected publications:

[1] Črnjarić-Žic, N., Crnković, B., *High order accurate semi-implicit WENO schemes for hyperbolic balance laws*, **Applied mathematics and computation**, 217 (2011), pp. 8611-8629

[2] Crnković, B., Črnjarić-Žic, N., Kranjčević, L., *Improvements of semi-implicit schemes for hyperbolic balance laws applied on open channel flow equations*, **Computers & mathematics with applications**, 58 (2009), pp. 292-309

[3] Črnjarić-Žic, N., Vuković, S., Sopta, L., *Balanced Finite Volume WENO and Central WENO Schemes for Shallow Water and Open Channel Flow Equations*, **Journal of Computational Physics**, 200 (2004), pp. 512-548

[4] Vuković, S., Črnjarić-Žic, N., Sopta, L., *WENO Schemes for Balance Laws with Spatially Varying Flux*, **Journal of Computational Physics**, 199 (2004), pp. 87-109

[5] Črnjarić-Žic, N., Vuković, S., Sopta, L., *Extension of ENO and WENO schemes to One-Dimensional Bed-Load Sediment Transport Equations*, **Computers & Fluids** 33/1, (2003), pp. 31-56