Dear Professor Marin,

Please find attached the manuscript entitled “Three-dimensional binary-liquid lattice Boltzmann simulation of microchannels with rectangular cross sections” prepared for submission to the “Chemical Engineering Journal”. This work extends our previous work about two-dimensional flows between plates to three-dimensional flows in microchannels with rectangular (mainly square) cross sections. With a great pleasure we consider the "Chemical Engineering Journal" as a natural fit for this work.

Please do not hesitate to contact me if you have any questions/comments.

Best Regards,

Alex

Keywords: Taylor/Bretherton problem, Microchannel simulation, Multiphase ﬂow, Lattice Boltzmann method, Binary liquid model, Flow in microchannels with square cross sections, Gravity driven