

# On the problem of a bi-fluid model for a mixture of two compressible non interacting fluids with general boundary data

S. Kračmar

*Department of Mathematics, Czech Technical University, Faculty of Mechanical Engineering  
stakr51@gmail.com,*

Y. Kwon

*Department of Mathematics, Dong-A University Busan 49315, Republic of Korea  
ykwon@dau.ac.kr,*

Š. Nečasová

*Institute of Mathematics of the Academy of Sciences of the Czech Republic  
matus@math.cas.cz,*

A. Novotny

*University of Toulon, IMATH, France  
novotny@univ-tln.fr*

## Abstract

We deal with the global existence of weak solutions for a version of one velocity Baer-Nunziato system with dissipation describing a mixture of two non interacting viscous compressible fluids in a piecewise regular Lipschitz domain with general inflow/outflow boundary conditions. The geometrical setting is general enough to comply with most current domains important for applications as, for example, (curved) pipes of piecewise regular and axis-dependent cross sections.

## References

- [1] S. Kračmar, Y. Kwon, Š. Nečasová, A. Novotny: Weak solutions for a bi-fluid model for a mixture of two compressible non interacting fluids with general boundary data, arXiv:2105.04843