

# INTERNATIONAL BIWEEKLY ONLINE SEMINAR ON ANALYSIS, DIFFERENTIAL EQUATIONS AND MATHEMATICAL PHYSICS

---

Coordinators: Prof. Alexey Karapetyants, Prof. Vladislav Kravchenko

[JOIN THE SEMINAR](#)

**24 November 2022, 6 pm (UTC+3)**

On solutions of a multi-phase Stefan-Riemann problem

**Evgeny Panov**, Yaroslav-the-Wise Novgorod State University, Veliky Novgorod, Russia

[eugeny.panov@novsu.ru](mailto:eugeny.panov@novsu.ru)

We find an explicit form of solutions to a multi-phase Stefan problem with Riemann initial data. It is demonstrated that the phase transition lines (free boundaries) correspond to the minimum point of some strictly convex function of a finite number of variables. In the limit as number of phases tend to infinity we obtain a variational formulation of self-similar solutions to a nonlinear diffusion equation.

\*Seminar website: <https://msrn.sfedu.ru/sl>. The seminar uses Microsoft Teams online platform.  
Please send questions to [ademp.seminar@gmail.com](mailto:ademp.seminar@gmail.com) (Tatiana Andreeva, scientific secretary).

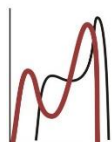
---

The seminar is organized by the coordinators Alexey Karapetyants and Vladislav Kravchenko within the activities of the Regional Mathematical Center of the Southern Federal University in collaboration with Institute of Mathematics, Mechanics and Computer Sciences of the Southern Federal University and the OTHA research group in Operator Theory and Harmonic Analysis.

**Региональный научно -  
образовательный  
математический центр**

Южный Федеральный Университет  
Ростов-на-Дону

**Regional Mathematical Center**  
<https://rmc.sfedu.ru/>



ИНСТИТУТ  
МАТЕМАТИКИ  
МЕХАНИКИ  
КОМПЬЮТЕРНЫХ  
НАУК

имени И.И. Воровича —

**Institute of Mathematics, Mechanics  
and Computer Sciences**  
<http://www.mmcs.sfedu.ru/>



**OTHA research network in  
Operator Theory and Harmonic Analysis**  
<http://msrn.sfedu.ru/>