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**Scientific interests:** kinetic theory of gases, exact and approximate solutions of the Bryan-Pidduck equation.

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## **Scientific papers**

- 1. V.D. Gordevskyy, O.O. Hukalov Maxwell distributions in a model of rough spheres // Ukr. Mat. Zh. 2011. 63, № 5. pp. 629-639
- 2. V.D.Gordevskyy, A.A.Gukalov Interaction of the eddy flows in the Bryan-Pidduck model // Visnyk of Karazin Kharkiv National University. Ser. Mathematics, Applied Mathematics and Mechanics.-2011.-990.-p.27-41.
- **3.** A. A. Gukalov Interaction between "Accelerating-Packing" Flows for the Bryan-Pidduck Model// Journal of Mathematical Physics, Analysis, Geometry, **9**:3 (2013), c.316–331.
- **4.** V.D.Gordevskyy, A.A.Gukalov Interaction of locally Maxwellian flows in the model of rough spheres, Teoreticheskaya i Matematicheskaya Fizika, **176**:2 (2013), c. 322–336.
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- **7.** V.D. Gordevskyy, O.O. Hukalov, The bimodal distribution with some Maxwell modes for the Bryan-Piddack equation, // Visnyk of Karazin Kharkiv National University. Ser. Mathematics, Applied Mathematics and Mechanics.-2015.-V.82.-P. 4-18.
- **8.** Gordevskii V. D., Gukalov A. A. Approximate solutions of the Boltzmann equation with infinitely many modes // Ukr. Mat. Zh. 2017. 69, № 3. pp. 311-323.
- **9.** O.O. Hukalov, V.D. Gordevskyy, The Interaction of the Maxwell Flows of General Form for the Bryan-Pidduck Model // Journal of Mathematical Physics, Analysis, Geometry, 14:1 (2018), c.54–66.
- **10.**O.O. Hukalov, V.D. Gordevskyy, Infinite-modal approximate solutions of the Bryan-Pidduck equation // Matematychni Studii, V.49., №1, p.95-108.