# PhD Nadezhda Bondareva – Curriculum Vitae

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## Contact address

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## Current position / Affiliations

Since 02/2017 **Research Fellow**, Tomsk state university, Russia
Since 09/2017 **Assistant professor**, Tomsk state university, Russia

## Professional career

09/2014 – 12/2016 **Junior researcher**, Tomsk state university, Russia
Since 01/2017 **Researcher**, Tomsk state university, Russia

## Education

09/2013 – 07/2016 PhD in Fluid mechanics, Title of thesis: Numerical study of conjugate convective heat transfer in systems containing phase change materials, Tomsk state university, Tomsk
09/2011 – 06/2013 Undergraduate studies in Fluid mechanics, Tomsk state university, Tomsk
09/2006 – 06/2011 Studies in Mechanics, Tomsk state university, Tomsk

## Research Interests

1) Numerical simulations
2) Fluid dynamics
3) Natural convection modeling
4) Phase change material

## Citations and Other Statistics (as of May 2018)

1) Social Science Citation Index (Web of Science): over 244 citations, h-index 8
3) Scopus: 304 citations, h–index 9

## Selected Research Projects and Grants (Project Leader)

2017 – 2018 « Methods for intensifying convective heat transfer in closed semi-open systems», government task of the Ministry of Education and Science of the Russian Federation, Tomsk, Russia.

## Selected Research Projects and Grants (Member of the Research Team)

2014 – 2016 « Modeling of heat and mass transfer processes and phase changing in heat pipes», government task of the Ministry of Education and Science of the Russian Federation, Tomsk, Russia.

2014 – 2015 «Mathematical modeling unsteady regimes conjugate convective heat transfer in systems containing the phase change material», grant of Russian Foundation for Basic Research, Tomsk, Russia.

2015 – 2016 «Mathematical modeling of unsteady regimes of conjugated convective-radiative heat transfer in technological objects taking into account external hydrodynamic and thermal effects», Grants Council, Tomsk, Russia

2017 – 2018 «Mathematical modeling of convective heat transfer in media with variable physical properties», Grants Council, Tomsk, Russia

## Conference and Seminar Presentations

2017

XXI School-seminar of young scientists and specialists under the guidance of Academician A.I. Leontiev "Problems of gas dynamics and heat and mass transfer in power installations ", St. Petersburg; XXXIII Siberian Thermophysical Seminar, Novosibirsk; VI International Scientific and Technical Conference of Young Scientists, Post-Graduates and Students "High Technologies in Modern Science and Technology", Tomsk; VI International Youth Scientific Conference "Actual Problems of Contemporary Continuum Mechanics and Celestial Mechanics - 2017", Tomsk.

2016

XIII International Conference of Students and Young Scientists "Prospects of Fundamental Sciences Development", Tomsk; XV Minsk International Forum on Heat and Mass Transfer, May 23-26, 2016, Minsk; IX All-Russian Conference "Fundamental and Applied Problems of Modern Mechanics", Tomsk; XIV All-Russian school-conference with international participation "Actual problems of thermophysics and physical hydrodynamics", Novosibirsk.

2015

IV International Scientific and Technical Conference of Young Scientists, Post-Graduates and Students "High Technologies in Modern Science and Technology", Tomsk; XII International Conference of Students and Young Scientists "Prospects of Fundamental Sciences Development", Tomsk; XX School-seminar of young scientists and specialists under the guidance of Academician A.I. Leontiev "Problems gas dynamics and heat and mass transfer in energy installations", Zvenigorod; All-Russian Conference "XXXII Siberian Thermophysical Seminar", Novosibirsk; XXI International Scientific Conference of Students and Young Scientists "Modern Technologies and Technologies", Tomsk.

2014

XIII All-Russian school-conference with international participation "Actual problems of thermophysics and physical hydrodynamics", Novosibirsk;

2012:

XII All-Russian school-conference with international participation "Actual problems of thermophysics and physical hydrodynamics", Novosibirsk; II All-Russian Youth Scientific Conference "Actual Problems of Contemporary Continuum Mechanics and Celestial Mechanics", Tomsk.

## Refereed Journals

2018

Bondareva, N.S., Sheremet, M.A. Conjugate heat transfer in the PCM-based heat storage system with finned copper profile: Application in electronics cooling // International Journal of Heat and Mass Transfer. – 2018. – Vol. 124. – pp. 1275-1284.

Bondareva, N.S., Sheremet, M.A., Oztop, H.F., Abu-Hamdeh, N. Free Convection in an Open Triangular Cavity Filled with a Nanofluid under the Effects of Brownian Diffusion, Thermophoresis and Local Heater // Journal of Heat Transfer. – 2018. – Vol. 140(4). – 042502.

Bondareva, N.S., Sheremet, M.A., Öztop, H.F., Abu-Hamdeh, N. Transient natural convection in a partially open trapezoidal cavity filled with a water-based nanofluid under the effects of Brownian diffusion and thermophoresis // International Journal of Numerical Methods for Heat and Fluid Flow. – 2018. – Vol. 28 Issue: 3. – pp.606-623.

2017

Bondareva N.S., Sheremet M.A. Flow and heat transfer evolution of PCM due to natural convection melting in a square cavity with a local heater // International Journal of Mechanical Sciences. – 2017. – Vol. 134. – P. 610 – 619.

Bondareva N.S., Sheremet M.A. 3D natural convection melting in a cubical cavity with a heat source // International Journal of Thermal Sciences. – 2017. – Vol. 115. – P. 43 – 53.

Bondareva N.S., Sheremet M.A. Natural convection heat transfer combined with melting process in a cubical cavity under the effects of uniform inclined magnetic field and local heat source // International Journal of Heat and Mass Transfer. – 2017. – Vol. 108. – P. 1057 – 1067.

Bondareva N.S., Sheremet M.A., Oztop H.F., Abu-Hamdeh N. Entropy generation due to natural convection of a nanofluid in a partially open triangular cavity // Advanced Powder Technology. – 2017. –Vol. 28(1). – P. 244 – 255.

H.F., Bondareva N.S., Sheremet M.A., Abu-Hamdeh N. Unsteady Natural Convection with Entropy Generation in Partially Open Triangular Cavities with a Local Heat Source // International Journal of Numerical Methods for Heat & Fluid Flow. – 2017. – Vol. 27(12). – P. 2696 –2716.

Bondareva N.S., Sheremet M.A., Oztop H.F., Abu-Hamdeh N. Heatline visualization of natural convection in a thick walled open cavity filled with a nanofluid // International Journal of Heat and Mass Transfer. – 2017. – Vol. 109. – P. 175–186.

Bondareva N.S., Gibanov N.S., Martyushev S.G., Miroshnichenko I.V., Sheremet M.A. Comparative analysis of finite difference method and finite volume method for unsteady natural convection and thermal radiation in a cubical cavity filled with a diathermic medium // Computer Research and Modeling. – 2017. – Vol. 9(4). – P. 567-578.

2016

Bondareva N.S., Sheremet M.A., Effect of inclined magnetic field on natural convection melting in a square cavity with a local heat source // Journal of magnetism and magnetic materials. – 2016. – Vol. 419. – P. 476 – 484.

Volokitin O.G., Sheremet M.A., Shekhovtsov V.V., Bondareva N.S., Kuzmin V.I. Studying regimes of convective heat transfer in the production of high-temperature silicate melts // Thermophysics and aeromechanics. – 2016. – Vol. 23. – No. 5. – P. 755 – 765.

Bondareva N.S., Sheremet M.A., Oztop H.F., Abu-Hamdeh N. Heatline visualization of MHD natural convection in an inclined wavy open porous cavity filled with a nanofluid with a local heater // International journal of heat and mass transfer. – 2016. – Vol. 99. – P. 872 – 881.

Bondareva N.S., Sheremet M.A. Mathematical simulation of melting inside a square cavity with a local heat source // Thermophysics and aeromechanics. – 2016. – Vol. 23. – No.4. – P. 553 – 565.

Bondareva N.S., Sheremet M.A. Numerical simulation of melting of phase change material in a square cavity with a heat source // Key engineering materials. – 2016. – Vol. 685. – P. 104 – 108.

Bondareva N.S., Sheremet M.A. Study of melting of a pure gallium in a rectangular enclosure // Key engineering materials. – 2016. – Vol. 683. – P. 348 –554.

2015

Bondareva N.S., Sheremet M.A. Influence of uniform magnetic field on laminar regimes of natural convection in an enclosure // Thermophysics and Aeromechanics. – 2015. – Vol. 22. – №. 2. – P. 203 – 216.

Bondareva N.S., Sheremet M.A. Study of melting of a pure gallium under influence of magnetic field in a square cavity with a local heat source // IOP conf. series: Materials science and engineering. – 2015. – Vol. 93. – 012004–1–012004–4.

Bondareva N.S., Sheremet M.A., I. Pop Magnetic field effect on the unsteady natural convection in a right-angle trapezoidal cavity filled with a nanofluid source // International journal of numerical methods for heat & fluid flow. – 2015. – Vol. 25. – P. 1924 – 1946.

2013

Bondareva N.S., Volokitin O.G., Morozova O.O., Sheremet M.A. Unsteady regimes of hydrodynamics and heat transfer at production of high-temperature silicate melts // Thermophysics and Aeromechanics. – 2013. – Vol. 20. – №. 5. – P. 633 – 641.