



The Combustion Institute

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2018 Russian Federation Section of The Combustion Institute Report

Section Website: <http://www.comb.inst.rus-section.mech.math.msu.su/>

Section Chair: Smirnov N.N

List section officers and board members with titles:

Smirnov N.N., Chairman
Assovskiy I.G., Deputy chairman, chairman of central regional department
Yakush S.E., International secretary
Vasil'yev A.A., Chairman of the Siberian regional department
Trotsyuk A.N., Scientific secretary of Siberian regional department
Assovskiy I.G., Chairman of central regional department
Nikitin V.F., Scientific secretary of central regional department
Amosov A.P., Chairman of the Ural- Volga regional department
Lukin A.N., Scientific secretary of the Ural-Volga regional department
Silnikov M.V., Chairman of the North Western regional department
Chernyshov M.V., Scientific secretary of the North Western regional department
Minaev S.S., Chairman of the Far East regional department
Lutsenko N., Scientific secretary of the Far East regional department
Azatyan V.V., Member
Babkin V.S., Member
Korobeinichev O.P., Member
Levin V.A., Member
Marshakov V.N., Member
Filimonov I.A., Member
Fomin V.M., Member
Frolov S.M., Member
Surzhikov S.T., Member
Tsyganov S.A., Member
Ulybin V.A., Member
Fortov V.E., Honorary Member
Liparov A.M., Honorary Member
Titov V.M., Honorary Member
Tyurenkova V.V., Committee secretary

Members of the Russian Federation Section:

Active Members	100
Non-Student Members	90
Student Members	10

Section meetings and workshops since 2016 with date and attendance information:

- 12th International Conference on “Technical devices against terrorist and criminal explosion” was held in St. Petersburg on 5-7 October 2016
 - Under the auspice of Russian Academy of Rocket and Artillery Sciences, Saint Petersburg University of the EMERCOM (Ministry of Emergency) and Combustion Institute Russian Section
 - Organizers: M.V. Silnikov, N.N. Smirnov, S.P. Medvedev, M.V. Chernyshov, V.V. Adushkin

- <https://www.npo-sm.ru/konferencii/>
- 5th Memorial Seminar of Professor Boris E.Gelfand was held in St. Petersburg on 4-6 October 2016
 - Under the auspice of Russian Academy of Rocket and Artillery Sciences, Saint Petersburg University of the EMERCOM (Ministry of Emergency) and Combustion Institute Russian Section
 - Organizers: M.V. Silnikov, N.N. Smirnov, S.P.Medvedev, M.V.Chernyshov, V.V.Adushkin
 - <https://www.npo-sm.ru/konferencii/>
- Fire Safety of Space Vehicles, 4th Space Flight Safety Symposium of the International Academy of Astronautics was organized in St.Petersburg July 3-5, 2017
 - CI organizers – N.N.Smirnov, M.V.Silnikov (Russian Section), Grunde Jomaas (Great Britain Section)
 - <http://sfs-spb.ru/>
- Session on Combustion and Detonation was organized within the frame of 45th International Summer School-Conference Advanced Problems in Mechanics (APM 2017). Russia, St. Petersburg June 22 – 27, 2017
 - Co-Chairmen: D. A. Indeitsev, A.M. Krivtsov
 - CI organizers: V.A.Levin, T.A.Zhuravskaya
 - <http://www.apm-conf.spb.ru/apm-2017>
- 12th Russian young scientists Conference on “Problems of explosion safety and antiterrorism” in Saint Petersburg 24-26 April 2017
 - Organized by Russian Academy of Rocket and Artillerist Sciences, Saint Petersburg University of the Ministry of Emergency and Combustion Institute Russian Section
 - CI Organizers: M.V. Silnikov, N.N. Smirnov, M.V.Chernyshov
 - www.npo-sm.ru/conf_blasts12.php
- 5th Colloquium on Physics of Shock Waves, Combustion and Detonation was organized jointly by Belarus and Russian Sections in Minsk, Belarus, November 13-16, 2017
 - Joint event organized by Belarus, Russian and Scandinavian Sections of the Combustion Institute
 - Colloquium Chair O.G.Penyazkov
 - CI Organizers from Russian section, N.N.Smirnov, S.M.Frolov, O.V.Sharypov, V.S.Babkin, V.A.Levin, A.V. Trotsyuk
 - Scandinavian section: A Konnov, A.Lipatnikov
 - Belarus Section: O.G.Penyazkov, N.A.Fomin
 - <http://www.itmo.by/mmk-2017>
- 13th Russian Scientific and Practical Conference on “Technical devices against terrorist and criminal explosion” was held in St. Petersburg on 24-26 October 2017
 - Under the auspice of Russian Academy of Rocket and Artillerist Sciences, Saint Petersburg University of the EMERCOM (Ministry of Emergency) and Combustion Institute Russian Section
 - Organizers: M.V. Silnikov, N.N. Smirnov, M.V.Chernyshov, V.V.Adushkin
 - <https://www.npo-sm.ru/konferencii/>
- 6th Memorial Seminar of Professor B.E.Gelfand was held in St. Petersburg on 24-26 October 2017
 - Under the auspice of Russian Academy of Rocket and Artillerist Sciences, Saint Petersburg University of the EMERCOM (Ministry of Emergency), Saint Petersburg State technical University named after D.F.Ustinov (Voenmech) and Combustion Institute Russian Section
 - Organizers: M.V. Silnikov, N.N. Smirnov, S.P.Medvedev, M.V.Chernyshov, V.V.Adushkin
 - <https://www.npo-sm.ru/konferencii/>
- Section on Nonlinear Dynamics of Complex Systems was organized within the frame of Ginzburg Centennial Conference on Physics May 29 – June 3, 2017, Moscow
 - Coordinators: Andrey Polezhaev, Vladimir Gubernov
 - CI organizers V. Fortov, V.Gubernov, N.Smirnov

- <http://www.gc2.lpi.ru/>
- The Voevodsky Institute of Chemical Kinetics and Combustion SB RAS hosted the 9th International Seminar on Flame Structure (July 10-14, 2017) held in Novosibirsk
 - Organized together with the Institute of Theoretical and Applied Mechanics SB RAS, Institute of Thermophysics SB RAS, Institute of Hydrodynamics SB RAS, Boreskov Institute of Catalysis SB RAS, Institute for Problems of Chemical & Energetic Technologies SB RAS, and the Novosibirsk State University
 - Under the aegis of the Combustion Institute and of its Russian section
 - CI organizers: O.P. Korobeinichev (co-chair), V.M. Fomin (co-chair), V.A. Bagryansky, S.V. Alekseenko, V.M. Dulin, A.V. Fedorov, A.A. Vasil'ev, V.E. Zarko, A.E. Zarvin, Z.R. Ismagilov, V.A. Yakovlev, S.S. Minaev, A.A. Korzhavin, E.R. Prueel, N.N. Smirnov
 - <http://www.kinetics.nsc.ru/kcp/9ISFS/index.htm>
- 8th International Conference “Space Challenge of the XXI Century” (SPACE'2017), 1- 8 October 2017, Adler, Russia
 - Chairman CI I.G. Assovskiy
- Session on Combustion Phenomena organized within the frame of 46th International Summer School-Conference Advanced Problems in Mechanics (APM 2018). Russia, St. Petersburg June 25-30, 2018
 - Co-Chairmen: D. A. Indeitsev, A.M. Krivtsov
 - Session organizers: V.A. Levin, N.N. Smirnov
 - <http://www.apm-conf.spb.ru/>
- 13th Russian young scientists Conference on “Problems of explosion safety and antiterrorism” in Saint Petersburg 23-25 April 2018
 - Organized by Russian Academy of Rocket and Artillerist Sciences, Saint Petersburg University of the Ministry of Emergency and Combustion Institute-Russian Section
 - Organizers: M.V. Silnikov, N.N. Smirnov, M.V. Chernyshov
 - <https://www.npo-sm.ru/konferencii/>

List other activities (e.g. section journals, projects, working groups, school for students, etc.)

- Scientific seminar for undergraduate students and postgraduate students on “Detonation and combustion” named after I.N. Zverev
 - Organized by the faculty of Mechanics and Mathematics Moscow M.V. Lomonosov State University
 - Periodicity: once per week
 - Commencement: since 1st September through 20th December, and since 7th February through 20th May
 - Seminar chair – Smirnov N.N.
 - Seminar secretary – Tyurenkova V.V.
- Scientific seminar of the central regional department of the Combustion Institute Russian section is being held in Moscow
 - Hosted by the Institute for Problems in Mechanics (Vernadskogo, 101)
 - Organizers: M.T. Surzhikov, S.E. Yakush
 - Periodicity: 6 sessions per year
- Annual sessions on Gas and Waves Dynamics and Detonation were organized within the frames of XXII and XXIII International Conferences of students, Ph.D. students and young professionals “Lomonosov-2017”, “Lomonosov-2018”, held in Moscow M.V. Lomonosov State University
 - Chairman of Organizing Committee – V.A. Sadovnichiy
 - Session organizers – R.I. Nigmatulin, N.N. Smirnov
- The scientific team of Central regional department of the International Combustion Institute Russian Section (Smirnov N.N., Assovskii I.G., Tyurenkova V.V.) participates in a joint space experiment of NASA, ESA, Roskosmos, JAXA “SAFFIRE” (Spacecraft Fire Experiment) on measurements of materials burning rate under low gravity conditions in the space capsule environment using Cygnus unit as a test site after its separation from the International Space Station

- Terrorism being the major contemporary threat to Mankind Combustion Institute Russian Section supported a series of both International and National conferences aimed at antiterrorist activities with participation of students and young professionals:
 - Annual Russian young scientists Conference on “Problems of explosion safety and antiterrorism” organized by Russian Academy of Rocket and Artillery Sciences, Saint Petersburg University of the Ministry of Emergency and Combustion Institute Russian Section held in Saint Petersburg in April
 - Organizers: M.V. Silnikov, N.N. Smirnov
 - International Conferences "Technical devices against terrorist and criminal explosions"
 - Organized under the auspice of Russian Academy of Rocket and Artillery Sciences, Saint Petersburg University of the EMERCOM of Russia and the Combustion Institute Russian Section
 - These science and Practical conferences are held in Saint Petersburg annually in October
 - Organizers: M.V. Silnikov, N.N. Smirnov, V.V. Adushkin
- The Cool Flames Investigation (CFI) is an ISS space flight experiment developed by the NASA Science Definition Team
 - Members include:
 - Prof. Forman A. Williams, University of California, San Diego
 - Prof. Frederick L. Dryer, Princeton University
 - Prof. Tanvir I. Farouk, University of South Carolina
 - Dr. Vedha Nayagam, Case Western Reserve University
 - Dr. Daniel L. Dietrich, NASA Glenn Research Center (GRC)
 - The CFI experiment is conducted in collaboration with:
 - Dr. Sergey Frolov, Prof. Valentin Basevich, Dr. Andrei A. Belyaev, Dr. Sergey N. Medvedev, and Dr. Igor Assovskii of N.N. Semenov Institute of Chemical Physics
 - Prof. Nikolay Smirnov, Moscow M.V. Lomonosov State University
 - Dr. Veronika Tyurenkova, Scientific Research Institute for System Analysis of the Russian Academy of Sciences
 - Dr. Oleg Korobeinichev, Dr. Tatyana Bolshova, Dr. Denis Knyazkov, Dr. Ilya Gerasimov, Institute of Chemical Kinetics and Combustion Russian Academy of Sciences Siberian Division
 - This joint Roscosmos-NASA spaceflight experiment is being coordinated by:
 - Dr. Francis Chiamonte (NASA, Headquarters)
 - Project Scientist (PS) Dr. Daniel L. Dietrich (GRC)
 - Dr. Elena Lavrenko of TsNIIMash (Russian Space Agency/Russia)
- The Growth and Extinction Limit of Solid Fuels (GEL) is a space flight investigation
 - Led by United States Principal Investigator Professor James S. T'ien (Case Western Reserve University, Cleveland, Ohio)
 - With Co-Investigators Dr. Paul Ferkul (USRA), and Dr. Sandra Olson, (NASA Glenn Research Center)
 - In collaboration with Professor Oleg P. Korobeinichev, (Siberian Branch of the Russian Academy of Sciences)
 - This joint Roscosmos-NASA spaceflight experiment is coordinated by Mark Hickman, NASA GRC, and Project Scientist (PS) Dr. Daniel L. Dietrich (GRC) of the USA and Dr. Elena Lavrenko of TsNIIMash (Russian Space Agency/Russia).

List awards given by section with details:

- Медаль Б.Е.Гельфанда (B.E.Gelfand medal)
 - Established by Russian Section of The Combustion Institute
 - The medal is established to commemorate the outstanding scientist in the field of Physical Chemistry, USSR State Prize winner, academician of Russian Academy of Natural Sciences Professor Boris Efimovich Gelfand (18.02.1941 – 03.10.2010)

- The B.E.Gelfand medal is awarded by the Russian Section of The Combustion Institute
- The B.E.Gelfand medal could be awarded to Russian scientists or scientists from other countries “for essential contribution to theory and practice of combustion and explosion, shock waves suppression, fire and explosion safety”
- The decision on awarding the B.E.Gelfand medal is taken once per year in October by the Commission on awarding the B.E.Gelfand medal, which is formed by the members of the Russian Section of The Combustion Institute approved by the Chairman of the Russian Section
- Nominations for the B.E.Gelfand medal could be made by the members of The Combustion Institute, as well as Scientific Councils of scientific-research, educational or engineering organizations registered in Russian Federation
- Any scientist having been awarded by the Gelfand medal once, cannot be nominated for the second time
- The B.E.Gelfand medal is made of special alloy “tompak” in the form of a circular disk 27 mm in diameter, 3 mm thick with golden coating
 - On the front side the B.E.Gelfand portrait and the sign are present «Борис Ефимович Гельфанд (18.02.1941 – 03.10.2010)»
 - On the back side of the medal the Cyrillic sign «Российская секция Международного Института Горения» (Russian Section of The Combustion Institute)
 - In the centre of the back side the emblem of The Combustion Institute is present
 - The medal with the help of round ring is connected with a rectangular plate decorated by red ribbon 20 mm thick
 - On the back side of the plate there is a pin for attaching the medal
 - The medal is worn on the left side of the jacket.
- Awardees:
 - 2013:
 - Vyacheslav Babkin
 - Sergey Khomik
 - Sergey Medvedev
 - Robert I. Nigmatulin
 - Mikhail Silnikov
 - 2014:
 - Derek Bradley
 - Vladimir Fortov
 - Iskender Goekalp
 - Nickolay Smirnov
 - Vyacheslav Ulybin
 - 2015:
 - Vitaliy Adushkin
 - Mikhail Chernyshov
 - Oser Igra
 - Kazuyoushi Takayama
 - Sergei Yakush
 - 2016:
 - Alexander Dolgoborodov