

Serbia
Member of ICHMT
(1) Overview

(Central European Time, CET: UTC+1, Population: 7 million)

1. Organizations

1.1 **The Society of Thermal Engineers of Serbia** (<https://www.drustvo-termicara.com/>) is the leading professional association in Serbia of scientific researchers, professors and engineers dealing with heat and mass transfer, fluid mechanics, thermodynamics, combustion, power and energy system, etc. It is legal successor of the Society of Thermal Engineers of Yugoslavia that was founded in 1962 following the idea and initiative of the researchers from the Thermal Engineering Laboratory of the Institute "Boris Kidrič" (today's Thermal Engineering and Energy Laboratory of the Institute of Nuclear Sciences in Vinča, <http://www.lte-vinca.rs/public/lang/rs>). The main objective of the Society was/is to establish/promote better cooperation and exchange of the fundamental/applied knowledge in the field of heat and mass transfer between research/educational institutions and industry in the country, region and the world. Following these ideas leading researchers from the Institute "Vinča" in September 1968 organized in Yugoslavia, 1st International Symposium/summer school titled "Heat and Mass Transfer in Turbulent Boundary Layers" which participated 115 leading world experts from 11 countries, from Europe, USA Canada and USSR. In spite of difficult political situation (due to Cold war) at that time in the world, based on excellent organization and high level of presented papers, most of the present experts agreed that such international cooperation should be continued by organizing regularly Symposiums on different subjects/problems in heat and mass transfer. For the realization of these tasks the INTERNATIONAL CENTRE FOR HEAT AND MASS TRANSFER was established with Head office in The Institute of Nuclear Sciences "VINČA", led by Professor Zoran Zarić as general secretary (1968-1985) and Professor Naim Afgan as scientific secretary (1968-1985) and later as general secretary (1985-1993) until the Center was relocated to Turkey in 1993. In period 1968-1993, ICHMT organized 47 international scientific events/meetings. Proceedings, published by world leading publishing companies, mostly edited by Professor Naim Afgan, are still among the best archive scientific publications/literature for the related area of heat and mass transfer (list of meetings, publications can be found at <http://thermalscience.vinca.rs/pdfs/papers-2020/TSCI200628265S.pdf>)

1.1.1. Publications

Journal TERMOTEHNIKA (in Serbian since 1975, <http://termotehnika.vinca.rs/>) published by **The Society of Thermal Engineers** in cooperation with the Laboratory for Thermal Engineering and Energy of the Institute VINČA.

International Journal THERMAL SCIENCE (in English since 1997, <http://thermalscience.vinca.rs>) Due to international sanctions imposed against Yugoslavia in May 1992 (until 2001), which caused extreme problems for the scientific research institutions in Yugoslavia, including barriers for their international cooperation, in 1994 Prof. Simeon Oka from the Laboratory for Thermal Engineering and Energy of the Institute VINČA, initiated the publication of one issue per year in English of the Journal Termotehnika, and in 1996 he initiated and started editing the **International Journal THERMAL SCIENCE** with scientific papers from the relevant international community. International Journal Thermal Science (Open Access Journal), founded by the **Society of Thermal Engineers of Serbia** and published by the **Institute of Nuclear Sciences "VINČA"** is on SCI list since 2009, with a constant increase of the number of published papers and Impact factor value.

1.1.2 Meetings

International Symposiums on heat and mass transfer (since 1964), since 2003 biannually in cooperation with **Faculty of Mechanical Engineering – University of Niš** (last, 19th International Conference on Thermal Science and Engineering of Serbia on October 22-25, 2019).

International Conference POWER PLANTS since 2004, biannually (9th International Conference on November 16-17, 2021, <https://e2021.drustvo-termicara.com>)

Regional IEEP Conference Industrial Energy and Environmental Protection in South Eastern European Countries, biannually (last, 7th Conference on June 19-22, 2019).

ENERGY DAY SERBIA Annual meeting organized in cooperation with **ENERGOPROJEKT ENTEL** since 2011 (last, June 2019).

International Forum for clean energy technologies in cooperation with **Faculty of Technical Sciences – University of Novi Sad** (14th Forum September 28-29, 2021)

1.2 **Serbian Chemical Society** (founded in 1897, <https://www.shd.org.rs/>)

1.2.1 Publications:

International Journal of the Serbian Chemical Society (Open Access Journal in English, Vol. 89 in 2021, <https://www.shd-pub.org.rs/index.php/JSCS/index>)

1.3 **Association of Chemical Engineers of Serbia** (founded in 1953, <http://www.ache.org.rs/index.php/sr/>)

1.3.1 Publications:

Chemical Industry (since 1947, in Serbian/English Open Access Journal, Vol. 75 in 2021, <https://www.ache-pub.org.rs/index.php/HemInd/>)

Chemical Industry & Chemical Engineering Quarterly (since 1995, Open Access Journal in English, Vol. 27 in 2021 <http://www.ache.org.rs/CICEQ/>)

1.4 **Union of Engineers and Technicians of Serbia** (founded in 1868, is union of different professional societies, associations/unions, sections and branches, <https://www.sits.org.rs>)

1.4.1 Publications:

Magazine TEHNIKA (since 1945 in Serbian, 6 issues/year, Vol. 76 in 2021

<https://www.sits.org.rs/textview.php?file=348.html>)

1.5 **Union of Mechanical and Electrical Engineers and Technicians of Serbia** (founded in 1951, is association of different professional societies, sections and branches <https://www.smeits.rs/eng/>)

1.5.1 Serbian Society for Heating, Ventilating, Air-Conditioning & Refrigeration

1.5.1.1 Publications:

Journal KGH (since 1972 in Serbian, 4 numbers/year, Vol. 50 in 2021 <https://izdanja.smeits.rs/index.php/kgb/issue/view/380>)

1.5.1.2 **Meetings:** International HVA&R Congress with Exhibition, every December (52th in 2021)

1.5.2 Serbian Society for Processing (former Process Engineering Section)

1.5.2.1 Publications: Journal Procesna tehnika/Process Engineering (since 1984 in Serbian, 2 numbers/year, Vol. 33 in 2021 <https://izdanja.smeits.rs/index.php/procteh/issue/view/378>)

1.5.2.2 Meetings: International Congress on Process Engineering - Processing (annual meeting, 34th in 2021)

2. Founds for Scientific Research

Ministry for Education, Science and Technological Development of the Republic of Serbia (<https://www.mpn.gov.rs/>)

EU founds

3. System of Education

According to Bologna declaration (first semester starts in October, second semester in February):

Bachelor academic studies 6 semesters (3 years)

Master academic studies 4 semesters (Master degree Σ 3+2 years)

Doctoral academic studies 6 semesters (PhD degree Σ 3+2+3 years)

4. Education/Research institutions

4.1 **Faculty of Mechanical Engineering – University of Belgrade** (<https://www.mas.bg.ac.rs/eng/start>)

4.1.1 **Publications** FME Transactions (Open Access Journal in English, since 1970, Vol. 41 in 2021 <https://www.mas.bg.ac.rs/istrazivanje/fme/start>)

4.2 **Faculty of Mechanical Engineering – University of Niš** (<https://www.masfak.ni.ac.rs/index.php/en/>)

4.2.1 Publications

Facta Universitatis, Series: Mechanical Engineering, (Open Access Journal in English, since 1986, Vol. 19 in 2021 http://casopisi.junis.ni.ac.rs/public/journals/8/homeHeaderTitleImage_en_US.png)

4.3 **Faculty of Technical Sciences – University of Novi Sad** (<http://fn.uns.ac.rs>)

4.4 **Faculty of Engineering – University of Kragujevac** (<http://www.fink.rs/en/>)

4.5 **Faculty of Mechanical and Civil Engineering Kraljevo – University of Kragujevac** (<https://www.mfkv.rs/>)

5. Research Institutions

5.1 **Institute of Nuclear Sciences "Vinča", Laboratory for Thermal Engineering and Energy**, (<http://www.lte-vinca.rs/public/lang/rs>)

Serbia, Member of ICHMT (2)

The Society of Thermal Engineers of Serbia
Dissemination of the heat and mass transfer scientific research results through publications of the International Journal THERMAL SCIENCE (Open access Journal)

1. Dissemination of the heat and mass transfer scientific research results through publications of the International Journal THERMAL SCIENCE



Simeon Oka, Thermal Science Editor-in-Chief Emeritus, okasn@rubb.bg.ac.rs
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The main objective of the Society of Thermal Engineers of Yugoslavia (founded in 1962, today **The Society of Thermal Engineers of Serbia** <https://www.drustvo-termicara.com/>) was/is to establish/promote better cooperation and exchange of the fundamental/applied knowledge in the field of heat and mass transfer between research/educational institutions and industry in the country, region and the world through International Conferences and Journal. The realization of these tasks in the period 1968-1993 was performed by editing Journal TERMOTEHNIKA (in Serbian, since 1975) and the most important by initiating organization of the International Center for Heat and Mass Transfer with Head office in The Institute of Nuclear Sciences "VINČA", led by Professor Zoran Zarić as general secretary (1968-1985) and Professor Naim Afgan as scientific secretary (1968-1985) and general secretary (1985-1993). The list of 47 international scientific events/meetings/ organized by ICHMT in that period and Proceedings can be found at <http://thermalscience.vinca.rs/pdfs/papers-2020/TSCI200628265S.pdf>.

Due to international sanctions against Yugoslavia since May 1992 (until 2001), and induced problems for the scientific research institutions, Prof Simeon Oka, based on long term international cooperation of the Laboratory for Thermal Engineering and Energy with a number of worlds' reputed Institutes and Universities, had initiated and started since 1997 to edit international journal *Thermal Science* with scientific papers from relevant international community. Despite numerous difficulties and barriers, Editorial Board lead by Prof Simeon Oka, supported also by International Advisory Board (26 reputed scientists from Sweden, Denmark, Canada, Russia, Netherland, Estonia, Belarus, Germany, North Macedonia, USA, Japan, Italy, and United Kingdom), had succeeded to pass a long way, and create excellent Open Access International Scientific Journal with a brand name THERMAL SCIENCE.

Initial scope of the Journal in the areas: (a) fluid mechanics (primarily, turbulent flows), heat and mass transfer, combustion and chemical processes, (b) multiphase and multicomponent flows, (c) high temperature flows with chemical reactions, (d) processes in fluidized systems, (e) renewable energy sources, (f) energy efficiency and sustainable development and (g) thermal processes, taking place in conventional and modern technologies, was lately was lately widened on previously unknown systems - cooling of electronic devices, flows and heat transfer in micro canals, flows and heat transfer of nanofluids, the production of micro and nanofibers, and processes in the atmosphere related to the climate change. THERMAL SCIENCE in recent years, included new scientific areas in which the number of papers is constantly growing, and which have been initially opened in Supplements and Special Issues:

- Nanofluids, processes in them and their use in new technologies,
- Processes during the formation and production of nanofibers,
- Physical models of fluid flow and thermal processes by using fractal mathematics,

- Fractal mathematics and application of fractal methods in solving equations describing fluid flows and in thermal processes,
- Processes in the atmosphere and origins of the climate change.

Starting from 2009, when THERMAL SCIENCE received its first Impact Factor and was included on the Web of Science, the authors' interest in publishing papers in the journal has been growing rapidly from 80 to 500 per year (Table 1). According to the values of the Impact Factor, THERMAL SCIENCE is in the top 50% journals in its field. The most famous databases: Web of Science, SCOPUS, EBSCO, ProQuest, DOAJ, CNKI and COPERNICUS, announce data on papers published in THERMAL SCIENCE.

Table 1 – Number of published papers and Impact Factor of the journal THERMAL SCIENCE

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Regular Issues	4	4	4	5	5	5	6	6	6 (8)	6 (8)	6 (10)	6 (11)	6 (12)
Papers	82	100	122	165	171	185	239	224	287	281	389	408	445
Supplements	-	1	2	2	-	2	2	5	3	5	6	1	2
Papers	-	25	23	51	-	56	68	159	91	153	219	41	56
Total papers	82	125	145	216	171	241	307	383	378	434	608	449	501
Impact Factor	0.407	0.706	0.779	0.838	0.962	1.222	0.939	1.093	1.431	1.541	1.574	1.625	1.971

Thermal Science published papers of the authors from Universities or Institutes from more than 70 countries. The share of published papers from different countries has been drastically changed since 2001. The Fig. 1 shows the share of regions and countries in the period from 2016 to 2019.

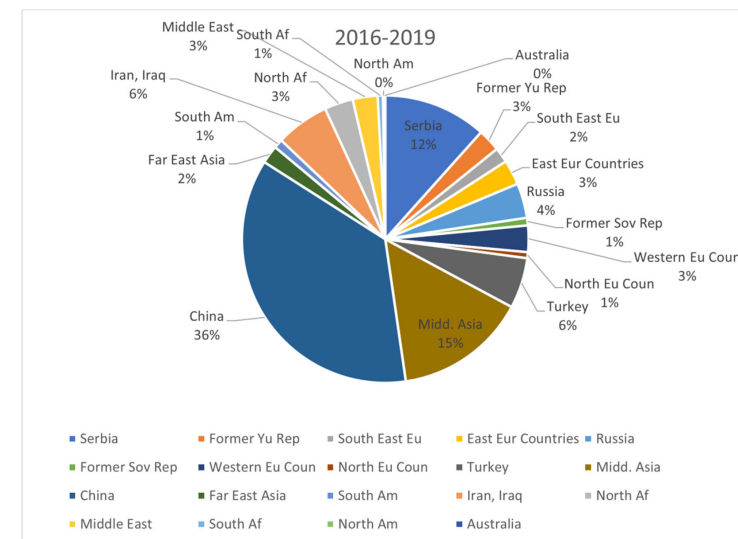


Fig. 1 Share of the papers from some large countries and Regions in the World Published by THERMAL SCIENCE in regular issues in the period 2016 – 2019

The Society of Thermal Engineers of Serbia as a non-profit organization by publishing Thermal Science as an OPEN ACCESS Journal enable researchers in the world to receive latest scientific information free of charge and authors to publish their papers only by compensating the cost of the "production" of the journal. Additional information about International Journal THERMAL SCIENCE could be found on web site: <http://thermalscience.vinca.rs>.