

## CURRICULUM VITAE and BIBLIOGRAPHY

1. **First, Father's and Family name:** Đorđe Svetislav Čantrak, or without Serbian Latin letters: Djordje (or Dorde) Svetislav Cantrak
2. **Title:** Dr.
3. **Date of birth:** September 11, 1977.
4. **Nationality:** Serbian
5. **Marital status:** Married and has two children
6. **Affiliation:** University of Belgrade, Faculty of Mechanical Engineering (UB FME), Hydraulic Machinery and Energy Systems Department ([http://hidro.mas.bg.ac.rs/docenti\\_cantrak-en.html](http://hidro.mas.bg.ac.rs/docenti_cantrak-en.html))  
**E-mail:** [djcantrak@mas.bg.ac.rs](mailto:djcantrak@mas.bg.ac.rs), **Mob.:** +381-63-8323-752
7. **Present position:** Associate Professor at UB FME (since December 2017.)

8. **Education (main levels):**

Institution [ Date from - Date to ]	Degree(s) or Diploma(s) obtained:
PhD studies: University of Belgrade, Faculty of Mechanical Engineering (2005-2012) (one part of experiments for PhD thesis were performed at Karlsruhe Institute of Technology, Faculty of Mechanical Engineering, Karlsruhe, Germany; Prof. Dr.-Ing. Martin Gabi, KIT, Karlsruhe was President of the PhD Committee)	PhD (public defense 30.07.2012.)
Dipl.-Ing. (M.Sc.) Studies: University of Belgrade, Faculty of Mechanical Engineering (1996-2001)	Dipl.-Ing. (M.Sc.), Hydropower engineering, The best student in generation with average 9.79, where 5-fail and 10-top score.

9. **Language skills:** Serbian (mother tongue), English (excellent), German (A2), French (A2) and Russian (A2).
10. **Membership of professional bodies:** Member of the Scientific Board of the Society of Thermal Engineers of Serbia, Serbian Society of Mechanics, GAMM (International Association of Applied Mathematics and Mechanics) , Centre for renewable sources, Society of metrologists of Serbia
11. **Employed at the University of Belgrade:** sixteen years
12. **Main research fields:** Turbulence, Turbomachinery, Measurements in Turbulent Flows, Particle image velocimetry (PIV), micro PIV, laser Doppler anemometry (LDA), classical measurement techniques, development of new flow measurement techniques.
13. **Functions at the UB FME:** Member of the Faculty Council (2012-2015. and 2015-2018.), Member of four Faculty commissions (2015-2018.), of which two of four are: commission for international projects and commission for laboratories and practical work, Member of a Council Commission for finances and etc.

#### 14. Professional Experience:

Date from - to	Location	Company	Position	Description
Since 25.12. 2017.	Belgrade, Serbia	University of Belgrade (UB), Faculty of Mechanical Engineering (FME), Hydraulic Machinery and Energy Systems Department (HMESD)	Associate Professor	Teaching and research in the field of flow machinery, turbulence and flow measurement techniques.
Since April 2017	Belgrade, Serbia	UB, FME, HMESD	Manager	Head of the Laboratory for turbulence and velocimetry
March 19-23, 2017.	Brno, Czech Republic	Czech Metrology Institute, Regional Inspectorate Brno, The Primary Pressure, Vacuum and Mass Flow Department	Representative from Serbian side	Calibration of the air flow meter for four ranges: 0,1-2 l/min, 2-10 l/min, 10-50 l/min и 50-100 l/min, Manufacturer: PRO-EKOS, Belgrade, Serbia, Model: DMP-LH-10. Calibration is performed for University of Belgrade, Fac. of Mech. Eng. , Lab. of Fluid Mechanics
Oct. 2016- Oct. 2017	Podgorica Montenegro	Faculty of Mechanical Engineering, University of Montenegro	Project leader in Serbia	Investigation of the influence of turbulent swirl flow on the energy parameters of the axial fans by use of the contemporary measurement techniques.
Jan. 2016- Dec. 2017	Clausthal, Germany	TU Clausthal, Institute of Applied Mechanics	Project leader in Serbia	Bilateral Project between Germany and Serbia: Computational and experimental investigation of the airflow in the human nasal cavity
31.03.2014.- 01.07.2014.	Stanford and NASA Moffet Field, USA	Stanford University and NASA Ames Research Center, Fluid Mechanics Laboratory	Fulbright scholarship (Core Fulbright Visiting Scholar Program)	High speed stereo particle image velocimetry and flow visualization in air tunnels. Project: Time Resolved Stereo PIV Investigation of NASA Common Research Model in NASA Ames FML 48" x Indraft Tunnel <a href="http://www.cies.org/grantee/dorde-cantrak">http://www.cies.org/grantee/dorde-cantrak</a> Senior Research Fellow at CTR, Stanford - <a href="https://ctr.stanford.edu/former">https://ctr.stanford.edu/former</a>
18.09.2013.- 18.11.2014.	Belgrade, Serbia	Consortium leader: Institute Nikola Tesla, Belgrade. Participant of Consortium: University of Belgrade (UB), Faculty of Mechanical Engineering (FME).	Leader for hydropower activities in project	Project: "Analysis of Potential and Program of Organized Supervision and Improvements of Energy Efficiency in the Electro Power Industry of Serbia in Coal Production and Electricity and Thermal Energy Production and Distribution" (period: 2013-2014).
Since 24.12. 2012.	Belgrade, Serbia	UB, FME, HMESD	Assistant Professor	Teaching and research in the field of flow machinery and turbulence measurements. Lectures in the following subjects: Measurements in Turbulence (PhD level), Measurements in hydropower engineering (M.Sc. level), Fans and Turbocompressors (M.Sc. level) and Basis of Flow Measurements (B.Sc. level)
Since 2012.	Belgrade, Serbia	Accreditation Board of Serbia	Technical expert (since 2012) and technical evaluator (since 2013)	Technical systems with hydraulic machines, Calibration of volume flow meters and pressure measuring devices
22.02.2002- December 2012.	Belgrade, Serbia	UB, FME, HMESD	Teaching and research assistant	Research (PhD thesis and scientific national and international projects) and teaching.
October 2011-	Belgrade, Serbia	Tehnikum Taurunum, High Engineering School of B.Sc.	Lecturer	Teaching in the field of applied fluid mechanics and turbomachinery.

Date from - to	Location	Company	Position	Description
present		studies		
May 2011- July 2012.	Belgrade, Serbia	GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit)	Researcher	Name of the project: Capacity building for Monitoring, Verification and Evaluation (M&V&E System) of the Energy Efficiency policy in SEE countries in terms of the EU accession process" (Modules 2 & 4), No. 08.2016.7-005.00, GIZ. Research in the field of energy efficiency.
April-May 2010., July- August 2011., December 2011. December 2012.	Karlsruhe, Germany	Karlsruhe Institute of Technology (KIT), Institute of Fluid Machinery	1 <sup>st</sup> period: participant 2 <sup>nd</sup> , 3 <sup>rd</sup> & 4 <sup>th</sup> period: Researcher	1. period: TEMPUS project, International Accreditation of Engineering Studies 144856-TEMPUS- 2008-RS-JPGR; 2. period: research at the Bilateral project between KIT and FME (high speed particle image velocimetry in turbomachinery); <a href="https://www.kit.edu/downloads/KIT-Jahresbericht_pdf.pdf">https://www.kit.edu/downloads/KIT-Jahresbericht_pdf.pdf</a> 3. period: research at the Bilateral project between KIT and FME (high speed particle image velocimetry in turbomachinery). <a href="https://www.kit.edu/downloads/KIT-Jahresbericht_pdf.pdf">https://www.kit.edu/downloads/KIT-Jahresbericht_pdf.pdf</a> 4. period: research at the Bilateral project between KIT and FME (high speed particle image velocimetry in turbomachinery), lecture and contacts with pump industry.
10 <sup>th</sup> of June 2010-2012	Belgrade, Serbia	HydroEnergyLab (accredited laboratory by the Accreditation Board of Serbia)	Examiner	Examiner in the field of testing pumps and fans in the laboratory and in-situ. Calibration of pressure transducers and anemometers. Investigation and generation of procedures for Laboratory.
April 2010.	Münich, Germany	TU München	Participant	TEMPUS project, International Accreditation of Engineering Studies 144856-TEMPUS-2008-RS-JPGR.
October- December 2003.	Stuttgart, Germany	Universität Stuttgart, Institut für Parallele und Verteilte Systeme (DAAD scholarship)	Researcher	Parallel codes for Computational fluid mechanics.
June-July 2001.	Urbana- Champaign, Illinois, USA	Air Conditioning and Refrigeration Centre	Researcher	Multiphase flow research.

## 15. Other relevant information

**Title of the PhD thesis:** Analysis of the Vortex Core and Turbulence Structure behind Axial Fans in a Straight Pipe using PIV, LDA and HWA Methods

**Scientific field in general:** Mechanical Engineering

**Scientific field in particular:** Hydraulic machines and energy systems - Applied fluid mechanics

**Guest Editor for the Special Issue of the International Scientific Journal Thermal Science** (<http://thermalscience.vinca.rs/2017/supplement-3>), published in December 2017. - dedicated to the Turbulence Workshop (<http://turbulenceworkshop.mas.bg.ac.rs/>)

### Some awards and fellowships:

1. 1999-2000. – Scholarship of the University of Belgrade
2. 2000. – Fellowship of the Kingdom of Norway embassy in Belgrade
3. January–March 2000. – IAESTE (DAAD fellowship)
4. first place at Summer Academy at Ohrid 2000. (02.-13.09.2000.), the course "Thermo-Fluid Dynamics", organizers: Universities of Erlangen-Nuremberg and Augsburg, Deutschland.
5. On the occasion of the Day of the University of Belgrade 27.02.2002. two awards:
  - a) the best student in generation at the Faculty of Mechanical Engineering – average mark: 9.79 (nine and 79/100, where 5-fail, 10-top mark)
  - b) best paper in the field of technical sciences at the University of Belgrade for the school year 2000/2001.
6. November 2001. – Fellowship of the Government of the Republic of Serbia
7. March 2002. –Certificate of appreciation in recognition of a substantial contribution to SAE World Congress '02
8. October 2003.- January 2004. – Simlab Scholarship Program, supported by the German Academic Exchange Service (DAAD) ([http://www5.in.tum.de/forschung/simlab/daad\\_stip.html](http://www5.in.tum.de/forschung/simlab/daad_stip.html)).
9. Nikola Tesla's Gold medal for new technology: Fan for sustaining ecological conditions in tunnels, Innovations–Belgrade 2009., Number 087-09, 22. May 2009.
10. December 2010. - Categorized as researcher of the first category (T1) by the Ministry of science and Technological Development Republic of Serbia in the field of Technological Development.
11. October 2012. - Acknowledgement of the Accreditation Board of Serbia for successful cooperation and contribution to the development of an accreditation in Republic of Serbia.
12. Fulbright fellowship for the academic year 2013/2014. at the University of Stanford, Center for Turbulence Research and NASA Ames Laboratory for Fluid Mechanics. <https://ctr.stanford.edu/former>, <https://www.cies.org/grantee/dorde-cantrak>

### Teaching in subjects at the University of Belgrade, Faculty of Mechanical Engineering

1. Measurements in turbulent flows - PhD studies
2. Fans and turbocompressors - MSc studies
3. Measurements in hydropower engineering - MSc studies
4. Hydraulic transmission - MSc studies
5. Turbomachinery - MSc studies
6. Pumps and fans - MSc studies
7. Pumps - MSc studies
8. Design of pumps, fans and turbocompressors - MSc studies
9. Basics of the measurement techniques - BSc studies

### Chosen lectures at the national and international seminars and institutions:

1. Čantrak, Dj. (2000): Vorticity, Circulation, Bernoulli's Equation and the Laws of Blasius and Kutta-Joukowski for Aerofoils, Summer Academy Ohrid 2000. (02.-13.09.2000.), the course "Thermo-Fluid Dynamics", Universities of Erlangen-Nuremberg and Augsburg, Deutschland, Ohrid.
2. Čoćić A., Čantrak Đ. (2003): Ideas and fulfilling, Lecture at the Abteilung Simulation großer Systeme, Fakultät Informatik, Universität Stuttgart, Stuttgart, Deutschland, 18.12.2003. time: 15:10.
3. Škara V., Čantrak Đ. (2007): PIV (Particle Image Velocimetry) - Basics and Example, Lecture at the Faculty of Civil Engineering University of Belgrade, Subject: Measurements in hydro-techniques, Teacher: Prof. Dr. Dušan Prodanović, December 2007.
4. Čantrak Đ., Janković N. (2011): Turbulent Swirl Flow in Pipes – Experimental Research, Introductory lecture at the International Workshop for Laser Flow Measurements, 7<sup>th</sup> June, Faculty of Mechanical Engineering, University of Belgrade.

5. Čantrak Đ. (2012): Turbulent Swirl Flow Research by Use of Stereo PIV, LDA and Classical Measurement Techniques, Mechanics Seminar, Mechanics Department, Mathematical Institute of Serbian Academy of Sciences and Arts, lecture No. 1177, 11.01.2012.
6. Čantrak Đ., Janković N. (2012): Experimental Investigation of the Vortex Core and Turbulence Structure behind Axial Fans in a Straight Pipe Using PIV and LDA, Lecture at the Seminar, 6<sup>th</sup> December, Institute of Fluid Machinery, Faculty of Mechanical Engineering, Karlsruhe Institute of Technology, Karlsruhe.
7. Čantrak Đ., Čočić A., Ilić D., Janković N. (2012): Challenging the Fluid, Lecture, 7<sup>th</sup> December, Company KSB, Frankenthal.
8. Čantrak Đ. (2014): Turbulent Swirl Flow Laser Research, Stanford University, Center for Turbulence Research, CTR, CTR seminar, 16<sup>00</sup>, 06.06.2014. (<http://us3.campaign-archive1.com/?u=24625681a1e50ab6b80c962ca&id=d53794df4b&e=5ed8048497>)
9. Čantrak Đ. (2014): Stereo PIV and LDA research of the turbulent swirl flow behind axial fan in pipe and high speed stereo PIV research of the CRM wing tip vortex, NASA Ames Research Center, Fluid Mechanics Laboratory (FML), 15<sup>00</sup>, 26.06.2014.
10. Invited lecture: Čantrak Đ. (2014): Optical measurement techniques (PIV and LDA) in turbulence research, University of Montenegro, Faculty of Mechanical Engineering, Podgorica (FML), 13<sup>00</sup>, 09.07.2015.
11. Čantrak Đ. (2015): Information about the project applications for Horizon 2020, University of Belgrade, Faculty of Mechanical Engineering, 21.12.2015., room 513, time: 11-13.
12. Čantrak Đ. (2016): Scientific Fab lab at the Faculty of Mechanical Engineering, Belgrade, Fabelgrade, May 14-15., Belgrade Youth Center, <http://fabelgrade.io/speakers/#digital-fabrication-stem>, <http://cmit37.ru/news/fablab-prokachka-v-belgrade>
13. Čantrak Đ. (2016): Water supply systems, sewage systems and systems for wastewater treatment, Training for energy managers in the field of municipal energy, University of Belgrade, Faculty of Mechanical Engineering, Belgrade, June 22.
14. Čantrak Đ., Janković N., Nedeljković M. (2016): The demonstration-educational pump installation, Tomas Bata University in Zlin, Czech Republic, August 23, SCOPES project.
15. Čantrak Đ. (2016): Compressors and distribution of the compressed air, Training for energy managers in the field of industrial energy, University of Belgrade, Faculty of Mechanical Engineering, Belgrade, November 17., December 14.
16. Čantrak Đ. (2016): Pumps and liquids transportation, Training for energy managers in the field of industrial energy, University of Belgrade, Faculty of Mechanical Engineering, Belgrade, November 16. and 19., December 14.
17. Čantrak Đ., Janković N. (2016): Experimental turbulent swirl flow investigations in pipe and jet, TU Clausthal, Institute of Applied Mechanics, Germany, December 22.
18. Čantrak Đ. (2016): Turbo pumps energy efficiency, NIS Gazprom Neft, Novi Sad, Serbia, 29.12.2016.
19. Čantrak Đ. (2017): Experimental Investigation of Coherent Vortex Structures, Mechanics Seminar, Mechanics Department, Mathematical Institute of Serbian Academy of Sciences and Arts, lecture No. 1308, 03.05.2017.
20. Invited lecture: Čantrak Đ. (2017): Scientific FabLab at the Faculty of Mechanical Engineering University of Belgrade - Support for Experimental Fluid Flow Research, The Abdus Salam International Centre for Theoretical Physics (ICTP Trieste), Italy, invited by Dr. Dr Enrique Canessa, Second Workshop on "Science Dissemination for the Disabled" followed by workshop on "Scientific Fabrication Laboratories (SciFabLabs)", section: SciFabLabs, October 24, 11<sup>15</sup>, SciFabLab, ICTP, <http://indico.ictp.it/event/7999/other-view?view=ictp timetable>
21. Čantrak Đ. (2017): Water supply systems, sewage systems and systems for wastewater treatment, Training for energy managers in the field of municipal energy, University of Belgrade, Faculty of Mechanical Engineering, Belgrade, October 26.
22. Čantrak Đ. (2017): Overview of the experimental work in progress in the Laboratory for HMES and possibilities for future cooperation, TU Clausthal, Institute of Applied Mechanics, Germany, 21. Dec., closing Project workshop.
23. Čantrak Đ. (2018): Energy installations and machines (hydropower, pump, compressors and ventilation) – development and research at the Hydraulic Machinery and Energy Systems Department Faculty of Mechanical Engineering University of Belgrade, Fifth International Industry Fair «EXPO-RUSSIA SERBIA 2018», March 14-16, Congress Center „Metropol Palace“, Belgrade, March 15, 14<sup>00</sup>-16<sup>00</sup>, Round table in Cooperation with the Ministry of mining and energy Republic of Serbia.
24. Čantrak Đ. (2018): Development and application of contemporary measurement techniques in applied fluid mechanics and energetics, Fifth International Industry Fair «EXPO-RUSSIA SERBIA 2018», March 14-16, Congress Center „Metropol Palace“, Belgrade, March 16, 11<sup>30</sup>-14<sup>30</sup>, Round table in Cooperation with the Ministry of education, science and technological development Republic of Serbia.

**Participation in National Scientific Projects Funded by the Government of the Republic of Serbia, Ministry of Education, Science and Technological Development:**

1. Small Hydropower Plants with Bulb Turbines for Energy Production and Direct Connectivity to the Pump Systems, Number: EE 271020, period: 2003-2007.
2. Small Hydropower Plants with Banki Turbines for Energy Production and Direct Connectivity to the Pump Systems, Number: EE 271019, period: 2003-2007.
3. Rationalization of Water Use in Pump Systems, Number: NPV-35A, period: 2004-2007.
4. Development and Realization of Equipment, Instruments and Probes for Turbulent Velocity Field Measurements, Number: TR 6381, period: 2005-2008.
5. Increase of Energy Efficiency, Disposal and Installed Power of Existing Units in Hydropower Plants in Electric Power Industry of Serbia, Number: NPEE-213009, period: 2006-2010.
6. Reversible Axial Jet Fans for Ecological Condition Sustain in Car Tunnels, Number: 451-01-2960/2006-85, period: 2007-2008.
7. Research and Development of Anemometer Probes, Measuring and Calibration Processes and Optical Methods for Technical Application, Number: TR14046, period: 2008-2010.
8. Development and Implementation of Integral Mathematical-Experimental Methods of Modal Analysis and Structural Modification in Optimization of Dynamic Behavior of Free and Connected Rotating Blades, Number: 18022, period: 2008-2010.
9. Contemporary Automatic Control System of the Unit 3 – House Unit of the HPP Bistrica, Number: 451-01-00065/2008-01/51, period: 2008-2009.
10. Integral Plan for Energy Ultra Efficient Multifamily Residential Building with Use of Technical and Technological Innovations and Contemporary EU Standards for Passive Buildings, Number: 391-00-00027/2009-02/164, period: 2010-2011.
11. Application of Contemporary Measuring and Computation Techniques for Research of Ventilation Systems Flow Parameters on the Model of Energy Ultra Efficient (Passive) Object, Number: TR 35046, period: 2011-2018.

**International Projects:**

1. International Accreditation of Engineering Studies 144856-TEMPUS-2008-RS-JPGR, (15.1.2009–14.1.2012)
2. Investigation of the Turbulent Structure Behind the Axial Fan Impellers by Use of the HWA, LDA and PIV Measuring Techniques and CFD Analysis, period: 2011-2012 (Bilaterally funded by the DAAD and Ministry of Science and Technological Development Republic of Serbia)
3. Capacity building for Monitoring, Verification and Evaluation (M&V&E System) of the Energy Efficiency policy in SEE countries in terms of the EU accession process" (Modules 2 & 4), No. 08.2016.7-005.00, GTZ, May-June 2011.
4. Fab Initiative, U.S. Embassy Belgrade, Serbia, Alumni Program, Гађански И., Чантрак Ђ., Матијевић М., Продановић Р., Мај 2015-мај 2016., US Federal Grant SRB100-15-GR-364, Project title: "Belgrade FabLab Conference 2016"
5. The European Researchers' Night, activity Great Scientific Adventure, (topic "Laser secrets") Project "Science in Motion for Friday Night Commotion 2014-15" (SCIMFONICOM 2014-25, H2020-MSCA-NIGHT-633376), September 25 2015.
6. Computational and experimental investigation of the airflow in the human nasal cavity, period: 2016-2017), Bilaterally funded by the DAAD and Ministry of Education, Science and Technological Development Republic of Serbia, Project leader in Serbia: Assist. Prof. Dr. Ђорђе Чантрак, Project leader in Germany (TU Clausthal, Institute of Applied Mechanics): Prof. Dr.-Ing. habil. Gunther Brenner.
7. Member of the Working Groups 1 and 4 in COST action Flowing Matter MP1305 (<http://flowingmatter.eu/wordpress/members/wg1/> <http://flowingmatter.eu/wordpress/members/wg4/>)
8. SCOPES Project "Enabling Web-based Remote Laboratory Community and Infrastructure", Чланице: EPFL, Швајцарска, University of Trnava, Словачка, Универзитет у Београду, Србија и Универзитет у Крагујевцу, Србија, период: 1.7.2015.-31.12.2018. <http://p3.snf.ch/Project-160454#>



## Membership in Ph. D. committees, publications, lectures, technical solutions, projects, etc.:

	Quantity:
Mentor of the PhD thesis	1*
Member of PhD committees	2
Scientific paper in the internationally known edition	1
Scientific papers in the journals of the international significance (SCI list)	11
Scientific papers in the national journals	15
Papers presented at the international conference printed in proceedings	45
Papers presented at the national conference printed in proceedings	5
Papers printed in the book of abstracts of the international conferences	26
Papers printed in the book of abstracts of the national conferences	2
Lectures	31
Books	2
Technical solutions	10
Patent	1
Reviews (books)	2
Reviewer in the international scientific journals at the SCI list (No. of journals)	6
Reviewer in the national scientific journals (No. of journals)	4
Reviewer for the congresses (No. of congresses)	7
Projects for industry (in the field of turbomachinery, energy systems, applied fluid mechanics, calibration of flow meters, anemometers, pressure transducers and etc.)	69

\* in progress

### • Organization of conferences, symposia, seminars and lectures:

1. Member of the organizing committee of the International Conference on Classics and Fashion in Fluid Machinery, Faculty of Mechanical Engineering University of Belgrade, Serbia, 18-20. October 2002.
2. Organizer of the International Workshop for Laser Flow Measurements, Faculty of Mechanical Engineering, University of Belgrade, Serbia, 7<sup>th</sup> June 2011.
3. Member of the organizing committee 4<sup>th</sup> International Meeting on Cavitation and Dynamic Problems in Hydraulic Machinery & Systems, IAHR-WG2011, IAHR Division II, Section 1, Faculty of Mechanical Engineering, University of Belgrade, Serbia, October 26-28, 2011., <http://iahrwg2011.mas.bg.ac.rs/local.htm>
4. Executive Symposium Chairman Turbulence Workshop - International Symposium, Faculty of Mechanical Engineering, University of Belgrade, 31.8-2.9.2015. <http://turbulenceworkshop.mas.bg.ac.rs/>
5. Organizer of twelve lectures of foreign researchers at the Faculty of Mechanical Engineering, University of Belgrade
6. Organizer of the special session "Fablabs in Science and Education" MEDO (Multidisciplinary Engineering Design Optimization) 2016, IEEE conference, September 14-16, 2016, Metropol Palace Hotel, Belgrade. [http://medo2016.northumbria.ac.uk/medo2016\\_workshop.html](http://medo2016.northumbria.ac.uk/medo2016_workshop.html) Other activities: chairman.
7. Chairman of the session Fablab NEWTECH 2017 (The 5th International Conference on Advanced Manufacturing Engineering and Technologies), Organizer: Chair for Production Engineering, Faculty of Mechanical Engineering (FME), University of Belgrade (UB), location: FME, Belgrade, May 9 2017., time 9-10:40, room 514.
8. Organizer and chairman of the Minisymposium: "Turbulence" at the Sixth Congress of Serbian Society of Mechanics, June 19-22. 2017., [http://www.ssm.org.rs/congress\\_2017/pdf/second\\_ann.pdf](http://www.ssm.org.rs/congress_2017/pdf/second_ann.pdf)  
[http://www.ssm.org.rs/congress\\_2017/pdf/Technical\\_programme\\_v4.pdf](http://www.ssm.org.rs/congress_2017/pdf/Technical_programme_v4.pdf)
9. Member of the Organizing Committee of the VI Regional Conference Industry Energetics and Environment Protection in the Southeastern Europe Countries (IEEP '17), Organizers: Serbian Society of Thermal Engineers, Zlatibor, Serbia, June 21-24 2017.
10. Chairman of the Session Pump and Pump Systems - Examples of Good Practice and Solutions for Increasing Energy Efficiency, Congress: IEEP '17, Zlatibor, Serbia June 23. jyh 2017.
11. Joint Workshop with Dr. Andreja Jović (U. S. Speaker Program): Do-it-yourself Microfluidics Workshop, FME, UB, room 145, September 20 2017., (29 participants, 8 institutions).

### Technical solutions and one patent are in the field of:

- construction of flow meters
- energy efficiency
- designing bulb and cross-flow hydraulic turbines
- designing laboratory test rigs for testing pumps, turbines, fans and variety of hydraulic components
- micropositioning device with 9 translations and 6 rotations (patent)
- software for designing axial fans.

### Certificates since 2014.:

- NASA Certificate of Completion - Laser Safety training at NASA Ames Research Center on 4/11/14
- NASA Certificate of Completion - Introduction to Information technology security for new employees on 4/17/14
- NASA Certificate of Completion - FY2014 Annual information technology security and privacy awareness training on 4/17/14
- Certificate of training for: Ultrasonic flow meter, Electromagnetic flow meters, portable low pressure controller, portable pressure calibration set, dead weight calibrator of pressure measuring device, Nov-Dec. 2014, ECHO Research & Development S.p.a., Italy, on 3/28/2015.
- Certificate of training - The Course of the technical training for training facilities provided by Japan International Cooperation Agency (JICA), under the auspices of the JICA Project Team of "Project for Assistance of Enhancement of Energy Management System in Energy Consumption Sectors in the Republic of Serbia", period: 28-30 March 2016.
- Certificate of training - The Course of the instructor training for Energy Auditor for Factory provided by Japan International Cooperation Agency (JICA), under the auspices of the JICA Project Team of "Project for Assistance of Enhancement of Energy Management System in Energy Consumption Sectors in the Republic of Serbia", period: 20-30 June 2016.

### BIBLIOGRAPHY

#### Scientific paper in the internationally known edition:

1. Čantrak Đ.S., Kushner L.K., Heineck J.T. (2014): Time-resolved stereo PIV investigation of the NASA Common Research Model in the NASA Ames Fluid Mechanics Laboratory 32- by 48-in indraft wind tunnel, CTR Research Publications, Center for Turbulence Research, Annual Research Briefs 2014, pp. 179-191, Eds.: P. Moin and J. Urzay, Center for Turbulence Research, Stanford University / NASA Ames.  
[https://web.stanford.edu/group/ctr/ResBriefs/2014/18\\_cantrak.pdf](https://web.stanford.edu/group/ctr/ResBriefs/2014/18_cantrak.pdf)

#### Scientific papers in the journals of the international significance (SCI list):

1. Ilić J., Čantrak Dj., Srećković M. (2007): Laser Sheet Scattering and the Cameras' Positions in Particle Image Velocimetry, Acta Physica Polonica A, Vol. 112, No 5., ISSN 0587-4246 (printed version), PL ISSN 1898-794X (electronic version), pp. 1113-1118., IF for 2007.: 0.34, <http://przyrbwn.icm.edu.pl/APP/PDF/112/a112z563.pdf>
2. Lečić M.R., Čantrak Đ.S., Čočić A.S., Banjac M.J. (2009): Piezoresistant Velocity Probe, Experimental Techniques, Wiley, May/June 2009, Vol. 33, Issue 3, pp. 73-79, ISSN 0732-8818, IF for 2009.: 0.5, <http://onlinelibrary.wiley.com/doi/10.1111/j.1747-1567.2008.00365.x/abstract>
3. Benišek M.H., Lečić M.R., Ilić D.B., Čantrak Đ.S. (2010): Application of New Classical Probes in Swirl Fluid Flow Measurements, Experimental Techniques, Wiley, May/June 2010, Vol. 34, Issue 3, pp. 74-81, ISSN 0732-8818, IF for 2010.: 0.505. <http://www3.interscience.wiley.com/cgi-bin/fulltext/122305518/HTMLSTART>
4. Protić Z.D., Nedeljković M.S., Čantrak Đ.S., Janković N.Z. (2010): Novel Methods for Axial Fan Impeller Geometry Analysis and Experimental Investigations of the Generated Swirl Turbulent Flow, Thermal Science, Vol. 14, Suppl., pp. S125-S139, ISSN 2334-7163 (online edition), ISSN 0354-9836 (printed edition), IF for 2010.: 0.706, <http://www.doiserbia.nb.rs/img/doi/0354-9836/2010/0354-98361000025P.pdf>
5. Benišek M.H., Ilić D.B., Čantrak Đ.S., Božić I.O. (2010): Investigation of the Turbulent Swirl Flows in a Conical Diffuser, Thermal Science, Vol. 14, Suppl., pp. S141-S154, ISSN 0354-9836, IF for 2010.: 0.706, <http://www.doiserbia.nb.rs/img/doi/0354-9836/2010/0354-98361000026B.pdf>



6. Ristić S.S., Ilić J.T., Čantrak D.S., Ristić O.R., Janković N.Z. (2012): Estimation of Laser-Doppler Anemometry Measuring Volume Displacement in Cylindrical Pipe Flow, Thermal Science, Vol. 16. No. 4, pp. 1027-1042, ISSN 2334-7163 (online edition), ISSN 0354-9836 (printed edition), DOI:10.2298/TSCI1204027R, IF for 2011.: 0.779, <http://thermalscience.vinca.rs/pdfs/papers-2012/TSCI1204027R.pdf>
7. Čantrak Đ.S., Čolić Damjanović V.M.Z., Janković N.Z. (2016): Study of the Turbulent Swirl Flow in the Pipe behind the Axial Fan Impeller, Mechanics & Industry, Vol. 17., No. 4, pp. 412 (13 pages), AFM (Association française de mécanique) publication, EDP Sciences, DOI: 10.1051/meca/2016016, ISSN 2257-7777 (printed version), eISSN: 2257-7750, IF for 2015: 0.559, <http://www.mechanics-industry.org/articles/meca/abs/2016/04/mi150099/mi150099.html>
8. Ilić D.B., Benišek M.H., Čantrak Dj.S. (2017): Experimental Investigations of the Turbulent Swirl Flow in Straight Conical Diffusers with Various Angles, Thermal Science, Vol. 21, Suppl. 3, pp. S725-S736, ISSN 2334-7163 (online edition), ISSN 0354-9836 (printed edition), DOI:10.2298/TSCI160205193I, IF for 2017.: 1.431, <http://thermalscience.vinca.rs/pdfs/papers-2016/TSCI160205193I.pdf>
9. Čantrak Dj.S., Heineck J.T., Kushner L.K., Janković N.Z. (2017): Turbulence Investigation of the NASA Common Research Model Wing Tip Vortex, Thermal Science, Vol. 21, Suppl. 3, pp. S851-S862, ISSN 2334-7163 (online edition), ISSN 0354-9836 (printed edition), DOI:10.2298/TSCI161005328C, IF for 2017.: 1.431, <http://thermalscience.vinca.rs/pdfs/papers-2017/TSCI161005328C.pdf>
10. Benišek M.H., Lečić M.R., Čantrak Đ.S., Ilić D.B. (2017): The School of the Turbulent Swirling Flow at the Faculty of Mechanical Engineering University of Belgrade, Thermal Science, Vol. 21, Suppl. 3, pp. S899-S911, ISSN 2334-7163 (online edition), ISSN 0354-9836 (printed edition), DOI: 10.2298/TSCI160628094B, IF for 2017.: 1.431, <http://thermalscience.vinca.rs/pdfs/papers-2017/TSCI160628094B.pdf>
11. Čantrak Đ.S., Janković N.Z. (2018): New Approach in Vortex Core Turbulence Structure and Dynamics Investigation, European Physical Journal E. Soft Matter, ISSN 1292-8941, IF for 2017.: 1.802, waiting for the second review.

#### Scientific papers in the national journals:

1. Benišek M., Čantrak S., Nedeljković M., Ilić D., Božić I., Čantrak Đ. (2005): Defining the Optimum Shape of the Cross-flow Turbine Semi-spiral Case by the Lagrange's Principle of Virtual work, FME Transactions, University of Belgrade, Faculty of Mechanical engineering, Belgrade, New Series, Vol.33, Number 3, pp. 141-144., UDC:621.YU ISSN 1451-2092
2. Benišek M.H., Čantrak S.M., Nedeljković M.S., Čantrak Dj.S., Ilić D.B., Božić I.O. (2006): Fluid Boundaries Shaping Using the Method of Kinetic Balance, Thermal Science, Vol.10, No. 4, Issue 15, pp. 153-162., UDC: 532.559/556, ISSN 0354-9836.
3. Benišek M., Božić I., Ilić D., Čantrak Đ. (2006): Experimental Determination of the Bulb Turbine Hydraulic Characteristics at HPP Experimental "Đerdap II", Vodoprivreda, No. 222-224, Year 38, July-December 2006/4-6, pp. 189-198., YU ISSN 0350-0519, UDK 626.
4. Lečić M., Radojević S., Čantrak Đ., Čočić A. (2007): V-type Hot Wire Probe Calibration, FME Transactions, University of Belgrade, Faculty of Mechanical Engineering, Belgrade, New Series, Vol.35, Number 2, pp. 55-62., UDC:621.YU ISSN 1451-2092.
5. Benišek M., Ignjatović B., Nedeljković M., Čantrak Đ., Ilić D., Božić I. (2008): Presentation of the Research Development and Realization Results of the Small Hydropower Plants with Banki Turbines, Energy, Savez energetičara, Belgrade, Number 1-2, Year X, pp. 131-139., UDC:620.9, ISSN 0354-8651, UDC: 621.311.21.001.6 (497.11).
6. Srećković M., Milosavljević A., Kovačević A., Gospavić R., Trtica M., Ristić Z., Cvetković N., Čantrak Đ. (2008): Interaction of Lasers of Various Types with Alloys Based on Ni and Ti, FME Transactions, University of Belgrade, Faculty of Mechanical engineering, Belgrade, Vol. 36, No 4, pp. 167-173., UDC: 621, ISSN: 1451-2092.
7. Lečić M., Kokotović B., Milosavljević A., Čantrak Đ., Petronić S. (2010): Improvement of Welded Joint Quality in Hot-wire Anemometric Probes Quality Process, Energy, Economy, Ecology, Energy Sector Alliance, No. 4, December 2010., pp. 75-79., ISSN 0354-8651., UDC: 621.792.052.004.
8. Čantrak Đ., Janković N., Tašin S. (2013): Laser Anemometry in Fan Testing, Energy, Economy, Ecology, Energy Sector Alliance, No. 3-4, year 15., March 2013., Proceedings, Zlatibor, 26-29.03.2013., pp. 89-96., ISSN 3554-8651, UDC: 620.9., UDK: 621.63 : 620.179
9. Ilić J., Ristić S., Čantrak Đ., Janković N., Srećković M. (2013): The Comparison of Air Flow LDA Measurement in Simple Cylindrical and Cylindrical Tube with Flat External Wall, FME Transactions, University of Belgrade, Faculty of Mechanical Engineering, Belgrade, New Series, Vol.41, No 4, pp. 333-341., UDC: 621, YU ISSN 1451-2092.,

10. Čantrak Đ., Janković N. (2014): Influence of the Reynolds Number on the Statistical and Correlation-Spectral Properties of Turbulent Swirl Flow, Theoretical and Applied Mechanics, Series: Special Issue dedicated to memory of Anton Dimitrija Bilimović (1879-1970), Vol. 41 (S1), pp. 137-148., DOI: 10.2298/TAM14S1137Č, ISSN 1450-5584, <http://www.mi.sanu.ac.rs/projects/TAM-SpecialIssue41-2014-BILIMOVIĆ.pdf>
11. Čantrak Đ., Janković N., Ristić S., Ilić D. (2014): Influence of the Axial Fan Blade Angle on the Turbulent Swirl Flow Characteristics, Scientific Technical Review, Vol. LXIV, No. 3, pp. 23-30, Military Technical Institute, Belgrade, Serbia.
12. Čantrak Đ., Janković N. (2014): Influence of the Reynolds Number on the Statistical and Correlation-Spectral Properties of Turbulent Swirl Flow, Theoretical and Applied Mechanics, Series: Special Issue dedicated to memory of Anton Dimitrija Bilimović (1879-1970), Vol. 41 (S1), pp. 137-148., DOI: 10.2298/TAM14S1137Č, ISSN 1450-5584, <http://www.mi.sanu.ac.rs/projects/TAM-SpecialIssue41-2014-BILIMOVIĆ.pdf>
13. Čantrak Đ., Janković N., Ilić D. (2015): Investigation of the Turbulent Swirl Flow in Pipe Generated by Axial Fans Using PIV and LDA Methods, Theoretical and Applied Mechanics, Vol. 42, Issue 3, pp. 211-222, DOI: 10.2298/TAM1503211C, ISSN 1450-5584, <http://elib.mi.sanu.ac.rs/files/journals/tam/80/tamn80p211-222.pdf>
14. Jović A.S., Raković M.M., Čantrak Đ.S., Janković N.Z. (2018): Do-it-Yourself Microfluidics and Possibilities for Micro PIV, FME Transactions, University of Belgrade, Faculty of Mechanical Engineering, Belgrade, New Series, Vol. 46, No 4, pp. 525-529., DOI: 10.5937/fmet1804525J, ISSN 1451-2092, [http://www.mas.bg.ac.rs/media/istrazivanje/fme/vol46/4/12\\_a\\_jovic\\_et\\_al.pdf](http://www.mas.bg.ac.rs/media/istrazivanje/fme/vol46/4/12_a_jovic_et_al.pdf)
15. Ilić D., Čantrak Đ., Janković N. (2018): Integral and Statistical Characteristics of the Turbulent Swirl Flow in a Straight Conical Diffuser, Theoretical and Applied Mechanics, Vol. 45, Issue 1, 11 pages, accepted for publishing.

#### Papers presented at the International conferences, printed in Proceedings:

1. Čantrak Đ., Dušanić A., Božić I., Lečić. M. (2002): On the Anisotropy of the Turbulent Viscosity, Proceedings of the International Conference Classics and Fashion in Fluid Machinery, October 18-20, 2002, pp. 139-148., ISBN 86-7083-451-0, Belgrade.
2. Fei P., Čantrak Đ., Hrnjak, P. (2003): Refrigerant Distribution in the Inlet Header of Plate Evaporators, SAE Technical Paper Series, Warrendale, PA 2002-01-0948, SAE 2002 Transactions, Journal of Passenger Cars: Mechanical Systems, Section 6, Vol. 111, pp. 1397-1402, ISBN 0-7680-1290-2, ISSN 0096-736X, SAE 2002 World Congress, Detroit, Michigan, USA
3. Benišek M., Čantrak Đ., Božić I. (2003): Axial Fan's Hub Radius Determination by the Lagrange's Principle of Virtual Work, Proceedings of The Sixth Conference Industrial Fans, Gliwice, Poland, pp. 5-12. ISBN/ISSN 83-918568-1-X/1506-9702, 01-03.10.2003.
4. Čantrak Đ., Ilić J., Hyde M., Čantrak S., Čočić A., Lečić M (2008): PIV Measurements and Statistical Analysis of the Turbulent Swirl Flow Field, ISFV 13 – 13<sup>th</sup> International Symposium on Flow Visualization, FLUVISU 12 – 12<sup>th</sup> French Congress on Visualization in Fluid Mechanics, July 1-4., Nice, France, CD-ROM, ID 183-080420.
5. Benišek M., Ilić D., Čantrak Đ., Božić I., Pajnić M., Begović M., Janković N. (2009): Fan for Ecological Condition Sustain in Tunnels, Proceedings, 40<sup>th</sup> International congress on heating, cooling and climatization, 2.-4.12.2009., SMEITS, Belgrade, pp. 320-331., ISBN 978-86-81505-50-2.
6. Čantrak Đ., Dondur N., Vesna Mila Čolić Damjanović, Bratislav Ilić, Miloš Banjac, Nataša Babačev, Dejan Ilić, Dušan Kostić (2009): Economic Analysis of the Passive and Intelligent Multifamily Residential Building in Belgrade, Proceedings, 4<sup>th</sup> International Symposium of Industrial Engineering, SIE 2009., Industrial Engineering Department, Faculty of Mechanical Engineering, University of Belgrade and Steinbeis Advanced Risk Technologies, Stuttgart, Germany, Belgrade, December 10-11. 2009., ISBN 978-86-7083-681-5, pp. 40-42.
7. Jojić I., Isakov M., Voronjec D., Čantrak Đ., Ilić D., Banjac M., (2010): Review of Techno-economic Parameters on the Realized Pilot Plant for Heat Recuperation at VMA, Proceedings of the Second Regional Conference: Industrial Energy and Environmental Protection Southeast Europe - IEEP 2010, Energy Efficiency in Building Construction, Society of Thermal Engineers of Serbia, Proceedings CD (ISBN 978-86-7877-012-8, COBISS.SR-ID 176061964), June 22-26, Zlatibor, 2010.
8. Čolić-Damjanović V. M., Čantrak Đ. (2010): Improvement of the Design of Residential Buildings by Applying Principles of Passive Building on the Example of Belgrade, International Conference, Institute IMS, Belgrade, October, pp. 111-116., ISBN 978-86-8208-116-6.
9. Čantrak Đ., Janković N. (2011): PIV and LDA Research of the Turbulent Swirl Flow Behind Axial Fans in Pipes, International Congress on Applications for Image based Measurements, Section Imaging Techniques in Fluid Mechanics and Combustion, 22-23 March, Schloss Großlaupheim, Laupheim, Ulm, Germany, ISBN 978-3-00-033591-4.
10. Benišek M., Božić I., Čantrak Đ., Ilić D. (2011): Hydraulic Tests of the Bulb Turbine Unite at the Hydropower Plant „Djerdap 2“, III International Symposium *Contemporary Problems of Fluid*

- Mechanics*, May 12-13<sup>th</sup>, University of Belgrade, Faculty of Mechanical Engineering, Belgrade, pp. 187-193., CD-ROM, ISBN 978-86-7083-725-6, The book of abstracts pp. 62., ISBN 978-86-7083-726-3.
11. Čantrak Đ., Pothos S., Janković N. (2011): Stereoscopic PIV Measurements and Visualization of a Turbulent Swirl Flow behind an Axial Fan in a Pipe, III International Symposium Contemporary Problems of Fluid Mechanics, May 12-13<sup>th</sup>, University of Belgrade, Faculty of Mechanical Engineering, Belgrade, pp. 289-300, CD-ROM, ISBN 978-86-7083-725-6, The book of abstracts pp. 62., ISBN 978-86-7083-726-3.
  12. Čantrak Đ., Ristić S., Janković N. (2011): LDA, Classical Probes and Flow Visualization in Experimental Investigation of Turbulent Swirl Flow, DEMI 2011, 10<sup>th</sup> International Conference on Accomplishments in Electrical and Mechanical Engineering and Information Technology, May 26-28<sup>th</sup>, University of Banja Luka, Faculty of Mechanical Engineering, Banja Luka, pp. 489-494., ISBN 978-99938-39-36-1.
  13. Čantrak Đ., Janković N. (2011): Use of Modern Measurement and Visualization Techniques in Research of Turbulent Swirl Flow in Ventilation Systems, 15<sup>th</sup> International Passive House Conference 2011, May 27-28<sup>th</sup>, Innsbruck, Austria, pp. 579-580, ISBN 978-3-00-034396-4.
  14. Čantrak Đ., Nedeljković M., Janković N. (2011): Turbulent Swirl Flow Dynamics, The 3<sup>rd</sup> International Congress of Serbian Society of Mechanics, Vlasina Lake, Serbia, 5-8 July, Proceedings IConSSM 2011, ISBN 978-86-909973-3-6, COBISS:SR-ID 187662860, Section B-Fluid mechanics, B-03, pp. 251-261., Eds. S. Maksimović and T. Igić, Proceedings of Abstracts, ISBN 978-86-909973-2-9, Section B- Fluid Mechanics, B-03, Eds. S. Maksimović and T. Igić, pp. 99.
  15. Mattern P., Sieber S., Čantrak Đ., Fröhlig F., Caglar S., Gabi M. (2012) Investigations on the swirl flow caused by an axial fan: A contribution to the revision of ISO 5801, Fan 2012, International Conference on Fan Noise, Technology and Numerical Methods, Senlis, France, 18.04.-20.04.2012., CD Proceedings, ISBN: 978-0-9572374-1-4, 11pages, paper fan2012-68-MATTERN.
  16. Čantrak Đ., Janković N., Nedeljković M., Lečić M. (2012) Stereo PIV and LDA measurements at the axial fan outlet, Proceedings, 15<sup>th</sup> Int. Symp. on Flow Visual., Minsk, June 25-28, CD-ROM, ISBN 978-985-6456-75-9, ISFV15-072-S16, <http://www.itmo.by/pdf/isfv/ISFV15-072.pdf>
  17. Čantrak Đ., Nedeljković M., Janković N. (2012): Turbulent swirl flow characteristics and vortex core dynamics behind axial fan in a circular pipe, Proceedings, Conference on Modelling Fluid Flow (CMFF'12), The 15<sup>th</sup> International Conference on Fluid Flow Technologies, Budapest, Hungary, September 4-7, Ed. J. Vad, Vol. II, pp. 749-756, ISBN 978-963-08-4587-8, CD-ROM ISBN 978-963-08-4588-5.
  18. Ristić S., Ilić J., Ristić O., Čantrak Dj., Tašin S. (2012): Overview of uncertainty sources in flow velocity vector measurement by LDA, Proceedings, 5<sup>th</sup> International Scientific Conference on Defensive Technologies, OTEH 2012, Belgrade, Serbia, September 18-19, Ed. J. Isaković, pp. 43-48, CD-ROM, ISBN 978-86-81123-58-4, COBISS.SR-ID 193395212, <http://www.vti.mod.gov.rs/oteh12/elementi/rad/7-01.html>
  19. Čantrak Đ., Gabi M., Janković N., Čantrak S. (2012): Investigation of structure and non-gradient turbulent transfer in swirl flows, S10.3: Turbulent flows: measurements and simulations, 83<sup>rd</sup> Annual Meeting, Darmstadt, Germany, GAMM, March 26-30, PAMM, Vol. 12, Issue 1, pp. 497-498, DOI 10.1002/pamm.201210237, Wiley, Online ISSN: 1617-7061, <http://onlinelibrary.wiley.com/doi/10.1002/pamm.201210237/pdf>, Book of Abstracts, pp. 237-238.
  20. Čantrak Đ.S., Janković N.Z. (2013): Reynolds Number Influence on the Statistical Characteristics of Turbulent Swirl Flow, 4<sup>th</sup> International Congress of Serbian Society of Mechanics, Vrnjačka Banja, Serbia, 4-7 June, Proceedings, ISBN 978-86-909973-5-0, COBISS.SR-ID 198308876, Section B-Fluid mechanics, B-09, pp. 273-278., Eds. S. Maksimović, T. Igić, N. Trišović.
  21. Čantrak Dj. S. (2013): Advanced Research in Energy Systems - Bilateral Project Karlsruhe-Belgrade, Proceedings, Resources of Danubian Region: The Possibility of Cooperation and Utilization, Humboldt-Club Serbien, Eds.: L. Č. Popović, M. Vidaković, Dj. Kostić, Belgrade, pp. 55-76.
  22. Čantrak Đ. S., Janković N., Lečić M. R. (2014): Laser Insight into the Turbulent Swirl Flow behind the Axial Flow Fan, Proceedings of ASME Turbo Expo 2014: Turbine Technical Conference and Exposition, GT 2014, Technical track: Fans and Blowers, ASME TURBO EXPO 2014, June 16-20, 2014, Düsseldorf, Germany, GT2014-26563, pp. 10. [http://www.asmeconferences.org/te2014/pdfs/TE14\\_Program.pdf](http://www.asmeconferences.org/te2014/pdfs/TE14_Program.pdf)
  23. Čolić Damjanović V.M., Burazer J., Stamenić M., Čantrak Đ., Lečić M. (2014): Influences of Architectural Design and HVAC Systems' Measures on Energy Savings of a High Energy Demand Residential Building, Proceedings of the 3rd International Symposium on Environment Friendly Energies and Applications (EFEA 2014), pp. 365-370., 19-21.11.2014., Editors: Choley J.Y., Djemai M., Busawon K., Barbot J.P., Paris, Oral Presentation: 20.11.2014., Session 4, Room 100, <http://soe.northumbria.ac.uk/efea2014/documents/ProgramEFEA%202014.pdf>
  24. Gadjanski I., Čantrak Đ., Matijević M., Prodanović R. (2015): Stimulating Innovations from University through the Use of Digital Fabrication - Case Study of the SciFabLab at Faculty of Mechanical Engineering, University of Belgrade, Proceedings of the WBCInno International conference 2015, ISBN 978-86-499-0203-9, COBISS.SR-ID 299306247, pp. 18-21., Editors: G. Stojanović, V. Mandić,

- Oral Presentation: 18.09.2015., Session 1: Innovations and University-Industry Cooperation, Novi Sad, Serbia, <http://www.wbc-inno.kg.ac.rs/article/conference/conference-programme.html>
25. Čantrak Đ.S., Janković N.Z., Ilić D.B. (2016): Statistical Characteristics and Time Autocorrelation Coefficients of the Turbulent Swirl Flow in Pipe, PAMM, Vol. 16, Issue 1, pp. 579-580, DOI 10.1002/pamm.201610278, <http://onlinelibrary.wiley.com/doi/10.1002/pamm.201610278/epdf>
  26. Gađanski I.I., Čantrak Đ.S. (2016): Kickstarting the fab lab ecosystem in Serbia - SciFabLab and FABelgrade conference, EFEA congress, Multidisciplinary Engineering Design Optimization - MEDO 2016, IEEE conference, Special Session "FabLabs in Science and Education", P24, September 14-16, Belgrade, Metropol Hotel, USB CFP1676T-USB 978-1-5090-0748-6, Publisher: IEEE, DOI 10.1109/MEDO.2016.7746541, <http://ieeexplore.ieee.org/document/7746541/>
  27. Čantrak Đ.S., Janković N.Z., Ilić D.B., Lečić M.R. (2016): Centrifugal pumps' impellers design and digital fabrication, EFEA congress, Multidisciplinary Engineering Design Optimization - MEDO 2016, IEEE conference, Special Session "FabLabs in Science and Education", P27, September 14-16, Belgrade, Metropol Hotel, USB CFP1676T-USB 978-1-5090-0748-6, Publisher: IEEE, DOI 10.1109/MEDO.2016.7746544, <http://ieeexplore.ieee.org/document/7746544/>
  28. Janković N.Z., Slijepčević M.Z., Čantrak Đ.S., Gađanski I.I. (2016): Application of 3D printing in M.Sc. studies - Axial turbocompressors, EFEA congress, Multidisciplinary Engineering Design Optimization - MEDO 2016, IEEE conference, Special Session "FabLabs in Science and Education", P28, September 14-16, Belgrade, Metropol Hotel, USB CFP1676T-USB 978-1-5090-0748-6, Publisher: IEEE, DOI 10.1109/MEDO.2016.7746545, <http://ieeexplore.ieee.org/document/7746545/>
  29. Janković N.Z., Barjaktarović M.C., Janković M.M., Čantrak Đ.S. (2016): First Steps in New Affordable PIV Measurements, Proceedings of the 24th Telecommunications forum TELFOR 2016, Belgrade, 22-23 November, 2016, pp. 1-4, ISBN 978-1-5090-4085-8, IEEE Catalog Number: CFP1698P-CDR, DOI:10.1109/TELFOR.2016.7818896, <http://ieeexplore.ieee.org/document/7818896/>
  30. Pejović Simeunović J., Gađanski I., Janičijević Ž., Janković M., Barjaktarović M., Janković N. Z., Čantrak Đ. S. (2017): Microfluidic Chip Fabrication for Application in Low-Cost DIY MicroPIV, Зборник радова, Eds.: Majstorović V., Jakovljević Z., Proceedings of 5<sup>th</sup> International Conference on Advanced Manufacturing Engineering and Technologies, NEWTECH 2017, Lecture Notes in Mechanical Engineering, Springer, Cham, DOI: 10.1007/978-3-319-56430-2\_34, [https://link.springer.com/chapter/10.1007/978-3-319-56430-2\\_34](https://link.springer.com/chapter/10.1007/978-3-319-56430-2_34)
  31. Matijević M., Nedeljković M., Čantrak Đ. (2017): Remote Labs and Problem Oriented Engineering Education, EDUCON 2017, 8th IEEE Global Engineering Education Conference, Athens, Greece, 26-28 April, Session 7C, Conference Proceedings, pp. 1390-1395. [https://www.conftool.com/educon/index.php?page=browseSessions&form\\_session=48#paperID1480](https://www.conftool.com/educon/index.php?page=browseSessions&form_session=48#paperID1480)  
<https://www.conftool.com/educon/index.php?page=browseSessions&letter=%C4%8C&mode=author&s&type=sessions>
  32. Ilić D. B., Čantrak Đ. S., Janković N. Z. (2017): Reynolds Number Influence on Integral and Statistical Characteristics of the Turbulent Swirl Flow in Straight Conical Diffuser, The 6th International Congress of Serbian Society of Mechanics, Mountain Tara, Serbia, 19-21 June, Conference Proceedings, Minisymposia M2: Turbulence, Eds.: Lazarević M. et al., paper No. M2e, 6 pages
  33. Čantrak Đ. (2017): LDV and PIV in Turbomachinery, Sixth Regional Conference, Industrial Energy and Environmental Protection in South Eastern Europe Countries, Proceedings, Session: Pump units and systems - good practice and solutions for increasing energy efficiency, CD with Proceedings, Chief Editor: Radovanović M., Zlatibor, Serbia, 21-24 June, ISBN: 978-86-7877-028-9, paper No. 068SS, Introductory lecture
  34. Čantrak Đ., Banjac M., Janković N., Ilić D. (2017): Pump System in the Energy Manager Training Center at the Faculty of Mechanical Engineering University of Belgrade, Sixth Regional Conference, Industrial Energy and Environmental Protection in South Eastern Europe Countries, Proceedings, Session: Pump units and systems - good practice and solutions for increasing energy efficiency, CD with Proceedings, Chief Editor: Radovanović M., Zlatibor, Serbia, 21-24 June, ISBN: 978-86-7877-028-9, paper No. 074S
  35. Jović A., Janičijević Ž., Janković M. M., Janković N. Z., Barjaktarović M., Čantrak Đ. S., Gađanski I. (2017): Simulating Fluid Flow in "Shrinky Dink" Microfluidic Chips - Potential for Combination with Low-Cost DIY MicroPIV, Proceedings, IEEE EWDTS, Novi Sad, Serbia, ISBN 978-1-5386-3298-7, September 29-October 2, pp. 494-498., DOI: 10.1109/EWDTS.2017.8110052, <http://ieeexplore.ieee.org/document/8110052/>
  36. Nedeljković M., Janković N., Čantrak Đ., Ilić D., Matijević M. (2018): Remote Engineering Education Set-Up of Hydraulic Pump and System, Proceedings, 15th International Conference on Remote Engineering and Virtual Instrumentation (REV 2018), March 21-23, Univ. of Applied Sciences, Duesseldorf, Germany, pp. 57-64, DOI: 10.1007/978-3-319-95678-7\_35, Part of the Lecture Notes in Networks and Systems book series (LNNS, volume 47), Print ISBN: 978-3-319-95677-0, Online ISBN: 978-3-319-95678-7, [https://link.springer.com/chapter/10.1007/978-3-319-95678-7\\_35](https://link.springer.com/chapter/10.1007/978-3-319-95678-7_35).



37. Nedeljkovic M., Cantrak D., Jankovic N., Ilic D., Matijevic M. (2018): Virtual Instrumentation Used in Engineering Education Set-Up of Hydraulic Pump and System, Proceedings, 15th International Conference on Remote Engineering and Virtual Instrumentation (REV 2018), March 21-23, Univ. of Applied Sciences, Duesseldorf, Germany, pp. 341-348, DOI: 10.1007/978-3-319-95678-7\_75, Part of the Lecture Notes in Networks and Systems book series (LNNS, volume 47), Print ISBN: 978-3-319-95677-0, Online ISBN: 978-3-319-95678-7, [https://link.springer.com/chapter/10.1007%2F978-3-319-95678-7\\_75](https://link.springer.com/chapter/10.1007%2F978-3-319-95678-7_75)
38. Nedeljkovic M.S., Cantrak D.S., Jankovic N.Z., Ilic D.B., Matijevic M.S. (2018): Virtual Instruments and Experiments in Engineering Education Lab Setup wuth Hydraulic Pump, Proceedings, 2018 IEEE Global Engineering Education Conference (EDUCON), April 17-20, Santa Cruz de Tenerife, Canary Islands, Spain, pp. 1145-1152, DOI: 10.1109/EDUCON.2018.8363358, <https://ieeexplore.ieee.org/document/8363358>
39. Nedeljkovic M.S., Jankovic N.Z., Cantrak D.S., Ilic D.B., Matijevic M.S. (2018): Engineering Education Lab Setup Ready for Remote Operation - Pump System Hydraulic Performance, Proceedings, 2018 IEEE Global Engineering Education Conference (EDUCON), April 17-20, Santa Cruz de Tenerife, Canary Islands, Spain, pp. 1175-1182, DOI: 10.1109/EDUCON.2018.8363362, <https://ieeexplore.ieee.org/document/8363362>
40. Veljovic A., Matijevic M., Nedeljkovic M., Cantrak D. (2018): An Approach to Design of the Cyber-Physical Systems for Engineering Education, Proceedings, 2018 IEEE Global Engineering Education Conference (EDUCON), April 17-20, Santa Cruz de Tenerife, Canary Islands, Spain, pp. 1408-1413, DOI: 10.1109/EDUCON.2018.8363393, <https://ieeexplore.ieee.org/document/8363393>
41. Janković N.Z., Čantrak Đ.S., Nedeljković M.S. (2018): Three-Components LDA Investigation of the Turbulent Swirl Jet behind the Axial Fan, Conference on Modelling Fluid Flow (CMFF '18), The 17th International Conference on Fluid Flow Technologies, Budapest, Hungary, September 4-7, Paper No. CMFF18-101, 8 pages.
42. Stamenić M.S., Čantrak D.S., Janković N.Z., Lečić M.R. (2018): Some Remarks on Bottom-Up Methodology for Energy Efficiency Action Plans, 6 pages, 5th International Symposium on Environment Friendly Energies and Applications (EFEA 2018), Session Design, Control and Applications of Efficient Energy Technologies or Systems, Rome, Italy, September, 24-26 September, ID 72, 6 pages.
43. Cantrak Dj.S., Jankovic N.Z., Nedeljkovic M.S., Matijevic M.S., Ilic D.B. (2018): Lectures in Rotodynamic Pumps - from Design and Simulations to Testing, Proceedings, International Conference on Interactive Mobile Communication, Technologies and Learning (IMCL2018), McMaster University, Hamilton, Ontario, Canada, October 11-13, ID 1165, in print by Springer.
44. Matijevic M., Nedeljković M., Čantrak Đ., Janković, N. (2018): Problem Oriented Learning Based on Use of Shared Experimental Results, Proceedings, International Conference on Interactive Mobile Communication, Technologies and Learning (IMCL2018), McMaster University, Hamilton, Ontario, Canada, ID 1146, October 11-13, in print by Springer.

#### **Papers printed in the book of abstracts of the international conferences (selected):**

1. Ilić J., Čantrak Đ., Srećković M. (2007): Laser Sheet Scattering and the Cameras' Positions in Particle Image Velocimetry, ISCOM 2007, Institute of Physics, Book of Abstracts, ISSN 978-86-82441-20-5, pp. 66., Editors: B. Jelenković, S. Vuković, A. Strinić, 3-7.9-2007., Belgrade.
2. Lečić M., Kokotović B., Milosavljević A., Čantrak Đ. (2008): Influence of the Platinum Alloy Microstructure on the Optimum Characteristics of the Precise Anemometers YUCOMAT, Symposium Advanced Materials for High-Technology Application, 8-12. September, Herceg Novi, Montenegro, Program and book of asbtracts, pp. 122, ISBN 978-86-80321-15-8, International conference. <http://www.mrs-serbia.org.rs/images/2008-1.pdf>
3. Čantrak Đ., Lečić M., Čočić A., Čantrak S. (2008): Investigation of Structure and Statistical Properties of Turbulent Swirling Flow in a Pipe, GAMM 2008, Session of short communication-9: 'Turbulence and reactive flows', Location: SFG 1020, Slot 3, Proceedings, CD-ROM, ZAMM, University of Bremen.
4. Čočić A., Lečić M., Čantrak Đ., Čantrak S. (2008): Invariant and Numerical Analysis of Turbulent Pipe Flow Subjected to Sudden Area Contraction, GAMM 2008, Session of short communication-9: 'Turbulence and reactive flows', Location: SFG 1020, Slot 1, Proceedings, CD-ROM, ZAMM, University of Bremen, <http://www.zarm.uni-bremen.de/gamm2008/files/acocicabstract.pdf>
5. Čantrak Đ. (2010): Contemporary Scientific Methods and their Application – Contribution of Young Researchers in Transition of Science and Education, Humboldt-Kolleg Wissenschaft und Bildung im Wandel (Science and Education in Transition), Book of Abstracts, pp. 12., Belgrade, October 28-30, [http://helix.chem.bg.ac.rs/Humboldt-2010/session\\_13/index.html](http://helix.chem.bg.ac.rs/Humboldt-2010/session_13/index.html), ISBN 978-86-7220-041-6, lecture given at the University of Belgrade (Rector's building), Hall B, 1<sup>st</sup> floor, 30.10.2010. 15<sup>30</sup>-15<sup>50</sup>.
6. Čantrak Đ., Gabi M., Janković N., Čantrak S. (2012): Investigation of structure and non-gradient turbulent transfer in swirl flows, S10.3: Turbulent flows: measurements and simulations, 83<sup>rd</sup> Annual Meeting, Darmstadt, Germany, GAMM, March 26-30, Book of Abstracts, Eds.: H.-D. Alber, C. Tropea, pp. 237-238.

7. Cantrak Dj., Mattern P., Jankovic N., Gabi M. (2013): PIV Invariant Maps in Analysis of Turbulent Swirl Flow, S10.2: Turbulence and reactive flows, 84th Annual Meeting, Novi Sad, Serbia, GAMM, March 18-22, Book of Abstracts on USB GAMM 2013 ID Card, Paper no. 67938
  8. Cantrak Đ. (2013): Advanced Research in Energy Systems - Bilateral Project Karlsruhe-Belgrade, Humboldt-Kolleg Resources of Danubian Region: The Possibility of Cooperation and Utilization, June 12-15, Book of Abstracts, pp. 16., ISBN 978-86-916771-0-7, <http://www.humboldt-serbia.ac.rs/kolleg2013/pics/abstract.pdf>
  9. Čolić-Damjanović V. M., Čantrak Đ. (2013): Integrated Sustainability in Housing in Belgrade: Social, Economic and Environmental Features, International scientific conference on impact of climate change on the environment and the economy, 22-24. April, Belgrade, Book of abstracts, p. 236., ISBN 978-86-89061-03-1.
  10. Čantrak Đ. S., Janković N. Z. (2015): Analysis of turbulence generated by axial fans using PIV and LDA methods, The 5th International Congress of Serbian Society of Mechanics, Aranđelovac, June 15-17, Proceedings, pp. 74, Abstract No. F3bCantrak, ISBN 978-86-7892-715-7. eds.: D. T. Spasić, M. Lazarević, N. Grahovac, M. Žigić.
  11. Čantrak Đ., Heineck J., Kushner L., Janković N. (2015): High Spee Stereo PIV Investigation of the NASA Common Research Model Wing Tip Vortex, Turbulence Workshop International Symposium, University of Belgrade, Faculty of Mechanical Engineering, August 31-September 2, The Book of Abstracts, pp. 24, ISBN 978-86-7083-865-9. eds.: Đ. Čantrak, M. Lečić, A. Čočić.
  12. Janković N., Čantrak Đ., Mattern P., Tašin S. (2015): PIV and LDA Investigation of the Turbulent Swirl Flow behind the Axial Fan in the Pipe and Jet, Turbulence Workshop International Symposium, University of Belgrade, Faculty of Mechanical Engineering, August 31-September 2, The Book of Abstracts, pp. 33, ISBN 978-86-7083-865-9. eds.: Đ. Čantrak, M. Lečić, A. Čočić.
  13. Lečić M., Čantrak Đ., Čočić A. (2015): School of the Turbulent Swirl Flow at the Faculty of Mechanical Engineering, University of Belgrade, Turbulence Workshop International Symposium, University of Belgrade, Faculty of Mechanical Engineering, August 31-September 2, The Book of Abstracts, pp. 36, ISBN 978-86-7083-865-9. eds.: Đ. Čantrak, M. Lečić, A. Čočić.
  14. Čantrak Đ., Janković N. (2016): Complex turbulent swirling flow analysis, Flowing Matter 2016, COST project MP1305 conference, 11-15.01.2016., Porto, Book of Abstracts, pp. 107-108. [http://www.campodeano.com/FlowingMatter/Home\\_files/Book%20of%20Abstracts.pdf](http://www.campodeano.com/FlowingMatter/Home_files/Book%20of%20Abstracts.pdf)
- Books:
    1. Genić S., Stamenić M., Živković B., Čantrak Đ., Nikolić A., Brdarević Lj. (2017): Manual for energy managers' training in the industry energetics, Faculty of Mechanical Engineering University of Belgrade, author of chapters: 12 and 13, and 17 (partly), ISBN 978-86-7083-931-1.
    2. Ilić D. B., Čantrak Đ. S. (2017): Manual for fluid flow measurements in laboratory, Fac. of Mechanical Eng. Univ. of Belgrade, Belgrade. (in Serbian), ISBN 978-86-7083-942-7