

CURRICULUM VITAE



1. Personal Data

First name, last name: **Suad, Jakirlić**

Birthday: 26 Mai, 1960

Birthplace: Sarajevo, Bosnia and Herzegovina (former Yugoslavia)

Marital status: married, two children (32 and 26 years old)

Citizenship: Germany

Employment: Institute of Fluid Mechanics and Aerodynamics (SLA), Department of Mechanical Engineering, Darmstadt University of Technology
Alarich-Weiss-Straße 10, D-64287 Darmstadt, Germany

2. Academic Record

1966 – 1974 Primary school in Sarajevo

1974 – 1978 Technical Gymnasium in Sarajevo

1978 - 1983 Study at the Mechanical Engineering Faculty, University of Sarajevo
Field of study: Energy and Process Engineering
Specialization: Air-conditioning, heating and refrigeration

March 17, 1983 **Diploma Engineer (Dipl.-Ing.)**

1983 - 1985 Postgraduate School at the Mechanical Engineering Faculty, University of Sarajevo, Field of study: Fluid Mechanics

July 19, 1991 **Master of Technical Sciences (M.Sc.)**

March 26, 1997 **Doctor of Engineering Sciences (Dr.-Ing.) (with distinction)**
Technical Faculty, Friedrich-Alexander University, Erlangen-Nürnberg, Germany

June 23, 2004 **Venia Legendi in Fluid Mechanics - Habilitation (Dr.-Ing. Habil.)**
Department of Mechanical Engineering, Darmstadt University of Technology

3. Professional career

22.03.1983-28.02.1991	Research scientist at the Institute of Process Technique, Energy and Environmental Engineering, University of Sarajevo
1.03.1984-28.02.1991	Teaching Assistant at the Mechanical Engineering Department, University of Sarajevo; Subject: Fluid Mechanics
1.03.1991-30.10.1997	Research scientist at the Chair of Fluid Mechanics (LSTM), Friedrich-Alexander University Erlangen-Nuremberg, Section for „ <i>Computational Fluid Mechanics and Turbulence Modelling</i> “
1.11.1997 – 30.04.2004	Scientific Assistant (C1) at the Chair of Fluid Mechanics and Aerodynamics (FG SLA), Darmstadt University of Technology
Since 1.11.1997	Leader of the Research Group „Modelling and simulation of turbulent flows“ with permanently 6-8 PhD students
01.05.2004-31.03.2008	Academic Councillor (Akademischer Rat - A13) at the Institute of Fluid Mechanics and Aerodynamics (FG SLA), Darmstadt University of Technology
11.01.2005-13.07.2010	Privatdozent , Mechanical Engineering Department, TU Darmstadt
01.04.2008-01.04.2013	Academic Senior Councillor (Akademischer Oberrat - A14) at the Institute of Fluid Mechanics and Aerodynamics (FG SLA), Darmstadt University of Technology
Since 14.07.2010	Associate Professor , Mechanical Engineering Department, TU Darmstadt
Since 01.04.2013	Academic Director (Akademischer Direktor - A15) at the Institute of Fluid Mechanics and Aerodynamics (FG SLA), Darmstadt University of Technology
Since 16.07.2014	(Full) Professor (<i>“tenure professorship”</i> ; from 25.04.2000 – 31.08.2004 Assistant Professor; from 01.09.2004 – 15.07.2014 Associate Professor), Section for „ <i>Hydraulics</i> “, Mechanical Engineering Department, University of Sarajevo

4. Refereeing

Journals

- *Journal of Fluid Mechanics*, Cambridge University Press, UK
- *Flow, Turbulence and Combustion*, Springer (formerly Kluwer Academic Publisher)
- *Theoretical and Computational Fluid Dynamics*, Springer
- *Experiments in Fluids*, Springer
- *Acta Mechanica*, Springer
- *ASME J. of Fluids Engineering*, American Society of Mechanical Engineers
- *Atomization and Spray*, Begell House Inc, NY, USA
- *ChERD - Chemical Engineering Research and Design*, IChemE - Institution of Chemical Engineering
- *Computers and Fluids*, Elsevier Science Ltd.
- *Int. Journal of Multiphase Flows*, Elsevier Science Ltd.
- *Int. Journal of Heat and Fluid Flow*, Elsevier Science Ltd.
- *Int. Journal of Heat and Mass Transfer*, Elsevier Science Ltd.

* I've been teaching about 15 lessons per year + examinations (see under „**teaching activities**“) and supervising M.Sc. and Ph.D. theses; this is a regular appointment through the Senate of the University of Sarajevo

- *Int. Journal of Thermal Sciences*, Elsevier Science Ltd.
- *Int. Journal of Computational Physics*, Elsevier Science Ltd.
- *Int. Journal of Applied Thermal Engineering*, Elsevier Science Ltd.
- *Int. Journal for Numerical Methods in Fluids*, John Wiley & Sons
- *AIAA Journal*, American Institute of Aeronautics and Astronautics
- *SAE Technical Papers Series*, Society of Automotive Engineering - SAE
- *The Aeronautical Journal*, Royal Aeronautical Society
- *Progress in Computational Fluid Dynamics*, Inderscience Publishers

Scientific conferences/symposiums

- 4th Int. Symp. on *Engineering Turbulence Modelling and Experiments*, Corsica, May 24-26, 1999
- 5th Int. Symp. on *Engineering Turbulence Modelling and Experiments*, Mallorca, September 15-18, 2002
- 6th Int. Symp. on *Engineering Turbulence Modelling and Experiments*, Sardinia, June 15-18, 2005
- 8th Int. Symp. on *Engineering Turbulence Modelling and Experiments*, Marseille, June 9-11, 2010
- 9th Int. Symp. on *Engineering Turbulence Modelling and Experiments*, Thessaloniki, June 6-8, 2012
- 10th Int. Symp. on *Engineering Turbulence Modelling and Experiments*, Marbella, September 17-19, 2014
- 11th Int. Symp. on *Engineering Turbulence Modelling and Experiments*, Palermo, September 21-23, 2016
- 12th Int. Symp. on *Engineering Turbulence Modelling and Experiments*, Montpellier, France, September 26-28, 2018
- 4th Int. Symp. on *Turbulence, Heat and Mass Transfer*, Antalya, October 12-17, 2003
- 5th Int. Symp. on *Turbulence, Heat and Mass Transfer*, Dubrovnik, September 25-29, 2006
- 6th Int. Symp. on *Turbulence, Heat and Mass Transfer*, Rome, September 14-18, 2009
- 7th Int. Symp. on *Turbulence, Heat and Mass Transfer*, Palermo, September 24-27, 2012
- 8th Int. Symp. on *Turbulence, Heat and Mass Transfer*, Sarajevo, September 15-18, 2015
- 3rd Int. Symp. on *Two-Phase Flow Modelling and Experimentation*, Pisa, September 22-24, 2004
- 7th Int. Symp. on *Direct and Large Eddy Simulation - DLES-7*, Trieste, September 8-10, 2008
- ASME Turbo Expo 2010, Scottish Exhibition & Conference Centre, Glasgow, June 14-18, 2010
- 7th Int. Symposium on *Turbulence and Shear Flow Phenomena*, Ottawa, Canada, July 28-31, 2011
- 8th Int. Symposium on *Turbulence and Shear Flow Phenomena*, Poitiers, France, August 27-29, 2013
- 9th Int. Symposium on *Turbulence and Shear Flow Phenomena*, Melbourne, Australia, June 30 – July 03, 2015
- 10th Int. Symposium on *Turbulence and Shear Flow Phenomena*, Chicago, IL, USA, July 6-9, 2017

Subsidy Institutions

- German Scientific Council (Deutsche Forschungsgemeinschaft – DFG)

- NSERC - Natural Sciences and Engineering Research Council of Canada
- European Research Council (ERC), Panel Member/Chair

5. Teaching

	Tutorials
1984-1991	University of Sarajevo Subject: <i>Fluid Mechanics</i> Prof. K. Hanjalic
1995/96	Friedrich-Alexander University, Erlangen-Nuremberg Subject: <i>Computer Applications in Chemical Engineering</i> Prof. C. Tropea
1996/97	Friedrich-Alexander University, Erlangen-Nuremberg Subject: <i>Fluid Mechanics</i> Prof. F. Durst
1997-2000	Darmstadt University of Technology Subject: <i>Fluid Mechanics</i> Prof. C. Tropea

	Lectures
Since 1999/2000 (3 lessons per week in Summer Semester; 6 CP's)	Darmstadt University of Technology Subject: <i>Computational Aerodynamics</i>
Since 2000/2001 (20 lessons every 2 years + examinations)	<i>Postgraduate Study</i> of the University of Sarajevo Subject: <i>Continuum Mechanics, Turbulence modelling</i>
Since 2004/2005 (4 lessons per week in Winter Semester; 8 CP's)	Darmstadt University of Technology Subject: <i>Advanced Turbulence Modelling and Simulation</i>
Since 2014/2015 (15 lessons per year)	University of Sarajevo Subject: <i>Fluid Mechanics</i>

	Summer Schools:
1997-2002	German-Bosnian Summer Academy Friedrich-Alexander University, Erlangen-Nuremberg and University of Sarajevo Courses: <i>Computer Application in Engineering, Fluid Mechanics and Thermodynamics</i>
Juni, 2013	Lappeenranta University, Lappeenranta, Finland Course: <i>Turbulence Modelling</i>

6. Conference and Workshop Organization

- Scientific secretary of the *2nd Int. Forum on Expert Systems and Computer Simulation in Energy Engineering, Erlangen, Germany, March 17-20, 1992*
- Chairman of the local organizing committee of the *9th ERCOFTAC/IAHR Workshop on Refined Turbulence Modelling, Darmstadt University of Technology, Germany, October 4-5, 2001*
- Symposium secretary of the *5th Int. Symposium on Turbulence, Heat and Mass Transfer, Dubrovnik, Croatia, September 25-29, 2006*

- Chairman (together with Prof. F. Thiele) of the *12th ERCOFTAC Workshop on Refined Turbulence Modelling*, Technical University Berlin, Germany, October 12-13, 2006
- Co-Chairman (Chairman Prof. Tropea) of the 15th Symposium of the DGLR (*German Aerospace*) Working Group STAB (*German Fluid Mechanics Society*), Darmstadt University of Technology, November 29 – December 01, 2006
- Chairman (together with Professors G. Brenn and H. Steiner) of the *13th ERCOFTAC Workshop on Refined Turbulence Modelling*, Graz University of Technology, Austria, September 25-26, 2008
- Symposium secretary of the *6th Int. Symposium on Turbulence, Heat and Mass Transfer*, Rome, Italy, September 14-18, 2009
- Chairman of the *14th ERCOFTAC Workshop on Refined Turbulence Modelling*, “Sapienza” University of Rome, Rome, September 18, 2009
- Organization of the 1st Workshop on “*Single and two-phase flow simulations with OpenFOAM: modelling and numerical issues*”, Center of Smart Interfaces, Technische Universität Darmstadt, April 7-8, 2009
- Chairman/Organization of the Mini Symposium “*Current Trends in Modelling and Simulation of Turbulent Flows*”, 5th European Conference on Computational Fluid Dynamics – ECCOMAS CFD 2010, Lisbon, Portugal, June 14-17, 2010
- Organization of the 2nd Workshop on “*Single and two-phase flow simulations with OpenFOAM: modelling and numerical issues*”, Center of Smart Interfaces, Technische Universität Darmstadt, September 27-28, 2010
- Chairman/Organization of the Section S9 on “*Laminar Flows and Transition*”, 83rd Annual Meeting of the International Association of Applied Mathematics and Mechanics – GAMM 2012, Darmstadt, Germany, March 26-30, 2012
- Chairman/Organization of the 2nd Mini Symposium on “*Current Trends in Modelling and Simulation of Turbulent Flows*”, 6th European Congress on Computational Methods in Applied Sciences and Engineering – ECCOMAS 2012, Vienna, Austria, September 10-14, 2012
- Symposium secretary of the *7th Int. Symposium on Turbulence, Heat and Mass Transfer*, Rome, Palermo, September 24-27, 2012
- Chairman/Organization of the 3rd Mini Symposium on “*Current Trends in Modelling and Simulation of Turbulent Flows*”, 6th European Conference on Computational Fluid Dynamics (ECFD VI) in the framework of 11th World Congress on Computational Mechanics (WCCM XI), Barcelona, Spain, July 20-25, 2014
- Chairman/Organization of the 4th Mini Symposium on “*Current Trends in Modelling and Simulation of Turbulent Flows*”, 7th European Congress on Computational Methods in Applied Sciences and Engineering – ECCOMAS 2016, Crete, Greece, June 5-10, 2016

7. Activities in Scientific Organizations

- **European Research Council (ERC):** Panel Chairman (Starting Grants)
- Editor-in-Chief of the *International Journal of Heat and Fluid Flow*, published by Elsevier Science Inc., since March, 2012 (from 2006-2009, Editorial Advisory Board member; from 01/2010-02/2012 Editor-at-Large)
- Organizing Committee of the Conference Series on *Turbulence, Heat and Mass Transfer* organized under auspices of *Int. Centre of Heat and Mass Transfer*

- Coordinator of the Steering Committee[†] of the **ERCOFTAC (European Research Community On Flow, Turbulence And Combustion) *Special Interest Group on Turbulence Modelling* (SIG 15) → Member of the ERCOFTAC Scientific Programme Committee**
- Advisory Committee of the 8th Int. Symposium on ***Engineering Turbulence Modelling and Experiments***, Marseille, France, June 9-11, 2010 organized under auspices of **ERCOFTAC**
- Advisory Committee of the 9th Int. Symposium on ***Engineering Turbulence Modelling and Experiments***, Thessaloniki, Greece, June 6-8, 2012, organized under auspices of **ERCOFTAC**
- Advisory Committee of the 10th Int. Symposium on ***Engineering Turbulence Modelling and Experiments***, Marbella, Spain, September 17-19, 2014, organized under auspices of **ERCOFTAC**
- Advisory Committee of the 11th Int. Symposium on ***Engineering Turbulence Modelling and Experiments***, Palermo, Italy, September 21-23, 2016, organized under auspices of **ERCOFTAC**
- Advisory Committee of the 12th Int. Symposium on ***Engineering Turbulence Modelling and Experiments***, Montpellier, France, September 26-28, 2018, organized under auspices of **ERCOFTAC**
- Advisory Committee of the 7th Int. Symposium on ***Turbulence and Shear Flow Phenomena***, Ottawa, Canada, July 28-31, 2011
- Advisory Committee of the 8th Int. Symposium on ***Turbulence and Shear Flow Phenomena***, Poitiers, France, August 27-29, 2013
- Advisory Committee of the 9th Int. Symposium on ***Turbulence and Shear Flow Phenomena***, Melbourne, Australia, June 30 – July 03, 2015
- Advisory Committee of the 10th Int. Symposium on ***Turbulence and Shear Flow Phenomena***, Chicago, IL, USA, July 6-9, 2017
- Scientific Advisory Committee of the 6th Int. Symposium on ***Hybrid RANS/LES Methods***, Strasbourg, France, September 26-28, 2016
- Scientific Advisory Committee of the 7th Int. Symposium on ***Hybrid RANS/LES Methods***, Berlin, Germany, September 17-19, 2018
- Academic Committee of 6th “***International Conference on Fluid Mechanics***“, organized by Chinese Society of Theoretical and Applied Mechanics (CSTAM)

8. Coordination of Stipend Programmes

- 1999 – 2007: coordination (together with Prof. Tropea) of the DAAD (German Academic Exchange Service) Stipend Programme „*Sur-Place*“ (SPBiH) at the Technische Universität in Darmstadt for Bosnia and Herzegovina. 24 diploma students, 4 M.Sc. students and 4 Ph.D. students (from the Universities of Sarajevo, Zenica and Tuzla) took part. The 12-month stipends included 3-month stays in Darmstadt. Different chairs of the Departments of Mechanical Engineering, Electrical Engineering and Information Technology, Physics, Biology (Zoology), Law and Economics have been involved. Seven professors from Bosnia visited the Technische Universität in Darmstadt; seven professors from Darmstadt visited the Bosnian Universities.

[†] Steering committee members are: Prof. M. Leschziner (IC London), Prof. W. Rodi (TH Karlsruhe), Prof. K. Hanjalic (TU Delft), Prof. B. Launder and D. Laurence (University of Manchester), Dr. R. Manceau (University of Poitiers), Dr. F. Menter (ANSYS GmbH Deutschland), Dr. D. von Terzi (GE Munich) and Dr. S. Wallin (FOI, Sweden)

9. Awards, Honours and Offers

- Offer for Professorship (*tenure-track position*) for Fluid Mechanics at *The University of Western Ontario, London, Canada*, September, 2003
- Guest Professor at “*Ecole Centrale de Lyon*”, France (March - April, 2004)
- Hermann-Reissner-Prize, Department of Aeronautics and Astronautics, Stuttgart University, 2005
- Internationality Prize for 2005, “*Carlo and Karin Giersch*”-Foundation, Darmstadt University of Technology

10. Languages

- German, English, Bosnian (formerly Serbo-Croatian) - mother tongue

11. Memberships

- ERCOFTAC - European Research Community On Flow, Turbulence And Combustion
- AIAA - American Institute of Aeronautics and Astronautics
- APS - American Physical Society
- SAE – Society of Automotive Engineers

12. Main Research Fields

- Computational Fluid Dynamics (turbulent and transitional, steady and unsteady flows): development and applications of statistical turbulence models (RANS) and hybrid RANS/LES (Large Eddy Simulation) models/methods,
- Flow, heat and mass transfer under conditions of constant and variable fluid properties in configurations relevant to swirl combustors and IC engines
- Flows affected by different pressure gradients, separation and reattachment, swirl, rotation and mean compression, periodically oscillating flows
- Aircraft (subsonic and transonic configurations) and car aerodynamics
- Transition: forward and reverse (laminarization),
- Active control of turbulent flow separation by boundary layer forcing, plasma-actuated flow control
- Two-phase flow (also with free surfaces): particulate flows, droplet and spray impact, evaporation, icing

13. Supervision of student works (bachelor-, diploma- and master theses, PhD theses, habilitations)

Until now 21 PhD theses have been completed under my supervision; additional 4 PhD theses are in progress (see the list of publications). Furthermore 38 bachelor-/diploma-/master theses have been initiated and directly supervised by myself. Numerous additional student works have been supervised by my PhD students.

I have furthermore participated as reviewer and exam commission member (“*Opponent*“) of a number of PhD theses and habilitations at different Universities (*Bremen University, Stuttgart University, Braunschweig University, Technical University of Dresden, Delft University of Technology, Helsinki University of Technology, Lappeenranta University, La Sapienza University of Rome, Keio University Yokohama, KTH Stockholm, Chalmers University of Technology Göteborg, University of Sarajevo, International University of Sarajevo*).

14. Publishing

I have published about 200 '*peer-reviewed*' articles in international scientific journals, edited books, bulletins, periodicals and conference proceedings (see the list of publications[‡]). Four books published by Springer Verlag (Heidelberg) und Begell House Inc. (New York) have been edited by myself.

Darmstadt; 25.04.2018

A handwritten signature in blue ink, appearing to read 'Johannes' followed by a surname that is partially obscured but seems to end in 'fried'.

[‡] http://scholar.google.de/citations?user=SLRGW_IAAAJ&hl=de&cstart=0&pagesize=20