Professional curriculum vitae

General data:
Surname: MUSZKA
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Main workplace:
Department of Metal Forming and Metalurgical Engineering,
Faculty of Metals Engineering and Applied Computer Science,
AGH University of Krakow,
30 Mickiewicza Ave.,
30-059, Krakow, Poland

Bibliometric data

- Book chapters: 4
- Books edited: 2
- Impact Factor journal papers: 51
- Other peer-reviewed journal papers: 11
- Conference proceedings: 115
- Citations without self-citations: 389 (WoS); 501 (Scopus)
- Hirsch index: 13 (WoS); 15 (Scopus)

Education

1998 – 2003	AGH University of Science and Technology, Faculty of Metallurgy and Materials Science.
2003	**Masters of Engineering degree (MEng) in Metallurgy (specialization: metal forming).**
2003 – 2008	AGH University of Science and Technology, Faculty of Metallurgy and Materials Science, Department of Metal Forming (Ph.D. studies).
2008	**Ph.D. degree** at the AGH University of Science and Technology, Faculty of Metals Engineering and Industrial Computer Science.
2016	**D.Sc. degree** at the AGH University of Science and Technology, Faculty of Metals Engineering and Industrial Computer Science.

Professional experience at the AGH University of Krakow

2007 – 2008	**Assistant** at the AGH University of Science and Technology, Faculty of Metals Engineering and Industrial Computer Science.
2008 – 2018	**Assistant professor** at the AGH University of Science and Technology, Faculty of Metals Engineering and Industrial Computer Science.
2018 –	**Associate professor** at the AGH University of Science and Technology, Faculty of Metals Engineering and Industrial Computer Science.
2020 –	**Head of Department** of Metal Forming and Metallurgical Engineering at the AGH University of Science and Technology, Faculty of Metals Engineering and Industrial Computer Science.

Other forms of professional activities

2015 – 2021	**Member**, Polish Forging Association
2021 –	**Audit Committee Member**, Polish Forging Association

2022 –	**Member**, Foundry and Metallurgy Committee, Krakow Branch of the Polish Academy of Sciences
2022 –	**Member**, The Polish Committee for Standardization, Technical Body KT153: Thin Steel Sheets
2015 – 2023	**Member**, Academic-Industrial Association for Metallurgy, Poland
2023 –	**Executive Board Member**, Academic-Industrial Association for Metallurgy, Poland
2023 –	**Scientific consultant**, Kuznia Glinik forging plant, Gorlice, Poland

Professional experience at other Universities (post doctoral research associate, visiting researcher, visiting professor)

2005	
1.04 – 30.09	Deakin University, Faculty of Science and Technology, Geelong Waurn Ponds Campus, Geelong, Australia.
2006	
15.03 – 1.06	Deakin University, Centre for Material and Fibre Innovation, Geelong Waurn Ponds Campus, Geelong, Australia.
2008 – 2011	
01.07 – 31.06	Post Doctoral Research Associate, The University of Sheffield, Department of Engineering Materials.
2013 – 2015	
01.07 – 30.06	Visitting Researcher, The University of Sheffield, Department of Materials Science and Engineering.
2016	
08.01 – 05.02	Deakin University, Institute for Frontier Materials, Geelong Waurn Ponds Campus, Geelong, Australia.
2017	
04.01 – 03.02	Deakin University, Institute for Frontier Materials, Geelong Waurn Ponds Campus, Geelong, Australia.
2018	
04.01 – 08.02	Deakin University, Institute for Frontier Materials, Geelong Waurn Ponds Campus, Geelong, Australia.
2018	
04.06 – 08.06	The University of Sheffield, Department of Engineering Materials, Sheffield, UK.
2019	
16.01 – 07.02	Deakin University, Institute for Frontier Materials, Geelong Waurn Ponds Campus, Geelong, Australia.
2023	
04.01 – 22.01	Deakin University, Institute for Frontier Materials, Geelong Waurn Ponds Campus, Geelong, Australia.

Awards for scientific and research activities

1. Ph.D. thesis “Effect of grain refinement on strengthening mechanisms of low carbon steels subjected to plastic deformation” was defended with honors (2008).
2. Travel Grant from Sheffield Metallurgical and Engineering Association (SMEA), Sheffield, 2008.
3. Rector scientific prize for scientific achievements in 2014.
4. Rodziewicz-Bielewicz prize for outstanding achievements in metallurgy, AGH University of Krakow, 2015.
5. Rector scientific prize for scientific achievements in 2015.

6. Rector scientific prize for scientific achievements in 2019.
7. Rector scientific prize for scientific achievements in 2020.
8. Rector prize for teaching achievements in 2020.
9. Rector scientific prize for scientific achievements in 2021.
10. Rector prize for teaching achievements in 2021.
11. Rector scientific prize for scientific achievements in 2022.

Important lectures and seminars

1. Lecture given during seminar at the Deakin University, Geelong, Australia, 2005.
2. Lecture given during Departamental Semminar, Faculty of Metallurgy and Materials Science, AGH University, Krakow, Poland, 2006.
3. Lecture given during seminar at the Deakin University, Geelong, Australia, 2006.
4. Lecture given at IMMPETUS Colloqium, The University of Sheffield, UK, 2009.
5. Lecture given at IMMPETUS Colloqium, The University of Sheffield, UK, 2010.
6. Invited lecture at the Los Alamos National Laboratory, Los Alamos, 2011.
7. Lecture given at IMMPETUS Colloqium, The University of Sheffield, UK, 2011.
8. Invited lecture given at TATA Steel Europe R&D Centre, Roterham, UK, 2011.
9. Lecture given at IMMPETUS Colloqium, The University of Sheffield, UK, 2012.
10. Invited lecture for a seminar of the Departments of Metal Forming and Modelling and Applied Computer Science at the AGH University, Krakow, 2012.
11. Lecture during ArcelorMittal Steel Forming/Metallurgy Network Seminar, Metz, France, 2013.
12. Invited lecture for a seminar of the Departments of Metal Forming and Modelling and Applied Computer Science at the AGH University, Krakow, 2015.
13. Invited lecture given at the ArcellorMittal Poland workshop for employees on „Thermomechanical Processing of steels", Sosnowiec, Poland, 2016.
14. Lectures during Development Academy Workshop organized by Polish Union of Steel Distributors PUDS, Katowice, Poland, 2017.
15. Lecture given during "Explosion of Ideas" Workshop organized by Explomet Company, Dobrodzien, Poland, 2017.
16. Invited lecture at Polish Forging Association Semminar, Świdnik, Poland, 2017.
17. Invited lecture at the Los Alamos National Laboratory, Los Alamos, USA, 2017.
18. Lectures/workshops given at Centrostal Handel Company, Torun, Poland, 2019.
19. Invited lecture for a seminar at the Center for Materials and Nanotechnology ACMIN, Krakow, Poland, 2021.
20. Invited lecture at the AGSH Academic-Industrial Association for Metallurgy meeting, Zakopane, Poland, 2023.
21. Invited lecture given at the Polish Defence Industry Capital Group, Warsaw, Poland, 2023.
22. Invited lecture given at the National Centre for Nuclear Research, Otwock, Poland, 2023.

Plenary and keynote lectures

1. Plenary Lecture: Multiscale analysis of the effects of strain path change and its role in designing microstructure and properties of metallic systems, Plastmet 2016, 22-25 Nov 2016, Lancut, Poland.
2. Plenary Lecture: The role of recovery and strengthening phenomena in controlling the level of microstructure inhomogeneity as a way to create special properties of modern engineering Fe-based materials - a practical approach, Plastmet 2023, 7-10 Nov 2023, Lancut, Poland.

Educational activities

Supervisor of defended Ph.D. theses

1. Paulina Lisiecka-Graca, Influence of deformation history on the strengthening mechanisms of multiphase and second-phase strengthened materials (in polish), Feb 2019. Defended with distinctions.

Supervisor of current Ph.D. theses

1. Kamil Cichocki
2. Monika Banasiak

Supervision of defended Master's theses

- 23 students

Supervision of defended Bachelor's theses

- 15 students

Lectures and Seminars at the university courses:

1. Interface Effects for Deformation Processes
2. Metal Forming Science and Technology
3. Thermomechanical processing
4. Mechanical Metallurgy
5. Metal Forming Products
6. Mechanical Response of Engineering Materials
7. Advanced Materials Processing
8. Desing of Pilot Lines and Technologies – Metal Forming
9. Process Limits in Metal Forming

Scientific opinions, evaluations and reviews

- Reviewer during the **D.Sc. procedures**:
  1. Konrad Laber, Nowe aspekty wytwarzania walcówki ze stali do spęczania na zimno (in polish).

- Reviewer during the **Ph.D. procedures**:
  1. Marcin Marciniak, Badanie odporności na zjawisko zmęczenia cieplnego stali narzędziowej do pracy na gorąco, Wroclaw University of Technology, Wrocław, Poland, 2020 (in polish).
  2. Szymon Szkudelski, Wytwarzanie struktury ultradrobnoziarnistej z wykorzystaniem koncepcji metody wyciskania bocznego wspomaganego tarciem, Wroclaw University of Technology, Wrocław, Poland, 2020 (in polish).
  3. Sarah Smithe, Development of the ConformTM process for the recycling of waste titanium into wire, The University of Sheffield, UK, 2020.
  4. Katarzyna Kubik, Kształtowanie właściwości funkcjonalnych walcowanych kompozytów warstwowych AlMg-Al-Cu Czestochowa University of Technology, Czestochowa, Poland, 2023 (in polish).
  5. Cameron Barrie, Field-Assisted Sintering Technology Processing Route of Metal-Metal Composites, The University of Sheffield, UK, 2023.

Organizational and popularizing activities

Functions held at the AGH University

2020 –	**Head of the Department of Metal Forming and Metallurgical Engineering at the Faculty of Metals Engineering and Industrial Computer Science**
2020 –	**Head of the Thermomechanical Processing Research Group at the Faculty of Metals Engineering and Industrial Computer Science**
2019 –	Member of the Faculty body related to Ph.D. defense
2016 –	Member of the Faculty Board of Metals Engineering and Industrial Computer Science
2016 –	Member of the Faculty body related to B.Sc/M.Sc defense (Metallurgy)
2016 –	Member of the Faculty body related to education quality
2016 –	Member of the Faculty body related to B.Sc/M.Sc defense (Materials Science)

Participation in evaluating teams

1. Reviewer: National Science Center, Poland (2019)
2. Reviewer: National Center for Reserach & Development, Poland (2019 – 2022)
3. Reviewer: Technology Agency STW, Ultrecht, Netherlands (2015)

Membership in Editorial Boards

1. Metallurgical and Material Transactions A – Key Reader (2012-2018)
2. Lightweight Materials and Manufacture – member of Editorial Board
3. Metals – member of Board of Reviewers

Reviewer activity for scientific journals

1. Archives of Civil and Mechanical Engineering,
2. Archives of Metallurgy and Materials,
3. Computer Methods in Metallurgy and Materials Science,
4. International Journal of Lightweight Materials and Manufacture,
5. Journal of Materials and Processing Technology,
6. Journal of Materials Engineering and Performance,
7. Journal of Materials Science,
8. Materials,
9. Materials Characterization,
10. Materials Letters,
11. Materials Research,
12. Metals,
13. Materials Science and Engineering A,
14. Philosophical Magazine,
15. Steel Research International,
16. Vacuum.

A total of 102 reviews has been performed. Reviews for conference proceedings have not been included in the presented data.

Member of conference scientific committees

1. Chairman of the Organization Committee of the Metal Forming 2016 Conference, Kraków, Poland.
2. Member of Scientific Committee of the Metal Forming 2018, Toyohashi, Japan.
3. Chairman of the Organization Committee of the Metal Forming 2020, Krakow, Poland.

4. Member of Scientific Advisory Board of The 4th International Ingot Casting Rolling Forging ICRF 2022, Pittsburgh, USA.
5. Member of Scientific Committee of the Metal Forming 2022, Taiyuan, China.
6. Member of the Scientific Committee of 2023 Lightweight Materials and Manufacture Conference, Shenzhen, China
7. Chairman of the Organization Committee of the Metal Forming 2024, Krakow, Poland.

Co-organization of thematic sessions at renowned international conferences

1. Organization of the session "Multi scale modeling of microstructure deformation in material processing" at the international conference MS&T 2015, Columbus, USA.
2. Organization of the session "Multi scale modeling of microstructure deformation in material processing" at the international conference MS&T 2016, Salt Lake City, USA.
3. Organization of the session "Multi scale modeling of microstructure deformation in material processing" at the international conference MS&T 2017, Pittsburgh, USA.
4. Organization of the session "Multi scale modeling of microstructure deformation in material processing" at the international conference MS&T 2018, Columbus, USA.
5. Organization of the session "Through scale numerical modeling of mechanical behavior and response of ultrafine-grained (UFG), nanostructured (NS) and nanocrystalline (NC) materials" at the international conference WCCM 2018, New York, USA.
6. Organization of the session "Multi scale modeling of microstructure deformation in material processing" at the international conference MS&T 2019, Portland, USA.
7. Organization of the session "Multi scale modeling of microstructure deformation in material processing" at the international conference MS&T 2020, Pittsburgh, USA.
8. Organization of the session "Multi scale modeling of microstructure deformation in material processing" at the international conference MS&T 2021, Columbus, USA.
9. Organization of the session "Multi scale modeling of microstructure deformation in material processing" at the international conference MS&T 2022, Pittsburgh, USA.
10. Organization of the session "Multi scale modeling of microstructure deformation in material processing" at the international conference MS&T 2023, Columbus, USA.

Participation in the scientific organizations and associations

1. Since 2007 – Member of the AIST (Association for Iron and Steel Technology), USA.
2. Since 2007 – Member of TMS (The Minerals, Metals and Materials Society), USA.
3. 2012–2020 – Associate member of the Committee for the Metalforming Processes Division of Polish Academy of Science.
4. Since 2017 – Member of the ESAFORM (Scientific Association for Materials Forming).
5. Since 2019 – Member of the Polish Materials Science Society.

Kraków, November 2023 Krzysztof Muszka