

CURRICULUM VITAE

Associate Professor Michael Regev

February 2020

Work Address: ORT Braude College, Dept. of Mechanical Engineering
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Date of Birth: August 23, 1964

Place of Birth: Haifa, Israel

Marital Status: Married, 3 children

ACADEMIC DEGREES:

- 1998 Ph.D., Materials Engineering, Technion - Israel Institute of Technology, Haifa, Israel
"The Influence of the Microstructure on the Creep Properties of AZ91D Magnesium Alloy" under the supervision of Prof. A. Rosen and Assoc. Prof. M. Bamberger
- 1994 M.Sc., Materials Engineering, Technion - Israel Institute of Technology, Haifa, Israel
"The Influence of Thermal Processes on the Properties of T22 Steel to T91 Steel Weldments" under the supervision of Prof. B.Z. Weiss and Dr. S. Berger
- 1989 B.Sc., Mechanical Engineering, Technion - Israel Institute of Technology, Haifa, Israel. Cum Laude

ACADEMIC POSITIONS:

- 2015-present ORT Braude College, Karmiel, Israel
Head, Mechanical Engineering M.Sc. Program
- 2013-present ORT Braude College, Karmiel, Israel
Associate Professor, Mechanical Engineering Department
- 2006-present The Israel Institute of Metals, Technion
Consultant
- 3.2016–8.2016 Researcher, sabbatical at The Israel Institute of Metals, Technion
- 2011-2015 ORT Braude College, Karmiel, Israel
Head, Mechanical Engineering Department

- 2009-2013 ORT Braude College, Karmiel, Israel
Senior Lecturer, Mechanical Engineering Department
- 2005-2009 ORT Braude College, Karmiel, Israel
Lecturer, Mechanical Engineering Department
- 2000-2001 Tel-Aviv Academic College of Engineering, Tel-Aviv, Israel
Adjunct Lecturer
- 1998-2001 The Israel Institute of Metals, Technion - Israel Institute of Technology, Haifa, Israel
Senior Researcher, Metallurgical Laboratory
- 1995-1998 Technion - Israel Institute of Technology, Haifa, Israel
Teaching Assistant in the Faculty of Materials Engineering

PROFESSIONAL EXPERIENCE:

- 2002-2005 RAFAEL Ltd., Haifa, Israel.
Welding Group Leader, areas of specialization: TIG, MIG, EBW, PAW welding processes, robot welding
- 2001-2002 Intel Israel Ltd., Haifa, Israel.
Failure Analysis Team Leader, areas of specialization: failure analysis of electronic chips
- 1989-1995 Israeli Electric Company (IEC), Haifa, Israel.
Mechanical Engineer, areas of specialization: steam boilers, steam pipeline, welding

TEACHING EXPERIENCE:

- 2018-present Technion International
Manufacturing Processes (in English)
- 2005-present Ort Braude College of Engineering
Materials Engineering, Introduction to Manufacturing Processes, Advanced Materials Engineering, Strength and Materials Lab
Plastic Deformation Theory (M.Sc. Program)
- 2000-2004 IDF (reserve duty)
Basic Principles of Strength and Materials Engineering
- 2000-2001 Tel-Aviv Academic College of Engineering
Materials and Manufacturing Technologies

- 1999 The Israel Institute of Metals
Introduction to Materials Engineering (for Israel Military Industries engineers)
- 1995-1998 Technion
Teaching Assistant in:
Materials Selection, Thermal Treatments of Metals
Laboratory Instructor in:
Students' Lab, Advanced Materials Engineering Lab,
Experiment developing for Advanced Materials Engineering Lab

ACADEMIC AND PROFESSIONAL AWARDS AND GRANTS:

Funded Research Projects:

"Interrupted Creep of Magnesium Alloys", The Israel Institute of Metals and Prof. A. Rosen, January 1999 – February 2001, approx. \$30,000

"Development of Gold Alloys", The Israel Institute of Metals, January 2000 – February 2001, approx. \$100,000

"Friction Stir Welding", RAFAEL Ltd., January 2003 - December 2003, approx. \$35,000

"Development of a New Dental Bur", Ministry of Economy and Industry, November 2007 – October 2009, approx. \$150000

"Development of a New Thermo-Mechanical Process for Medium Carbon Steels", Ministry of Economy and Industry, June 2017 – December 2017, approx. \$15700

Internal funding by OBC over the years 2010 – 2018 for various research projects in the fields of friction stir welding and friction stir processing, approx. \$25000

Honors and Awards:

- 2001 Listed in "Who's Who in Science and Engineering"
- 2001 Listed in "Who's Who in the World"
- 1998 The Miriam and Aaron Gutwirth Special Distinction Fellowship Award
- 1996 "GRANJON" Award of the International Welding Institute – IIW
- 1989 Bachelor of Science Cum Laude

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:

ASME, member since January 2007

REVIEWER FOR:

1. Journal of Materials Science
2. Physica Status Solidi
3. Materials Science and Engineering
4. Journal of Materials Engineering and Performance
5. Materials and Design
6. Micromachines
7. Journal of Non-Crystalline Solids
8. Coatings
9. Wear
10. Metals
11. Materials
12. Journal of Alloys and Compounds

EDITORSHIP:

1. Materials – special issue on High Entropy Alloys (Guest Editor)
2. Metals – special issue on Amorphous Alloys (Guest Editor)

LIST OF PUBLICATIONS

Theses:

- Ph.D. "The Influence of the Microstructure on the Creep Properties of AZ91D Magnesium Alloy"
Research conducted under the supervision of Professor A. Rosen and Associate Professor Menachem Bamberger.
- M.Sc. "The Influence of Thermal Processes on the Properties of T22 Steel to T91 Steel Weldments"
Research conducted under the supervision of Professor B.Z. Weiss and Dr. Shlomo Berger.

Refereed Journal Papers:

1. M. Regev, S. Berger and B. Z. Weiss: "Investigation of Microstructure, Mechanical and Creep Properties of Weldments between T91 and T22 Steels", Welding Journal (Research Supplement), Volume 75, Number 8, pp. 261s - 268s (1996)
2. M. Regev, E. Aghion and A. Rosen: "Creep Studies of AZ91D Pressure Die Casting", Materials Science and Engineering A, Vol. A234-236, pp. 123-126 (1997)

3. M. Regev, E. Aghion, M. Bamberger and A. Rosen: "Creep Studies of Coarse Grained AZ91D Magnesium Alloy", *Materials Science and Engineering A*, Vol. A252, pp. 6-16 (1998)
4. M. Regev, E. Aghion, M. Bamberger S. Berger and A. Rosen: "Dislocation Analysis of Crept AZ91D Ingot Casting" , *Materials Science and Engineering A*, Vol. A257, pp. 349-352 (1998)
5. M. Regev, O. Botstein, M. Bamberger and A. Rosen: "Continuous vs. Interrupted Creep in AZ91D Magnesium Alloy", *Materials Science and Engineering A*, Vol. A302/1, pp. 51-55 (2001)
6. M. Regev, A. Rosen and M. Bamberger: "Qualitative Model for Creep of AZ91D Magnesium Alloy", *Metallurgical and Materials Transactions A*, Vol. 32A, pp. 1335-1345 (2001)
7. S. Spigarelli, M. Regev, E. Evangelista and A. Rosen: "A Review of the Creep Behavior of AZ91 Mg Alloy Produced by Different Technologies", *Materials Science and Technology*, Vol. 17, pp. 627-638 (2001)
8. M. Regev, H. Rosenson and Z. Koren: "Microstructure Study of Particle Reinforced AZ91D and AM50 Magnesium Alloys Semisolid Casting", *Materials Science and Technology*, Vol. 23, pp. 1485-1491 (2007)
9. U. Ben-Hanan, H. Judes and M. Regev: "Comparative Study of Three Different Types of Dental Diamond Burs", *Tribology - Materials, Surfaces & Interfaces*, Vol. 2, pp. 77-83 (2008)
10. A. Katz-Demyanetz, H. Rosenson, Z. Koren and M. Regev: "Bulk Metallic Glass Formation in the $Mg_{80}Cu_{15}Y_5$ System", *Materials Science and Technology*, Vol. 25, pp. 1227-1233 (2009)
11. M. Regev, H. Judes and U. Ben-Hanan: "Wear Mechanisms of Diamond Coated Dental Burs", *Tribology - Materials, Surfaces & Interfaces*, Vol. 4, pp. 38-42 (2010)
12. M. Regev, H. Rosenson, Z. Koren and A. Katz-Demyanetz: "The Influence of the Cooling Rate on Bulk Metallic Glass Formation in $Mg_{80}Cu_{15}Y_5$ and $Mg_{80}Cu_{10}Y_{10}$ ", *Journal of Materials Science*, Vol. 45, pp. 6365-6373 (2010)
13. S. Spigarelli, M. El Mehtedi and M. Regev: "Enhanced Plasticity and Creep in an Extruded ZK60 Alloy", *Scripta Materialia*, Vol. 63, pp. 617-620 (2010)
14. M. Cabibbo, P. Ricci and M. Regev: "Nanoindentation Applied to an Optimized FSW-AZ31 Butt Joint", *Kovove Materialy - Metallic Materials*, Vol. 49, pp. 233-242 (2011)
15. A. Katz-Demyanetz, H. Rosenson, Z. Koren and M. Regev: "Thermal Stability and DSC Studies of Melt-spun $Mg_{80}Cu_{15}Y_5$ and $Mg_{80}Cu_{10}Y_{10}$ ", *Journal of Materials Science and Engineering A* (formerly part of *Journal of Materials Science and Engineering*), Vol. 1 pp. 168-173 (2011)
16. S. Spigarelli, M. El Mehtedi and M. Regev: "Effect of Grain Size on High Temperature Deformation of AZ31 alloy", *Materials Science and Engineering A*, Vol. 528, pp. 6919-6926 (2011)
17. S. Spigarelli, M. Regev, M. El Mehtedi, G. Quercetti and M. Cabibbo: "Analysis of the Effect of Friction Stir Welding on the Minimum Creep Rate of a Mg-3%Al-1%Zn Alloy", *Scripta Materialia*, Vol. 65, pp. 626-629 (2011)
18. S. Spigarelli, M. El Mehtedi, M. Regev and E. Gariboldi: "High Temperature Creep and Superplasticity in a Mg-Zn-Zr Alloy", *Journal of Materials Science and Technology*, Vol. 28, pp. 407-413 (2012)

19. U. Ben-Hanan, M. Regev and H. Judes: "Temperature Measurements During Dental Cutting Using an Internally Cooled Diamond Dental Bur", *Journal of Materials Science and Engineering B* Vol. 2, pp. 551-559 (2012)
20. M. Regev and S. Spigarelli: "Plastic Deformation Mechanisms of Base Material and Friction Stir Welded AZ31B-H24 Magnesium Alloy", *Materials Sciences and Applications*, Vol. 4, pp. 357-364 (2013)
21. M. Regev, M. El Mehtedi, M. Cabibbo, G. Quercetti, D. Ciccarelli and S. Spigarelli: "High Temperature Plasticity of Bimetallic Magnesium and Aluminum Friction Stir Welded Joints", *Metallurgical and Materials Transactions A*, Vol. 45A, pp. 752-764 (2014)
22. M. Regev, S. Spigarelli and M. Cabibbo: "Microstructure Stability During Creep of Friction Stir Welded AZ31B Magnesium Alloy", *ASME Journal of Manufacturing Science and Engineering*, Vol. 137, pp. 051021-1 – 051021-8 (2015)
23. M. Regev, S. Essel and A. Katz-Demyanetz: "Microstructure Characterization of Melt Spun Mg₆₅Cu₂₅Y₁₀", *Kovove Materialy - Metallic Materials*, Vol. 55, pp. 1-5 (2017)
24. N. Larianovsky, A. Katz-Demyanetz, E. Eshed and M. Regev: "Microstructure, Tensile and Creep Properties of Ta₂₀Nb₂₀Hf₂₀Zr₂₀Ti₂₀ High Entropy Alloy", *Materials*, Vol. 10, pp. 883-1 – 883-12 (2017)
25. M. Regev, T. Rashkovsky, M. Cabibbo and S. Spigarelli: "Microstructure Stability During Creep of Friction Stir Welded AA2024-T3 Alloy", *Journal of Materials Engineering and Performance*, Vol. 27, pp. 5054-5063 (2018)
26. C. Paoletti, M. Regev and S. Spigarelli: "Modelling of Creep in Alloys Strengthened by Rod-Shaped Particles: Al-Cu-Mg Age-Hardenable Alloys", *Metals*, Vol. 8, pp. 930-1 – 930-18 (2018)
27. M. Regev and S. Spigarelli: "Study of Mechanical, Microstructural and Thermal Stability Properties of Friction Stir Processed Aluminum 2024-T3 Alloy", *Kovove Materialy - Metallic Materials*, Vol. 57, pp. 229-236 (2019)
28. E. Santecchia, M. Cabibbo, M. Ghat, M. Regev and S. Spigarelli: "Physical Modeling of the Creep Response of an Al-Cu-Mg Alloy With a Fine Microstructure Transformed by Friction Stir Processing", *Materials Science and Engineering A*, Vol. 796, article 138521 (2020)
29. M. Regev and S. Spigarelli: "Microstructure, Thermal Stability During Creep and Fractography Study of Friction Stir Processed AA2024-T3 Aluminum Alloy", accepted for publication in the *Journal of Materials Engineering and Performance* (2020)

Refereed Conference Proceedings:

1. M. Regev, E. Aghion, M. Bamberger and A. Rosen: "Creep Studies of AZ91D Castings", *Proceedings of DGM International Conference on Magnesium Alloys and Their Applications*, pp. 283 - 288 (1998)
2. M. Regev, A. Rosen and M. Bamberger: "Structural Stability and Creep Properties of AZ91", *Proceedings of the 1999 Annual Meeting*, San Diego, California, pp. 163 – 170 (1999)
3. M. Regev, D. Kalinka and S. Spigarelli: "Deformation Mechanisms Operating During Creep of Friction Stir Welded AZ31B Magnesium Alloy", *Conference Proceedings of the 9th International Conference on Magnesium Alloys and Their Applications*, Vancouver, Canada, ISBN number 978-0-615-67510-7, pp. 923-928(2012)

4. M. Regev and S. Spigarelli: "Plastic Deformation Mechanisms Operating in Parent Metal and Friction Stir Welded AZ31B Magnesium Alloy", Conference Proceedings of the 7th Asia Pacific IIW International Conference, Singapore, pp. 523-527 (2013)
5. M. Regev and S. Spigarelli: "Microstructure Stability During Creep of Friction Stir Welded AZ31B-H24 Magnesium Alloy and AA2024-T3 Aluminum Alloy", Proceedings of IIW 2017 International Conference, Shanghai, P.R. China, pp. F13-F20 (2017)
6. M. Regev and S. Spigarelli: "Microstructural Processes Occurring During Creep of Friction Stir Welded AA2024-T3 Alloy", Proceedings of IIW 2019 International Conference, Bratislava, Slovakia, paper 000031 (2019)

Other Conference Proceedings:

1. A. Finkel, M. Regev, E. Aghion, M. Bamberger and A. Rosen: "Aging Studies of AZ91D Casts", Proceedings of The First Israeli International Conference on Magnesium Science & Technology, Dead Sea, Israel, pp.121-126 (1997)
2. S. Spigarelli, M. Cabibbo, E. Evangelista, M. Regev and A. Rosen: "Process and Microstructural Effects on the Creep Properties of the AZ91 Magnesium Alloy", Proceedings of the Second Israeli International Conference on Magnesium Science and Technology, Dead Sea, Israel, pp. 293-300 (2000)
3. M. Regev, O. Botstein and A. Rosen: "The Influence of the Microstructure on the Creep Properties of AZ91D Magnesium Alloy – Continuous vs. Interrupted Creep", Proceedings of the Second Israeli International Conference on Magnesium Science and Technology, Dead Sea, Israel, pp. 301-307 (2000)

Other Publications:

1. M. Regev: "Fire-side Corrosion in Coal Fired Steam Boilers of Power Plants", Mechonot, Nov. 1992, pp. 5-7 (in Hebrew)
2. M. Regev: "Creep Mechanisms in Steam Boiler Tubes Made of T22 Steel", Mechonot, Mar. 1994, pp. 28-30 (in Hebrew)
3. M. Regev and O. Botstein: "Scanning Electron Microscopy and its Applications for Researchers and Engineers", Mechonot, Jun. 1999, pp. 8-12 (in Hebrew)

Technical Reports:

1. "Friction Stir Welding – Review", submitted to RAFAEL – Report No. 2004/M2/001, February 2004 (in Hebrew)
2. "Development of Nano/Sub-micron Particle Reinforced Light Alloys", submitted to the Israel Institute of Metals, October 2006 (in Hebrew)
3. M. Regev, U. Ben-Hanan: "Comparative Examination of Three Different Types of Dental Burs", submitted to Strauss & Co., November 2006 (in Hebrew)
4. "Development of Nano/Sub-micron Particle Reinforced Light Alloys", submitted to the Israel Institute of Metals, December 2006 (in Hebrew)
5. U. Ben-Hanan, M. Regev: "Grinding Zirconia – Comparative Study of Three Different Types of Dental Burs", submitted to Strauss & Co., November 2009 (in Hebrew)

Conference Presentations:

1. May 30, 1996 - The 30th Annual Meeting of the Israel Society for Microscopy, Haifa, Israel
2. October 22, 1996 - The National Welding Conference, Shfaim, Israel
3. April 16-17, 1997 - The Eighth Israel Materials Engineering Conference – IMEC VIII, Beer-Sheva, Israel
4. August 25-29, 1997 - Eleventh International Conference on the Strength of Materials - ICSMA-11, Prague, Czech Republic
5. November 10-12, 1997 - The First Israeli International Conference on Magnesium Science & Technology, Dead Sea, Israel
6. April 28-30, 1998 - Magnesium Alloys and Their Applications Conference, Wolfsburg, Germany
7. December 6-7, 1999 - The Ninth Israel Materials Engineering Conference – IMEC IX, Haifa, Israel
8. February 22-24, 2000 - The Second Israeli International Conference on Magnesium Science & Technology, Dead Sea, Israel
9. May 10-11, 2006 – The 7th Israeli Conference on Corrosion and Electrochemistry, Bar-Ilan University, Ramat-Gan, Israel
10. July 11-12, 2006 - The 2nd Ort Braude College Interdisciplinary Research Conference, Ma'alot, Israel
11. September 10-11, 2007 – EUROMAT 2007, Nürnberg, Germany
12. October 8-9, 2007 - The 3rd Ort Braude College Interdisciplinary Research Conference, Hagoshrim, Israel
13. December 9-10, 2007 – The 13th Israel Materials Engineering Conference – IMEC 13, Haifa, Israel
14. October 22-23, 2008 - The 4th Ort Braude College Interdisciplinary Research Conference, Nazareth Ilit, Israel
15. September 7-10, 2009 – EUROMAT 2009, Glasgow, UK
16. October 14-15, 2009 - The 5th Ort Braude College Interdisciplinary Research Conference, Nahariya, Israel
17. December 13-14, 2009 - The 14th Israel Materials Engineering Conference – IMEC14, Tel-Aviv, Israel (presented by Dr. A Katz)
18. April 21-23, 2010 – IWNCS 2010, Barcelona, Spain
19. October 13-14, 2010 - The 6th Ort Braude College Interdisciplinary Research Conference, Haifa, Israel
20. January 26-28, 2011 – CIRP winter meeting, Paris, France (presented by Dr. U. Ben-Hanan)
21. September 19-20, 2011 - The 7th Ort Braude College Interdisciplinary Research Conference, Kfar-Blum, Israel
22. January 25-27, 2012 - CIRP winter meeting, Paris, France (presented by Dr. R. Wertheim)
23. July 8-12, 2012 – 9th International Conference on Magnesium Alloys and their

Applications, Vancouver, BC, Canada

24. October 17-18, 2012 - The 8th Ort Braude College Interdisciplinary Research Conference, Acre, Israel
25. July 8-10, 2013 – The 7th Asia Pacific IIW International Conference, Singapore
26. October 2-3, 2013 - The 9th Ort Braude College Interdisciplinary Research Conference, Hagoshrim, Israel
27. December 2-6, 2013 – THERMEC 2013, Las Vegas, USA (invited talk)
28. May 20-22, 2014 – 10th FSW Symposium, Beijing, China
29. October 19-20, 2014 - The 10th Ort Braude College Interdisciplinary Research Conference, Nahariya, Israel
30. March 22-25, 2015 - BIT's 1st Annual World Congress of Smart Materials, Busan, Republic of Korea (including chairmanship)
31. October 7-8, 2015 - The 11th Ort Braude College Interdisciplinary Research Conference, Hagoshrim, Israel
32. May 29-June 3, 2016 - THERMEC 2016, Graz, Austria (invited talk)
33. September 28-29, 2016 - The 12th Ort Braude College Interdisciplinary Research Conference, Hagoshrim, Israel
34. June 29-30, 2017 – IIW 2017, Shanghai, P.R. China
35. September 17-21, 2017 – EUROMAT 2017, Thessaloniki, Greece (keynote lecture)
36. October 25-26, 2017 - The 13th Ort Braude College Interdisciplinary Research Conference, Nahsholim Seaside Resort, Israel
37. July 8-13, 2018 - THERMEC 2018, Paris, France (invited talk)
38. October 17-18, 2018 - The 14th Ort Braude College Interdisciplinary Research Conference, Kfar-Blum, Israel
39. July 11-12, 2019 – IIW 2019, Bratislava, Slovakia (including chairmanship)
40. September 1-5, 2019 – EUROMAT 2019, Stockholm, Sweden
41. October 23-24, 2019 - The 15th Ort Braude College Interdisciplinary Research Conference, Kfar-Blum, Israel