

**DANIEL RITTEL**

**CURRICULUM VITAE**

(updated July 2017)

**PERSONAL**

Name: Daniel Rittel

Address: Faculty of Mechanical Engineering  
Technion, Israel Institute of Technology  
32000 Haifa, Israel

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Date & place of birth: September 29, 1956. Paris, France  
Immigration: August 1974

**ACADEMIC DEGREES**

1983-1988 Ph.D., Materials Science.  
The Hebrew University of Jerusalem, The Graduate School of Applied Science and Technology.

1981-1983 M.Sc., Materials Science (with distinction).  
The Hebrew University of Jerusalem, The Graduate School of Applied Science and Technology.

1975-1979 B.Sc., Materials Engineering (Specialization in Nuclear Engineering).  
Ben-Gurion University of the Negev, Beer-Sheva, Materials and Nuclear Engineering Departments.

**ACADEMIC APPOINTMENTS**

Honorary Prof. University Carlos III, Dept. of Continuum Mechanics and Structures, Madrid, Spain. 2013-present.

Chair Catedra de Excelencia. University Carlos III, Dept. of Continuum Mechanics and Structures, Madrid, Spain. Sept 2011-2012.

Chair The Zandman Chair in Experimental Mechanics. April 2009, Technion.

Chair Clark B. Millikan Visiting Professor in Aeronautics (08/ 2006 - 08/2007).

## **DANIEL RITTEL**

California Institute of Technology, Graduate Aeronautical Laboratories, Pasadena, CA.

Professor April 2006, Faculty of Mechanical Engineering, Technion, Israel Institute of Technology.

Associate Professor December 2000, Faculty of Mechanical Engineering, Technion, Israel Institute of Technology.

Senior Lecturer March 1997, Faculty of Mechanical Engineering, Technion, Israel Institute of Technology.

Lecturer February 1994, Faculty of Mechanical Engineering, Technion, Israel Institute of Technology.

1991-1994 Research Scientist  
Ecole Polytechnique, Solid Mechanics Division  
Palaiseau, France.

1989-1990 Postdoctoral Associate  
Yale University, Dept. of Mechanical Engineering.  
New Haven, CT, USA.

1983-1988 Lecturer  
Betzael Academy of Arts, Jerusalem.

## **PROFESSIONAL EXPERIENCE**

1986-1988 Associate Director.  
RADIANT Engineering and Technology Ltd.  
Failure analysis and Materials Engineering.

1981-1988 Materials Engineer  
The Hebrew University of Jerusalem, Graduate School of Applied Science and Technology.  
*Specializing in metallurgical, mechanical testing and analysis of engineering materials. Failure analyst.*

1978-1979 Research Assistant  
Ben-Gurion University, Materials Engineering Department.  
*Specializing in the study of anomalous diffusion in V-Co alloys by means of radioactive tracers.*

## **SPECIAL LECTURES**

February 2017 **Invited special lectures series**  
**Innsbruck University**, Civil Engineering Dept.

## DANIEL RITTEL

Invited series of 5 lectures on *failure of materials*.

- July 2015      **Invited special lectures series**  
**Beijing Institute of Technology**, Materials Engineering Dept.  
Invited series of 5 lectures and 2 special seminars (21 hours), on *(dynamic) failure of materials*.
- July 2012      **Summer School**  
**CISM, Udine**, Italy, Constitutive relations of materials under impact loadings: Experimental, theoretical and numerical aspects.  
*Invited series of 3 lectures (5 hours), on dynamic failure of materials.*
- March 2007      **Invited special lectures series**  
**University of Tokyo**, Dept. of Earth and Planetary Science. Center of Excellence for Earth Science  
*Invited series of 2 lectures (4 hours), on the dynamic failure of materials.*
- March 2005      **Invited special lectures series**  
**University of Tokyo**, Dept. of Earth and Planetary Science.  
Invited series of 5 lectures (22 hours), including laboratory practice, on *"Material failure: models and experiments"*

## EDITORIAL ACTIVITIES

- July 2015      **Editorial Board**, Explosion and Shock Waves (Chinese).  
May 2015-May 2018      **Editorial Board**, Strain  
September 2014      **Editorial Advisory Board**, Int. J. of Impact Eng.  
August 2008      **Associate Editor**, Mechanics of Materials.  
May 2007-June 2014      **Editorial Advisory Board**, The Open Mechanics Journal.  
March 2007      **Editorial Board Member**, Int. J. of Eng. Science.  
July 2005-Dec. 2014      **Associate Technical Editor**, Experimental Mechanics.

## APPOINTMENTS AS VISITING SCIENTIST

- Feb. 2017      AIANI Fellow, University of Innsbruck
- Sept 2011-2012      Catedra de Excellencia, University Carlos III Madrid, Dept. of Continuum Mechanics and Structures.
- 08/2001-present      Visiting Associate, California Institute of Technology  
Graduate Aeronautical Laboratories  
Pasadena, CA
- 08/2006-08/2007      Clark B. Millikan Visiting Professor in Aeronautics  
California Institute of Technology  
Graduate Aeronautical Laboratories  
Pasadena, CA
- 09/2000-02/2001      Maître de Recherches

## **DANIEL RITTEL**

Ecole des Mines de Paris  
Centre des Matériaux, PM Fourt, France.

03/2000-08/ 2000 Visiting Professor, California Institute of Technology  
Graduate Aeronautical Laboratories, Pasadena, CA

### **RESEARCH INTERESTS**

*Mechanics and Materials.* Fracture mechanics (static and dynamic, damage). Numerical (FEM) modelling of material / structural behavior. Thermomechanical couplings. Mechanical metallurgy. Failure analysis of materials/mechanical systems. Soft matter.

*Geophysics.* Mechanical and failure properties of volcanic magma at high ejection rates.

*Biomechanics* and failure of dental implants.

### **TEACHING EXPERIENCE**

Technion *Undergraduate:*  
Statics; Laboratory on Mechanics and Control (M4); Theory of the Strength of Materials; Special Project in Mechanical Engineering, Failure of Materials, Fracture Mechanics.

*Graduate:*  
Mechanical Properties of Engineering Materials, Seminar Work in Mechanical Engineering (M.E.), Stress waves in Solids, Fracture Mechanics.

Caltech Failure of Materials (AE225, 2000), Dynamic Behavior of Materials (AE215, 2006), Mechanics and Materials Aspects of Fracture (AE213, 2006), Plasticity (AE223, 2006)

Betzalel Metallurgy for Jewelers, 1983-1988.

### **MEMBERSHIP IN SCIENTIFIC AND PROFESSIONAL SOCIETIES**

Corresponding Member (Israel) of DYMAT  
Member of the The Materials Society, TMS.  
Fellow of the American Society of Mechanical Engineers, ASME.  
Fellow of the Society for Experimental Mechanics, SEM.  
Member of the European Society for Mechanics, EUROMECH  
Member of the Israel Society for Theoretical and Applied Mechanics, ISTAM  
Member of the European Society for Structural Integrity, ESIS

### **ADMINISTRATIVE POSITIONS**

December 2012 - 2014 Member of the Standing Committee for evaluation of Research Staff, TRDF.

April 2011-2017 Deputy Senior Vice President, Technion

## DANIEL RITTEL

March 2009- 2012	Member of the Standing Committee for non-tenured Faculty
December 2008-2012	Member of the Research Committee, Technion
September 2008 – present	Member of the Scientific Committee, Fondation France Israel.
January 2008-2009	Senate member, Technion.
August 2007-present	Member of the Academic Council, Jerusalem College of Engineering
April 2004-present	Head, Materials Mechanics Center, Technion
Dec. 2003-Dec 2006	Member, Interdepartmental Committee for Polymer Engineering, Technion
April 2001-July 2006	Head, Danciger Teaching Laboratories, Technion
Sept. 1998-present	Corresponding member of the Conférence des Grandes Ecoles (CGE-ARIEL, France).
Oct. 1997-March 2000	In charge of the Faculty Seminar, Faculty of Mechanical Engineering, Technion
1995-2004	Head of the “Materials Minor”, Faculty of Mechanical Engineering.

## AWARDS & DISTINCTIONS

2017	<b>Hershel Rich Technion Innovation Award</b> (with Assoc. Prof. N. Drimer)
2017	<b>AIANI Fellow</b> and <b>Guest Professor</b> (2 weeks), University of Innsbruck
2015	<b>Fellow</b> , American Society of Mechanical Engineers (ASME).
2015	<b>Gili Agostinelli Prize</b> (The International Gili Agostinelli Prize for pure or applied mechanics, mathematics applied to the physical, natural and engineering sciences as well as biological and medical sciences). Torino Academy of Sciences.
2013	<b>Honorary Professor</b> , Univ. Carlos III, Madrid, Spain
2013	<b>Cooper Prize</b> for academic excellence.
2012	<b>Fellow</b> , Society of Experimental Mechanics.
2011-2012	<b>Chair of Excellence</b> (6 months), Universidad Carlos III, Madrid, Spain.
2009	<b>Lt. Gen. A. Peled</b> Research Fund for armor related subjects, Technion.
2009	<b>The Zandman Institute Chair</b> in Experimental Mechanics, Technion
2006-2007	<b>Clark B. Millikan Chair</b> in Aeronautics, Caltech, USA.
2005	<b>Lt. Gen. A. Peled</b> Research Fund for armor related subjects, Technion.
2002	<b>A. Goldberg Research Prize</b> , Technion.
1988	<b>Elected</b> to represent Israeli research students at SAMPE European Chapter Conference, Milano, Italy.
1982	<b>Fellowship</b> in the memory of Professor A.S. Tetelman, HUJ.

## GRADUATE STUDENTS and POSTDOCTORAL ASSOCIATES

### Postdoctoral Associates

1. Dr. **Jing Xie** (2016)
2. Dr. **Huseyn G. Aksoy** (2010-2011)
3. Dr. **A. Dorogoy** (2003-2005)

**Ph.D. in progress**

1. **J.C. Nieto Fuentes**, (2016), “Adiabatic shear”, OUTCOME program.
2. **O. Rijensky**, (2013), “A study of wave slamming on composite Al-Polyurea plates”. Direct track.
3. **R. Fadida**, (2016), “Printed materials”. (co-advisor Dr. A. Shirizly)
4. **LH. Zhang**, (2015), “Adiabatic shear”. (co-advisor Prof. S. Osovski)
5. **Y. Rotbaum**, (2015), “Sound attenuation in soft matter”.
6. **K. Shemtov-Yona**, (2014), “Fatigue of dental implants”.

**M.Sc. in progress**

1. **D. Levy**, (2016), “Impact failure of additively printed materials”. (co-advisor Dr. A. Shirizly).
2. **R. Korabi**, (2016), “Modeling the dental implant-bone interaction”. (co-advisor Dr. A. Dorogoy). *Incumbent of Vatat fellowship for Outstanding Minority Graduate Students.*
3. **N. Deloya**, (2014), “Failure of a brittle polymer”. (co-advisor Dr. A. Sides).
4. **D. Blumer**, (2014), “Impact of transparent ceramics with controlled microstructure”.

**Ph.D. completed**

1. **M. Dolinsky**, (2016), “Energy concepts in dynamic failure”. (Direct Ph.D. program).
2. **E. Ben-David**, (2015), “Dynamic plasticity at the nanoscale”, (Principal Advisor Prof. D. Shilo).
3. **Z. Lovinger**, (2014), "Multiple spontaneous shear banding". *Pazi Price for Excellent PhD Research, 2014.*
4. **A. Belenky**, (2013), "Dynamic flexural strength of advanced ceramics and its relation to structural defects".
5. **S. Osovski**, (2013), “Adiabatic shear from a microstructural point of view”. *The Jacobs Excellence Scholarship Award, 2011. Barazani Prize, 2014.*
6. **H. Saguy (Cohen)**, (2008), "Crack identification using ACPD techniques". *The David and Olga Pnueli Prize, 2008.*
7. **Z. Wang**, (2008), "Experimental study of adiabatic shear band formation".
8. **A. Neuberger**, (2006), "Blast protection of structures" (co-advisor until 2004, Prof. A.L. Yarin). *The David and Olga Pnueli Prize, 2007.*

**M.Sc. completed**

1. **S. Cibola**, (2014), “Dynamic tension of brittle polymers”
2. **E. Avriel**, (2013), “Ultra high strain rates by electromagnetic loading”.
3. **G. Shapira**, (2011), "Pressure sensitivity in metals". (Co-advisor Dr. B. Karp).
4. **L. Glikin**, (2015), “Impact properties of confined ceramics and polymers”.
5. **Y. Rotbaum**, (2015), “Dynamic necking of metals”.
6. **R. Fadida**, (2015), “Dynamic mechanical properties of printed porous Ti6Al4V”.

7. **S. Chen**, (2015), "Atomistic simulations", (Principal Advisor Prof. D. Mordehai).
8. **R. Sitton**, (2014), "Measuring loads from contact mechanics concepts".
9. **D. Richler**, (Brakim-2015), "Dynamic mechanical behavior of poroelastic gels".
10. **N. Tomer**, (Brakim-2014), "Scaling dynamic failure". (Co-advisor Dr. E. Kochavi).
11. **N. Barham**, (2014), "Advanced ceramics" (Co-advisor Prof. W.D. Kaplan).
12. **R. Oiknine**, (2013), "Dynamic behavior of Cu-Zn alloys", *Ecole des Mines de Paris*.
13. **H. Kotler (Choukroun)**, (2013), "Dynamic failure of aluminum alloys". (Co-advisor Dr. L. Levin).
14. **D. Sory**, (2013), "Notch sensitivity of AISI 4340 in dynamic tensile testing", TFE, *ECAM (Belgium)*.
15. **K. Shemtov-Yona** (2013), "Fatigue of dental implants", (Co-advisor Prof. E. Machtei).
16. **M. Khokhlov**, (2012), "3D reconstruction and segmentation of fracture surfaces from microscope images using a multi-resolution representation". (Principal advisor Prof. A. Fischer).
17. **U. Stauber**, (Brakim-2013), "Mechanical and failure properties of ULTEM".
18. **I. Ptashnik**, (2012), "Dynamic fragmentation". (Principal advisor Prof.D. Durban).
19. **E. Weisel**, (Brakim-2011), "Mechanical properties of advanced magnesium alloys" (Co-advisor res. Prof. D. Schectman).
20. **M. Dolinsky**, (2008), "Energy concepts in dynamic failure". 2009-admitted for direct PhD program.
21. **M. Mergui**, (2010), "Residual stresses in thin films" (Principal advisor Prof. I. Bucher).
22. **Belenky**, (2010), "Dynamic fracture properties of transparent alumina". Recipient of the Barazani Prize.
23. **M. Shpitzer**, (2009), "Impact resistant ceramic ammunition casing".
24. **E. Ben-David**, (2008), "Dynamic plasticity at the nanoscale", (Principal Advisor Dr. D. Shilo, Co-Advisor Dr. D. Elata).
25. **A. Brill**, (2008), "The influence of hydrostatic pressure on the dynamic failure of PMMA".
26. **A. Regev**, (2008), "Infrared monitoring of dynamic failure in polymers".
27. **D. Samak**, (2006), "Three dimensional reconstruction and visualization of fracture surfaces", (Principal Advisor Prof. A. Fischer).
28. **E. Hanina**, (2006), "The effect of hydrostatic pressure on dynamic shear failure".
29. **I. Zisso**, (2006), "An investigation into the dynamic deformation and fracture of MAR250 steel".
30. **S. Mizrachi**, (2005), "Infrared sensing of transient temperature changes during dynamic deformation of materials".
31. **H. Saguy (Cohen)**, (2001), "Fatigue crack growth in Weldox alloy", (Co-Advisor Prof. M.P. Weiss).
32. **R. Lazarovitch**, (2001), "Crack identification using electrical non-destructive methods", (Co-Advisor Dr. I. Bucher).
33. **G. Weisbrod**, (1999), "Dynamic fracture toughness of heavy tungsten base alloys".

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34. **D. Studny**, (1997), "The application of impact mechanics to destructive disassembly of fasteners", Technion, (Principal Advisor Dr. E. Zussman).
35. **F. Laraba**, (1993) "Comportement à perforation de tubes en acier de transport de fluides", DEA (Masters) Thesis, with Prof. A. Pineau (Principal Advisor, Ecole Nationale Supérieure des Mines de Paris).

### M.E. completed (without thesis)

1. **N. Ish-Shalom**, (2016), "Dynamic behavior of tantalum".
2. **S. Saliba**, (2016), "Random spectrum loading of dental implants".
3. **E. Blumstein**, (2010), "Theory and experimental assessment of digital image correlation"
4. **G. Dvir**, (2009), "Digital image correlation: theory and applications".
5. **A. Zlatkis**, (2009), "Models for behind the armor debris".
6. **O. Shor**, (2006), "A survey of constitutive models for polymers and rubbers".
7. **A. Gersthstein**, (2006), "Comparing estimates of Kc and Kd in sintered carbides using mechanical and microhardness tests".
8. **S. Cohen**, (2002), "Dynamic collapse of metallic tubes", M.E. seminar work.
9. **A. Tanenboim**, (2002), "Micromechanical polymeric devices", M.E. seminar work.
10. **O. Shani**, (2000), "Micromechanical models of fracture", M.E. seminar work.
11. **M. Katriaru**, (1998), "Thermomechanical aspects of monotonic and cyclic deformation in commercial polymethylmethacrylate", M.E. seminar work.
12. **A. Cohen**, (1998), "Experimental investigation of thermomechanical couplings in commercial polycarbonate", M.E. seminar work.
13. **Y. Greif**, (1998), "Non destructive tests", M.E. seminar work work.
14. **S. Lev**, (1998), "Thermal stresses and design of pressure vessels", M.E. seminar work.
15. **R. Bar-Om**, (1997), "Material aspects of jet fragmentation in explosive shaped charges", M.E. seminar work.
16. **N. Strumtza**, (1997), "Characterization of damage and fracture of sintered carbide tools", M.E. seminar work.

### RESEARCH GRANTS

**Total Technion 1995- present: ( rounded) 4.548 M\$**

### PUBLICATIONS

#### Theses

- |              |   |
|--------------|---|
| Ph.D. thesis | <i>Deformation, Fatigue and Fracture of Cast Austenitic Manganese Steels. <u>Advisor</u>: Prof. I. Roman.</i>   |
| M.Sc. thesis | <i>The Influence of Thermal Treatments on the Microstructure and Mechanical Properties of a Sintered Tungsten-Base Heavy Alloy. <u>Advisor</u>: Prof. I. Roman.</i> |
| B.Sc project | <i>Design and realization of a resonant device for internal friction measurements. <u>Advisors</u>: Profs. S.I. Rokhlin and J. Pelleg.</i>                          |



**Published papers**

1. I. Roman and D. Rittel, "Failure analysis of materials systems in aircraft structures", FORUM, *The International Society of Air Safety Investigators*, 16 (2) (1983), 4-8.
2. D. Rittel, I. Roman and M. Bercovier, "A finite element modelling of embrittlement in composite liquid phase sintered heavy alloys", *ASME Transactions, Journal of Engineering Materials and Technology*, 108 (1986), 159-162.
3. D. Rittel and I. Roman, "Ductility and precipitation in sintered tungsten alloys", *Materials Science and Engineering*, 82 (1986), 93-99.
4. D. Rittel and I. Roman, "Plastic dilatancy as a parameter for ductile fracture criterion", *International Journal of Fracture*, 35 (1987), R61-R64.
5. D. Rittel and G. Faingold, "On the application of metallurgical techniques to forensic sciences", *Journal of Forensic Sciences*, 33 (1) (1988), 210-216.
6. D. Rittel and I. Roman, "Tensile fracture of coarse grained cast austenitic manganese steels", *Metallurgical Transactions*, 19A (1988), 2269-2277.
7. D. Rittel and I. Roman, "Cyclic properties of coarse grained cast austenitic manganese steels", *International Journal of Fatigue*, 11 (3) (1989), 177-182.
8. D. Rittel and I. Roman, "Tensile deformation of coarse grained cast austenitic manganese steels", *Materials Science and Engineering*, A110 (1989), 77-87.
9. D. Rittel, "The influence of microstructure on the macroscopic patterns of surface instabilities in metals", *Scripta Metallurgica et Materialia*, 24, (1990), 1759-1764.
10. D. Rittel, R. Aharonov, G. Feigin and I. Roman, "Experimental investigation of surface instabilities in cylindrical tensile metallic specimens", *Acta Metallurgica et Materialia*, 39 No. 4, (1991), 719-724.
11. H.D. Bui, H. Maigre and D. Rittel, "A new approach to the experimental determination of the dynamic stress intensity factor", *International Journal of Solids and Structures*, Vol. 29 No. 23, (1992), 2881-2895.
12. D. Rittel, H. Maigre and H.D. Bui, "A new method for dynamic fracture toughness testing", *Scripta Metallurgica et Materialia*, 26, (1992), 1593-1598.
13. H. Maigre, D. Rittel and H.D. Bui, "Détermination expérimentale de la ténacité dynamique : une nouvelle approche", *Revue du GAMI*, No. 445, (1992), 8-11.

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14. H. Maigre and D. Rittel, "Mixed-mode quantification for dynamic fracture initiation: application to the compact compression specimen", *International Journal of Solids and Structures*, Vol. 30 No. 23, (1993), 3233-3244.
15. H. Maigre and D. Rittel, "Dynamic fracture detection using the force-displacement reciprocity: application to the compact compression specimen", *International Journal of Fracture*, Vol. 73 No. 1, (1995), 67-79.
16. D. Rittel and H. Maigre, "An investigation of dynamic crack initiation in PMMA", *Mechanics of Materials*, Vol. 23 No. 3, (1996), 229-239.
17. D. Rittel and H. Maigre, "A study of mixed-mode dynamic crack initiation in PMMA", *Mechanics Research Communications*, Vol. 23, No. 5, (1996), 475-481.
18. D. Rittel, R. Levin and H. Maigre, "On dynamic crack initiation in polycarbonate under mixed-mode loading", *Mechanics Research Communications*, Vol. 24, No. 1, (1997), 57-64.
19. D. Rittel, R. Levin and H. Maigre, "The influence of mode-mixity on dynamic failure mode transitions in polycarbonate", *J. Physique France 7, Colloque C3*, (1997), 861-866.
20. D. Rittel, "Experimental investigation of transient thermoelastic effects in dynamic fracture", *International Journal of Solids and Structures*. Vol. 35 No. 22, (1998), 2959-2973.
21. D. Rittel, "Transient temperature measurement using embedded thermocouples", *Experimental Mechanics*, Vol. 38 No. 2, (1998), 73-79.
22. D. Rittel and R. Levin, "Mode-mixity and dynamic failure mode transitions in polycarbonate", *Mechanics of Materials*, Vol. 30 No. 3, (1998), 197-216.
23. D. Rittel, "The influence of temperature on dynamic failure mode transitions", (1998), *Mechanics of Materials*, Vol. 30 No. 3, 217-227.
24. D. Rittel, "On the conversion of plastic work to heat during high strain rate deformation of glassy polymers", *Mechanics of Materials*, Vol. 31, No. 2, (1999), 131-139.
25. D. Studny, D. Rittel and E. Zussman, "Impact fracture of screws for disassembly", ASME Transactions, *Journal of Manufacturing Science and Engineering*, Vol. 121 No. 1, (1999), 118-126.
26. Y. Rabin and D. Rittel, "A model for the time response of solid-embedded thermocouples", *Experimental Mechanics*, Vol. 39 No. 1, (1999), 132-136.
27. D. Rittel, "Thermomechanical aspects of dynamic crack initiation", *Intl. Journal of Fracture*, Vol. 99 No. 3, (1999), 201-212.

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28. A. Shirizly, D. Rittel, Rubinski, L. and J. Tirosh, "On damage distribution in the upsetting process of sintered porous materials", *Intl. Journal of Fracture*, Vol. 97 No. 1/4, (1999), 55-69.
29. D. Rittel, "Experimental investigation of transient thermoplastic effects in dynamic fracture", *International Journal of Solids and Structures*, Vol. 37 No.21, (2000), 2901-2913.
30. D. Rittel, "An investigation of the heat generated during cyclic loading of two glassy polymers. Part I: experimental", *Mechanics of Materials* (2000), Vol. 32 No. 3, 131-147.
31. D. Rittel and Y. Rabin "An investigation of the heat generated during cyclic loading of two glassy polymers. Part II: thermal analysis", *Mechanics of Materials* (2000), Vol. 32 No. 3, 149-159.
32. Y. Rabin and D. Rittel, "Infrared temperature sensing of mechanically loaded specimens: thermal analysis", (2000), *Experimental Mechanics*, Vol. 40 No. 2, 197-202.
33. G. Weisbrod and D. Rittel, "A method for dynamic fracture toughness determination using short beams", (2000), *Intl. Journal of Fracture*, Vol. 104 No. 1, 91-104.
34. D. Rittel , "A note of the dynamic failure of PMMA", (2000), *Int. Journal of Fracture*, Vol. 106 No. 2, L3-L8.
35. O. Bougaut and D. Rittel, "On crack-tip cooling during dynamic crack initiation", (2001), *International Journal of Solids and Structures*, Vol. 38 No.15, 2517-2532.
36. D. Rittel and G. Weisbrod, "Dynamic fracture of tungsten base heavy alloys", (2001), *Int. Journal of Fracture*, Vol. 212, 87-98.
37. R. Lazarovitch, D. Rittel and I. Bucher, "Experimental crack identification using electrical impedance tomography", (2002), *NDT& E-International*, Vol. 35, 301-316.
38. D. Rittel, S. Lee and G. Ravichandran, "A shear compression specimen for large strain testing", (2002), *Experimental Mechanics*, Vol. 42 No. 1, 58-64.
39. D. Rittel, S. Lee and G. Ravichandran, "Large strain constitutive behavior of OFHC copper over a wide range of strain-rates using the shear compression specimen", (2002), *Mechanics of Materials*, Vol. 34, 627-642.
40. D. Rittel, A. Pineau, J. Clisson and L. Rota, "On testing of Charpy specimens using the one point bend impact technique", (2002), *Experimental Mechanics*, Vol. 42 No.3, 247-252.

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41. D. Rittel, B. Tanguy, A. Pineau and T. Thomas, "Impact fracture of a ferritic steel in the lower shelf regime", (2002), *Intl. Journal of Fracture*, Vol. 117, 101-112.
42. M. Ichihara, D. Rittel and B. Sturtevant, "Fragmentation of a porous viscoelastic material: implications to magma fragmentation", (2002), *J. Geophys. Research. v. Solid Earth*, V 106 No. B10, 2226-2239.
43. D. Rittel, N. Eliash and J.L. Halary, "Hysteretic heating of modified poly(methylmethacrylate), (2003), *Polymer*, Vol. 44/9, 2817-2822.
44. E. Zussman, D. Rittel and A.L. Yarin, "Failure modes of electrospun nanofibers, (2003), *Applied Physics Letters*, Vol. 82 No. 22, 3958-3960.
45. A. Benatar, D. Rittel and A.L. Yarin, "Theoretical and experimental analysis of longitudinal wave propagation in cylindrical viscoelastic rods", (2003), *J. Mech. Phys. Solids*, Vol 51/8, 1413 - 1431.
46. M. Vural and D. Rittel, "An educational visualization technique for Kolsky (split Hopkinson) bar, (2003), *Experimental Techniques*, Nov-Dec 2003, 35-39.
47. M. Vural, D. Rittel and G. Ravichandran, "Large strain mechanical behavior of 1018 cold rolled steel over a wide range of strain rates, (2003), *Metallurgical and Material Transactions A*, 34A (12), 2873-2885.
48. W.D. Kaplan, D. Rittel, M. Lieberthal, N. Frage and M.P. Dariel, "Static and dynamic mechanical damage mechanisms in TiC-1080 steel cermets", (2004), *Scripta Metallurgica et Materialia*, 51(1), 37-41.
49. D. Rittel, N. Frage and M.P. Dariel, "Dynamic mechanical and fracture properties of an infiltrated TiC-1080 steel cermet", *International Journal of Solids and Structures*, Vol. 42 No.2, (2004), 697-715.
50. D. Rittel, R. Levin and A. Dorogoy, "On the isotropy of the dynamic mechanical and failure properties of swaged tungsten heavy alloys ", *Metallurgical and Materials Transactions A*, Vol. 35A, (2004), 3787-3795.
51. D. Rittel and G. Ravichandran, "High-strain-rate behavior of  $\alpha$  iron under shear dominant loading conditions", (2004), *Matériaux et Techniques*, No. hors série, Dec. 2004, 21-25.
52. D. Rittel, "A hybrid experimental-numerical investigation of dynamic shear failure", (2005), *Engineering Fracture Mechanics*, 72, 73-89.
53. A. Bhattacharyya, D. Rittel and G. Ravichandran, "Effect of strain rate on deformation texture of OFHC copper", (2005), *Scripta Metallurgica et Materialia*, 52, 657-661.

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54. B.N. Cox, H. Gao, D. Gross and D. Rittel, "Modern topics and challenges in dynamic fracture", (2005), *Journal of the Mechanics and Physics of Solids*, (53), 565-596.
55. D. Rittel, "Adiabatic shear failure of a syntactic polymeric foam", (2005), *Materials Letters*, Vol 59/14-15, 845-1848.
56. D. Rittel and A.J. Rosakis, "Dynamic fracture of beryllium-bearing bulk metallic glass systems: a cross-technique comparison", (2005), *Engineering Fracture Mechanics*, Vol. 72 No. 12, 1905-1919.
57. A. Dorogoy and D. Rittel, "Numerical validation of the shear compression specimen (SCS). Part I: Quasi-static large strain testing" (2005), *Experimental Mechanics*, 45 (2): 167-177.
58. A. Dorogoy and D. Rittel, "Numerical validation of the shear compression specimen (SCS). Part II: Dynamic large strain testing" (2005), *Experimental Mechanics*, 45 (2): 178-185.
59. H. Saguy and D. Rittel, "Bridging thin and thick skin solutions for alternating currents in cracked conductors", (2005), *Applied Physics Letters*, 87: 084103-084103-3.
60. S. Moisa, G. Landsberg, D. Rittel and J.L. Halary, "Hysteretic thermal behavior of amorphous semi-aromatic polyamides", (2005), *Polymer*, 46, 11870-11875.
61. A. Dorogoy and D. Rittel, "A numerical study of the applicability of the shear compression specimen to parabolic hardening materials", (2006), *Experimental Mechanics*, 46, 355-366.
62. A. Bhattacharyya, D Rittel and G. Ravichandran, "Strain rate effect on the evolution of deformation texture for  $\alpha$ -Fe", (2006), *Metallurgical and Material Transactions A*, 37A(4), 1137-1145.
63. D. Rittel, Z. G. Wang and M. Merzer, "Adiabatic shear failure and dynamic stored energy of cold work", (2006), *Physical Review Letters*, 96(7), 075502.
64. D. Rittel, G. Ravichandran and A. Venkert, "The mechanical response of pure iron at high strain rates under dominant shear", (2006), *Materials Science and Engineering A*, A432, 191-201.
65. H. Saguy and D. Rittel, "Alternating current flow in internally flawed conductors: a tomographic analysis", (2006), *Applied Physics Letters*, 89, 094102.
66. D. Rittel, ZG. Wang and M. Merzer, "Some experiments on adiabatic shear failure", *J. Physique France IV*, 134, (2006), 835-838.

## DANIEL RITTEL

67. D. Rittel, A. Bhattacharyya, B. Poon, J. Zhao and G. Ravichandran, (2007), "Thermomechanical characterization of pure polycrystalline tantalum", *Materials Science and Engineering A*, A447, 65-70.
68. E. Hanina, D. Rittel and Z. Rosenberg, (2007), "Pressure sensitivity of adiabatic shear banding in metals", *Applied Physics Letters*, 90: 021915-021915-3.
69. A. Neuberger, S. Peles and D. Rittel, "Scaling the response of circular plates subjected to large and close-range spherical explosions. Part I: air-blast loading", (2007), *Int. J. Impact Engng.*, 34, 859-873.
70. A. Neuberger, S. Peles and D. Rittel, "Scaling the response of circular plates subjected to large and close-range spherical explosions. Part II: buried charge", (2007), *Int. J. Impact Engng.*, 34, 874-882.
71. H. Saguy and D. Rittel, "Flaw detection in metals by the ACPD technique: theory and experiments", (2007), *NDT&E International*, 40, 505-509.
72. D. Samak, A. Fischer, D. Rittel, (2007), "3D Reconstruction and Visualization of Microstructure Surfaces from 2D Images", *CIRP Annals*, Vol. 56/1, 149-152.
73. A. Bhattacharyya, D. Rittel and G. Ravichandran, (2007), "Strain rate dependency on deformation texture for pure polycrystalline tantalum", *International Journal of Materials Research* (formerly *Zeitschrift für Metallkunde*), 98(9), 889-893.
74. H. Saguy and D. Rittel, (2007), "An application of AC tomography to crack identification", *Applied Physics Letters*, 91, 084104.
75. A. Dorogoy and D. Rittel, (2008), "Transverse impact of square aluminum beams: an experimental-numerical investigation", *Int. J. Impact Engng.*, 35, 569-577.
76. B. Karp, D. Rittel and D. Durban, (2008), "Dynamic end effects induced by damaged joints", *J. Sound and Vibration*, 312, 257-272.
77. D. Rittel, E. Hanina and G. Ravichandran, (2008), "A note on the direct determination of the confining pressure of cylindrical specimens", *Experimental Mechanics*, Vol 48/3, 375-377.
78. D. Rittel, ZG. Wang and A. Dorogoy, (2008), "Geometrical imperfection and adiabatic shear banding", *I. J. Impact Engineering*, Vol. 35, 1280-1292.
79. D. Rittel and A. Brill, (2008), "Dynamic flow and failure of confined polymethylmethacrylate", *J. Mechanics & Physics of Solids*, Vol 56/4, pp 1401-1416.
80. A. Regev and D. Rittel, (2008), "Simultaneous transient temperature sensing of impacted polymers using infrared detectors and thermocouples", *Experimental Mechanics*, Vol 48/5, 675-682.

## DANIEL RITTEL

81. S. Hayun, D. Rittel, N. Frage and M.P. Dariel, (2008), "Mechanical properties of B<sub>4</sub>C based Si infiltrated composites at various strain rates", *Materials Science & Engineering A*, 487, 405-409.
82. A. Dorogoy and D. Rittel, (2008), "Optimal location of a three strain gauge rosette for measuring mixed-mode stress intensity factors", *Eng. Fracture Mechanics*, 75/14, 4127-4139.
83. D. Rittel and ZG. Wang, (2008), "Thermo-mechanical aspects of adiabatic shear failure of AM50 and Ti6Al4V alloys", *Mechanics of Materials*, 40, 629-635.
84. B. Poon, D. Rittel and G. Ravichandran, (2008), "An analysis of nanoindentation in linearly elastic solids", *Int. J. Solids and Structures*, 45, 6018-6033.
85. B. Poon, D. Rittel and G. Ravichandran, (2008), "An analysis of nanoindentation in elastic-plastic solids", *Int. J. Solids and Structures*, 45, 6399-6415.
86. D. Rittel and A. Dorogoy, (2008), "A methodology to assess the rate and pressure sensitivity of polymers over a wide range of strain rates", *J. Mech. Physics Solids*, 56, 3191-3205.
87. D. Rittel, P. Landau and A. Venkert, (2008), "Dynamic recrystallization as a potential cause for adiabatic shear failure", *Physical Review Letters*, 101 (16), 165501.
88. A. Neuberger, S. Peles and D. Rittel, "Springback of circular clamped armor steel plates subjected to spherical air-blast loading ", (2009), *Int. J. Impact Engng*, 36, 53-60.
89. S. Daly, D. Rittel, G. Ravichandran and K. Bhattacharya, (2009), "Large deformation of nitinol under shear dominant loading", *Experimental Mechanics*, 49(2), 225-233.
90. A. Dorogoy and D. Rittel, (2009), "Technical note: Determination of the Johnson-Cook material parameters using the SCS specimen", *Experimental Mechanics*, 49(6), 881-885.
91. D. Rittel, M.L. Silva, B. Poon and G. Ravichandran, (2009), "Thermomechanical behavior of single crystalline tantalum in the static and dynamic regime, *Mechanics of Materials*, 41(12), 1323-1329.
92. D. Rittel, (2009), "A different viewpoint on adiabatic shear localization, *J. Phys. D: Appl. Phys.* 42, 214009
93. A. Dorogoy, D. Rittel and A. Brill, (2010), "A study of inclined impact in polymethylmethacrylate plates", *Int. J. Impact Engng*, 37(3), 285-294.

## DANIEL RITTEL

94. P. Landau, A. Venkert and D. Rittel, (2010), "Microstructural aspects of adiabatic shear failure in annealed Ti6Al4V, *Metallurgical and Material Transactions A*, 41(2), 389-396.
95. J.P. Schramm, M.P. Demetriou, W.L. Johnson, B. Poon, G. Ravichandran and D. Rittel, (2010), "Effect of strain rate on the yielding mechanism of amorphous metal foam", *Applied Physics Letters*, 96, 0219061-3.
96. A. Belenky, I. Bar-On and D. Rittel, (2010), "Static and dynamic fracture of transparent nanograined alumina", *J. Mech. Phys. Solids*, 58, 484-501.
97. D. Rittel and S. Osovski, (2010), "Dynamic failure by adiabatic shear banding", invited paper, *Int. J. Fracture*, 162, 177-185.
98. M. Dolinski, D. Rittel and A. Dorogoy, (2010), "Modeling dynamic shear failure from energy considerations", *J. Mech. Phys. Solids*, 58, 1759-1775.
99. A. Belenky and D. Rittel, (2011), " A simple methodology to measure the dynamic flexural strength of brittle materials ", (2011), *Experimental Mechanics*, 31, 1325-1334.
100. A. Dorogoy, B. Karp and D. Rittel, (2011), " A shear compression disk specimen with controlled stress triaxiality under quasi-static loading", *Experimental Mechanics* 51, 1545-1557.
101. A. Dorogoy, D. Rittel and A. Brill, (2011)," Experimentation and modeling of inclined ballistic impact in thick polycarbonate plates", *Int. J. Impact Engineering*, 38, 804-814.
102. Z. Lovinger, A. Rikanati, Z. Rosenberg and D. Rittel, (2011), "Electro-magnetic collapse of thick walled cylinders to investigate spontaneous shear localization", *Int. J. Impact Engineering*, 38, 918-929.
103. S. Osovski, D. Rittel, P. Landau and A. Venkert, (2012), "Microstructural effects on adiabatic shear band formation", *Scripta Materialia* 66, 9-12.
104. D. Rittel, A.A. Kidane, M. Alkhader, A. Venkert, P. Landau and G. Ravichandran, (2012), "On the dynamically stored energy of cold work in pure single and polycrystalline copper *Acta Materialia*, 60, 3719-3728.
105. A. Belenky and D. Rittel, (2012), "Static and dynamic flexural strength of 99.5% alumina: Relation to porosity", *Mechanics of Materials* 48, 43-55.
106. M. Khokhlov, A. Fischer and D. Rittel, (2012), "Multi-scale stereophotogrammetry system for fractographic analysis using the scanning electron microscope", *Experimental Mechanics*, 52, 975-991.
107. A. Belenky and D. Rittel, (2012), "Static and dynamic flexural strength of 99.5% alumina: Relation to surface roughness", *Mechanics of Materials*, 54, 91-99.



## DANIEL RITTEL

108. S. Osovski, Y. Nahmany, D. Rittel, P. Landau, A. Venkert, (2012), "On the dynamic character of localized failure", *Scripta Materialia*, 67, 693-695.
109. S. Osovski and D. Rittel, (2012), "Microstructural heterogeneity and dynamic shear localization", *Applied Physics Letters*, Vol. 101, issue 21, 211901.
110. J.A. Rodriguez-Martinez, D. Rittel, R. Zaera and S. Osovski, (2012) "Finite element analysis of AISI 304 steel sheets subjected to dynamic tension: the effects of martensitic transformation and plastic wave propagation on flow localization", *Int. J. Impact Engng*, 54, 206-216.
111. K. Shemtov-Yona, D. Rittel, L. Levin and E. Machtei, (2012), "The effect of oral-like environment on dental implants' fatigue performance", *Clinical Oral Implants Research* 25, 2,e166-e170.
112. S. Osovski, D. Rittel and A. Venkert, (2013), "The respective influence of microstructural and thermal softening on adiabatic shear localization", *Mechanics of Materials*, 56, 11-22.
113. B. Karp, A. Dorogoy and D. Rittel, (2013), "A shear compression disk specimen with controlled stress triaxiality under dynamic loading", *Experimental Mechanics*, 53, 243-253.
114. R. Zaera, J.A. Rodriguez-Martinez and D. Rittel, (2013), "On the Taylor-Quinney coefficient in dynamically phase transforming materials. Application to 304 stainless steel", *Int. J. Plasticity*, 40, 185-201.
115. S. Osovski, D. Rittel, J.A. Rodriguez-Martinez and R. Zaera, (2013) "Dynamic tensile necking: influence of specimen geometry and boundary conditions", *Mechanics of Materials*, 62, 1-13.
116. D. Rittel and A. Dorogoy, (2014), "Impact of thick PMMA plates by long projectiles at low velocities. Part I: Effect of head's shape", *Mechanics of Materials*, 70, 41-52.
117. K. Shemtov-Yona, D. Rittel, L. Levin and E. Machtei, (2014),"Effect of Dental Implant Diameter Fatigue Performance. Part I: Fatigue performance", *Clinical Implant Dentistry and Related Research*, 16(2),172-177.
118. K. Shemtov-Yona, D. Rittel E. Machtei and L. Levin, (2014),"Effect of Dental Implant Diameter on Fatigue Performance. Part II: Failure Analysis", *Clinical Implant Dentistry and Related Research*, 16(2),178-184.
119. A. Dorogoy and D. Rittel, (2014), "Impact of thick PMMA plates by long projectiles at low velocities. Part II: Effect of confinement", *Mechanics of Materials*, 70, 53-66.

## DANIEL RITTEL

120. N.L. Barham, D. Rittel and W.D. Kaplan, (2014), "Static and Dynamic Mechanical Properties of Alumina Reinforced with Sub-Micron Ni Particles", *Materials Science and Engineering A*, Vol. 297, 1-9.
121. D. Rittel, Y. Rotbaum, J.A. Rodriguez-Martinez, D. Sory and R. Zaera, (2014), "Dynamic necking of notched tensile bars: An experimental study", *Experimental Mechanics*, 54, 6, 1099-1109.
122. K. Shemtov-Yona and D. Rittel, (2014), "Failure analysis of dental implants", *Engineering Failure Analysis*, 38, 58-65.
123. D. Richler and D. Rittel, (2014), "On the testing of the dynamic mechanical properties of soft gelatins", *Experimental Mechanics*, 54, 805-815.
124. T. Noam, M. Dolinski and D. Rittel, (2014), "Scaling dynamic failure: A numerical study", *Int. J. Impact Engng*, 69, 69-79.
125. Y. Rotbaum and D. Rittel, (2014), "Is there an optimal gage length for dynamic tensile specimens?", *Experimental Mechanics*, 54, 1205-1244.
126. E. Ben-David, T. Tepper-Faran, D. Rittel, and D. Shilo, (2014), "A new methodology for uniaxial tensile testing of free-standing thin films at high strain-rates", *Experimental Mechanics*, 54, 1687-1696.
127. E. Ben-David, T. Tepper-Faran, D. Rittel and D. Shilo, (2014), "A large strain-rate effect in free standing Al films", *Scripta Materialia*, 90-91, 6-9.
128. K. Shemtov-Yona, D. Rittel and A. Dorogoy, (2014), "Mechanical assessment of grit blasting surface treatments of dental implants", *J. Mechanical Behavior of Biomedical Materials*, 39, 375-390.
129. S. Chen, D. Mordechai and D. Rittel (2014), "Nanograins promote shear localization", *Materials Res. Letters*, <http://dx.doi.org/10.1080/21663831.2014.957791>
130. A. Sadjadpour, D. Rittel, G. Ravichandran and K. Bhattacharya, (2015), "A model coupling plasticity and phase transformation with application to dynamic shear deformation of iron", *Mechanics of Materials*, 80 part B, 255-263.
131. J.A. Rodriguez-Martinez, G. Vadillo, D. Rittel, R. Zaera, J. Fernandez-Saeza and D. Rittel, (2015), "Dynamic recrystallization and adiabatic shear localization", *Mechanics of Materials*, 81, 41-55.
132. J.A. Rodriguez-Martinez, G. Vadillo, R. Zaera, J. Fernandez-Saeza and D. Rittel, (2015), "An analysis of microstructural and thermal softening effects in dynamic necking", *Mechanics of Materials*, 80, 298-310.
133. A. Dorogoy and D. Rittel, (2015), "Effect of confinement on thick polycarbonate plates impacted by long and AP projectiles", *Int. J. Impact Engng.*, 76, 38-48.

134. Y. Rotbaum, S. Osovski and D. Rittel, (2015), “ Why does necking ignore notches in dynamic tension?”, *J. Mech. Phys. Solids*, 78, 173-185.
135. R. Fadida, D. Rittel and A. Shirizly, (2015), “Dynamic mechanical behavior of additively manufactured Ti6Al4V with controlled voids”, *J. Applied Mechanics*, 82(4), 041004-041004-9.
136. Z. Lovinger, D. Rittel and Z. Rosenberg, (2015), “An experimental study on spontaneous adiabatic shear band formation in electro-magnetically collapsing cylinders”, *J. Mech. Phys. Solids*, 79, 134–156.
137. K. Shemtov-Yona and D. Rittel, (2015), “ On the mechanical integrity of retrieved dental implants”, *J. Mechanical Behavior of Biomedical Materials*, 49, 290-299.
138. M. Dolinski, M. Merzer and D. Rittel, (2015), “Analytical formulation of a criterion for adiabatic shear failure“, *Int. J. Impact Engng*, 85, 20-26.
139. M. Dolinski and D. Rittel, (2015), “Experiments and modeling of ballistic penetration using an energy failure criterion”, *J. Mech. Phys. Solids*, 83, 1-18.
140. A. Dorogoy, D. Rittel and A. Godinger, (2015), “Modification of the Shear-Compression Specimen for Large Strain Testing”, *Exp. Mechanics*, 55, 1627-1639.
141. K. Shemtov-Yona and D. Rittel, (2015), “An overview of the mechanical integrity of dental implants”, *Biomedical Research International*, invited paper , Article ID 547384.
142. A. Dorogoy, D. Rittel and A. Godinger, (2016), “A Shear-Tension Specimen for Large Strain Testing”, *Exp. Mechanics*, 56, 437-449.
143. A. Vaz-Romero, Y. Rotbaum, J.A. Rodriguez-Martinez and D. Rittel, (2016), “Necking evolution in dynamically stretched bars: New experimental and computational insight”, *J. Mech. Phys. Solids*, 91, 216-239.
144. K. Shemtov-Yona and D. Rittel, (2016), “Random spectrum loading of dental implants: An alternative approach to functional performance assessment”, *J. Mechanical Behavior of Biomedical Materials*, 62, 1-9.
145. K. Shemtov-Yona and D. Rittel, (2016), “Fatigue of dental implants: facts and fallacies”, invited paper, *Dentistry Journal*, 4(2), 16.
146. K. Shemtov-Yona and D. Rittel, (2016), “Fatigue failure of dental implants in simulated intraoral media”, *J. Mech. Behavior of Biomedical Biomaterials*, 62, 636-644.
147. O. Rijensky and D. Rittel, (2016), “Polyurea coated aluminum plates under hydrodynamic loading: Does side matter?”, *Int. J. Impact Engineering*, 98, 1-12.

## DANIEL RITTEL

148. P. Landau, S. Osovski, A. Venkert, V. Gartnerova and D. Rittel, (2016), “The genesis of adiabatic shear bands”, *Scientific Reports*, 6:37226.
149. A. Dorogoy, D. Rittel, K. Shemtov-Yona and R. Korabi, (2017), “Modeling dental implant insertion”, *J. Mech. Behavior of Biomedical Biomaterials*, 68, 42-50.
150. Z. Lovinger, D. Rittel and Z. Rosenberg, (2017), “Modeling spontaneous adiabatic shear band formation in electro-magnetically collapsing thick-walled cylinders”, in press, *Mechanics of Materials*.
151. D. Rittel, L.H. Zhang and S. Osovski, (2017), “Mechanical characterization of impact-induced dynamically recrystallized nanophase”, *Phys. Rev. Applied*, 7, 044012.
152. D. Rittel, A. Dorogoy and K. Shemtov-Yona, (2017), “Modelling dental implant extraction by pullout and torque and procedures”, *J. Mech. Behavior of Biomedical Biomaterials*, 71, 416-427.
153. R. Korabi, K. Shemtov-Yona, A. Dorogoy and D. Rittel, (2017), “The failure envelope concept applied to the bone-dental implant system”, *Scientific Reports*, 7, 2051.
154. A. Godinger, Y. Rotbaum, A. Vaz-Romero, J.A. Rodriguez-Martinez and D. Rittel, (2017), “Investigation of the interplay between specimen wavelength and necking growth rate in dynamic tension”, *Int. J. Engng. Science*. 119, 278-287.
155. R. Korabi, K. Shemtov-Yona and D. Rittel, (2017), “On stress/strain shielding and the material stiffness paradigm for dental implants”, in press, *Clin. Implant Dentistry and Related Research*.
156. D. Rittel, K. Shemtov-Yona and R. Korabi, (2017), “Engineering dental implants”, **invited paper**, in press, *Current Oral Health Reports*.
157. Y. Rotbaum, G. Parvari, Y. Eichen and D. Rittel, (2017), “Static and Dynamic Large Strain Properties of Methyl Cellulose Hydrogels”, in press *Macromolecules*.
158. A. Dorogoy and D. Rittel, (2017) “Dynamic large strain characterization of tantalum using shear-compression and shear-tension testing”, accepted, *Mechanics of Materials*.
159. D. Rittel, L.H. Zhang and S. Osovski, (2017), “The dependence of the Taylor-Quinney coefficient on the dynamic loading mode”, *J. Mech. Phys. Solids*, 107, 96-114.
160. A. Dorogoy and D. Rittel, (2017), “Quasi-static and dynamic large strain shear-tension testing, accepted *Exp. Mechanics*.

**Submitted**

161. B. Karp, G. Shapira and D. Rittel, (2017), "Experimental investigation of fracture under controlled stress triaxiality using SCD specimen", *Int. J. Fracture*.
162. S. Tzibula, Z. Lovinger and D. Rittel, (2017), "Dynamic tension of ductile polymers: Experimentation and modelling", *Int. J. Impact Engng.*
163. E. Avriel, Z. Lovinger, R. and D. Rittel, (2017), "Investigating the strength of materials at very high strainrates using electro-magnetically expanding cylinders", *Mechanics of Materials*.
164. J. Xie and D. Rittel, (2017), "Modelling metallic surface roughness resulting from pure waterjet peening. PartI: Velocity and pressure distributions", *Int. J. Engng. Science*.
165. J. Xie and D. Rittel, (2017), "Modelling metallic surface roughness resulting from pure waterjet peening. Part II: Surface roughness profile", *Int. J. Engng. Science*.

**Book Chapters**

1. D. Rittel, "Dynamic testing of materials: Selected topics", in *Constitutive relations under Impact Loadings*, Eds. T. Lodygowski and A. Rusinek, Springer (2013).
2. D. Rittel, "Dynamic shear failure of materials", in *Dynamic Failure of Materials and Structures*, Eds. A. Shukla, G. Ravichandran and D.S. Rajapakse, Springer (2010).
3. D. Rittel, "Dynamic crack initiation toughness", in *Dynamic Fracture Mechanics*, Ed. A. Shukla, World Scientific, (2006).
4. D. Rittel, "Dynamic fracture experiments using point impact", *Recent Advances in Experimental Mechanics*, Ed. EE. Gdoutos, Kluwer Academic Publishers, (2002), 267-274.
5. D. Rittel, "Experiments in dynamic fracture", *Physical Aspects of Fracture*, Ed. E. Bouchaud, Kluwer Acad., (2001), 343-352.
6. D. Rittel, "Thermomechanical couplings and fracture of amorphous polymers", *Fracture of Polymers, Composites and Adhesives*, Ed. JG. Williams and A. Pavan, Elsevier, (2000), 375-382.
7. D. Rittel, "Experimental investigation of dynamic failure mode transitions", *Non-Linear Singularities in Deformation and Flow*, Ed. D. Durban and JRA. Pearson, Kluwer Acad., (1997), 181-192.

## DANIEL RITTEL

8. D. Rittel and H. Maigre, "A new approach to dynamic fracture toughness testing", *Novel Experimental techniques in Fracture Mechanics*, Ed. A. Shukla, ASME-AMD Vol. 176, (1993), 173-184.

### Patents

1. "Inverse-freeing compositions and use thereof", with G. Parvari, Y. Rotbaum and Y. Eichen, Israel Patent Application **No. 252660**, June 4, 2017
2. "Polyurea coating of surfaces for leak protection", with N. Drimer and B. Danino, US Provisional Patent Application **No. 62/429,818**, Dec. 5, 2016
3. "System for monitoring health of structural joints", with Dr. B. Karp and Prof. D. Durban. US Patent No. **8,596,135**, Dec. 3, 2013.
4. "Electrical tomography of hidden flaws in conductors using the alternating current potential drop technique (ACPD)", with H. Saguy. US Patent No. **7519487 B2**, Apr. 14, 2009.

### CONFERENCES

#### Plenary

1. **ATTOI 2017**, 1st International Conference on Advanced Technologies and Techniques in Oral Implantology, May 22-24, Tel-Aviv, Israel. "*Physical communication: The bone-implant interface*".
2. **LWAG 2016**, Grenoble, France, "*Adiabatic shear across the scales- The engineer's perspective*".
3. **Solmech 2014**, Zakopane, Poland, R. Zaera, J.A. Rodríguez-Martínez, G. Vadillo, J. Fernández-Sáez, D. Rittel, A. Rusinek, R. Pesci, S. Osovski, T. Cohen, "*Deformation of Dynamically Phase Transforming Metals in Adiabatic Conditions: Thermal Effects and Instabilities*".
4. **Security and Terror**, Technion, 2011, "*Challenges and innovations in ballistic armor*".
5. **Photomechanics, Brussels**, 2011, "*Some applications of infrared sensing in mechanics of materials*". Opening address.
6. **7<sup>th</sup> International Symposium on Impact Engineering**, Warsaw, 2010, "*On some issues in dynamic failure of materials*". Opening address.
7. **Dynamic Behavior of Materials**, in memoriam J.R. Klepaczcko, Metz, France, May 2009, "*A different viewpoint on adiabatic shear failure*". Opening address.

#### Keynote

1. Cermotel, Trento, July 1-3 2015, "*Some experiments on the dynamic failure of ceramics*". Opening address.
2. Third International Workshop on Physics Based Material Models and Experimental Observations, Izmir, June 2014, "*The role of microstructure in dynamic shear localization*".

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3. Dymat, Strasbourg, December 2010, "*High-rate thermomechanical properties of glassy polymers*". Opening address.
4. LWAG 2010, Madrid, November 2010, "*Modeling dynamic shear failure from energy considerations*". Opening address.
5. Materiaux 2010, Nantes, October 2010, "*Microstructural aspects of dynamic shear localization*". Opening address
6. 3d Israel Conference on Failure Analysis and Non Destructive Testing, Tel Aviv, April 2006, "*Dynamic mechanical failure: adiabatic shear banding*".
7. Israel Materials Engineering Conference IMEC06, Beersheba, Israel, March 2006, "*Dynamic mechanical properties: modern trends*".
8. Intl. Conference on Computational Experimental Engineering and Sciences ICCES'05, Chennai, India, Dec. 2005, "*Experimental investigation of adiabatic shear failure*".
9. Intl. Conference on Computational Experimental Engineering and Sciences ICCES'05, Chennai, India, Dec. 2005, "*Dynamic deformation of alpha iron under shear dominant conditions*" (with G. Ravichandran).
10. The 14<sup>th</sup> US National Congress on Theoretical and Applied Mechanics (UNSCTAM14), Blacksburg VA, June 2002, "*Some experimental aspects of dynamic fracture mechanics*".
11. The 10<sup>th</sup> International Conference on Fracture, ICF10, Hawaii, December 2001. "*Transient thermomechanical effects in dynamic fracture*".
12. NATO Advanced Study Institute on Physical Aspects of Fracture, Cargèse (Corsica), June 2000. "*Experiments in dynamic fracture*".
13. The 7th Israel Materials Engineering Conference, Haifa, June 1994. "*Dynamic crack initiation in brittle solids*".

### Invited

1. IUTAM Symposium on Dynamic Instabilities in Solids, Madrid, May 2016, "*Adiabatic shear failure from micro to macro*".
2. MRS Annual Meeting, Boston, November 2013, "*Microstructural aspects of dynamic shear localization*" (with S. Osovski, A. Venkert and P. Landau).
3. IUTAM Symposium on Materials and Interfaces under High Strain rates and large Deformations, Metz, June 2013, "*On the onset of adiabatic shear failure*" (with S. Osovski, A. Venkert and P. Landau).
4. IUTAM Symposium on Recent Development of Experimental Techniques Under Impact Loading, Xi'an, May 2013, "*On the dynamically stored energy of cold work in pure single and polycrystalline copper*" (with A. Kiddane, M. Alkhader, G. Ravichandran, A. Venkert and P. Landau).
5. 10th International DYMAT Conference, Freiburg, Sept. 2012, "*On the Non-Adiabatic Nature of Adiabatic Shear Bands*" (with S. Osovski, A. Venkert and P. Landau).
6. IUTAM Symposium on Fracture in Nature and Technology, Brescia, July 2012, "*The causes for adiabatic shear failure: Microstructural, thermal or both?*" (with S. Osovski, A. Venkert and P. Landau).
7. SEM XII International Congress & Exposition on Experimental & Applied Mechanics, Costa Mesa, June 2012, "*Is adiabatic shear failure really adiabatic?*" (with S. Osovski, A. Venkert and P. Landau).
8. IUTAM Symposium on Dynamic Fracture and Fragmentation, Austin TX, March 2009, "*Revisiting adiabatic shear failure*".

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9. ISTAM 2007 annual Meeting, Tel Aviv, December 2007, "*Dynamic flow and failure of confined polymethylmethacrylate*" (with A. Brill)
10. Strategy for promoting researches on volcanic explosion, Kobe, Japan, January 2005, "*Experimental characterization of the dynamic and mechanical and fracture properties of materials*".
11. The Annual Israel Conference on Failure Analysis, Herzlyia, October 2004, "*Dynamic failure mechanics*".
12. Multi-disciplinary Monitoring, Modeling and Forecasting of Volcanic Hazard, Elat, January 2004, "*Experimental characterization of the dynamic mechanical and fracture properties of materials*".
13. Rafael Worksop on Ballistic Performance of Ceramic Materials, Haifa, December 2003, "*Dynamic mechanical and fracture properties of TiC-1080 steel cermets*".
14. Ringberg Worksop on Dynamic Fracture, Ringberg Castle, Germany, July 2003, "*Some experimental aspects of dynamic crack initiation*".
15. MECAMAT Workshop on Rupture dynamique vs. rupture incrémentale, Paris December 2000. "*Rupture dynamique expérimentale, couplage thermomécanique application aux interfaces*".
16. IACM Annual Meeting, Tel Aviv, March 2001. "*Dynamic fracture of short beam specimens*".
17. IUTAM Symposium. Non-linear singularities in Deformation and Flow, Haifa 1997. "*Experimental investigation of dynamic failure mode transitions*".
18. Euromech 326 Colloquium Experiment and Macroscopic Theory in Crack Propagation, Kielce, Poland, 1994, "Dynamic crack initiation experiments with the compact compression specimen technique".
19. Euromech 306 Colloquium Mechanics of Contact Impact, Prague, 1993, "Dynamic fracture toughness determination using the CCS technique".
20. Euromech 282 Colloquium Microscopic and Macroscopic Plastic Deformation Instabilities, Metz, France, 1991. "Experimental aspects of surface deformation of metals".

### **Contributed talks (with abstracts)**

1. Solmech 38, Polish Solid Mechanics Conference, Warsaw, Aug. 2012, with R. Zaera and J.A. Rodriguez-Martinez
2. Shock 09, APS Meeting on Shock Compression of Condensed Matter, Nashville USA, June 2009, with Z. Lovinger, A. Rikanati and Z. Rosenberg
3. Insensitive Munition and Energetic Materials Technology Symposium, Tucson USA, May 2009, with M. Shpitzer and T. Yarom
4. 9<sup>th</sup> International Dymat Conference, Bruxelles, Sept. 2009.
5. Dymat Technical Meeting, Bourges, Sept. 2008, with A. Belenky and I. Bar-On.
6. ASME-ESDA, Haifa, July 2008, 4 talks with M. Ichihara, G. Ravichandran-B. Poon, D. Shilo, A. Brill.
7. MRS Fall Meeting, Boston, Nov. 2007, with B. Poon and G. Ravichandran (poster)
8. Experimental Analysis of Nano and Engineering Materials and Structures, Alexandroupolis Greece, 2007, with E. Ben-David, D. Elata, D. Rittel and S. Shilo.
9. Israel Materials Engineering Conference IMEC13, Haifa, Israel, December 2007, with S. Hayun, N. Frage and M. Dariel.
10. Volcanological Society of Japan, Fall Meeting, Shimabara City, Nov. 2007, with M. Ichihara



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11. ASME Mechanics and Materials Conference, Austin, June 2007, with B. Poon and G. Ravichandran.
12. SEM Annual Meeting, Springfield, June 2007, with B. Karp and D. Durban.
13. SEM Annual Meeting, Springfield, June 2007.
14. TMS Annual Meeting, Orlando, February 2007, with G. Ravichandran.
15. 47th Israel Annual Conference on Aerospace Sciences, Tel-Aviv–Haifa, 21-22 February, 2006, with B. Karp and D. Durban.
16. EURODYMAT 06, 2006, Dijon, France, with Z.G. Wang.
17. The 2005 Joint ASME/ASCE/SES Conference on Mechanics and Materials, Baton Rouge LA, with K.D. Papoulia, C.H. Sam, P. Ganguly.
18. 22<sup>nd</sup> International Symposium on Ballistics, Nov. 2005, 2 talks with A. Neuberger and S. Peles.
19. 15<sup>th</sup> Technical Meeting DYMAT, 2004, D. Rittel and G. Ravichandran.
20. SEM Meeting, Charlotte VA., 2003, M. Vural, D. Rittel and G. Ravichandran.
21. Charpy Centenary Conference CCC2001, Poitiers, France, 2001, D. Rittel
22. ASME-Mechanics and Materials Conference, San Diego, USA, 2001, 2 presentations, D. Rittel.
23. XX Intl. Congress of Theoretical and Applied Mechanics (ICTAM2000), Chicago, USA, 2000, D. Rittel.
24. ESIS TC4, Fracture of Polymers, Les Diablerets, Switzerland, 1999, D. Rittel
25. ASME Summer Annual Meeting, Mechanics and Materials, Blacksburg VA, 1999, 3 presentations, D. Rittel.
26. Annual meeting of the Israel Society for Theoretical and Applied Mechanics ISTAM, Haifa, Israel, 1997, D. Rittel.
27. EURODYMAT 97, 1997, Toledo, Spain
28. 3<sup>rd</sup> Euromech Solid Mechanics Conference, Stockholm, Sweden, 1997, D. Rittel.
29. 26<sup>th</sup> Israel Conference on Mechanical Engineering, Haifa, Israel, 1996, D. Rittel. (3 presentations, 2 with D. Studny and S. Haham).
30. Annual meeting of the Israel Society for Theoretical and Applied Mechanics ISTAM, Haifa, Israel, 1995, D. Rittel.
31. ASME-WAM, San Francisco, Symposium on the Mechanics and Mechanisms of Fracture of Polymers, Anaheim, USA, 1995, D. Rittel.
32. European Symposium on Impact and Dynamic Fracture of Polymers and Composites, Porto Cervo, Italy, 1993, H. Maigre.
33. Eighth International Conference on Fracture ICF8, Kiev, Ukraine, 1993, H. Maigre.
34. XVIIIth Intl. Congress of Theoretical and Applied Mechanics (ICTAM), Haifa, Israel, 1992, D. Rittel.
35. 119th TMS Meeting, Anaheim Ca, USA, 1990, D. Rittel
36. ASM Materials Engng. Conference, Salt Lake City, 1985, D. Rittel (2 presentations, 1 with I. Roman).
37. Israel Society for Electron Microscopy Meeting, Rehovot, Israel, 1983, D. Rittel.

### **Papers in Conference Proceedings (\*refereed)**

1. (\*) Z. Lovinger, A. Rikanati, D. Rittel and Z. Rosenberg, “Investigation of adiabatic shear bands in thick-walled cylinders collapsed by electro-magnetic driving forces”, 16<sup>th</sup> APS Topical Conference on Shock Compression of Condensed Matter, 2009.
2. (\*) D. Rittel, “A new perspective on adiabatic shear failure”, Dymat 2009, Bruxelles, 2009.

3. (\*)A. Belenky, I. Bar-On and D. Rittel, "Static and dynamic fracture of transparent alumina", Dymat Technical Meeting, Bourges, 2008.
4. Ichihara, M., Rittel., D., and Rubin, M. B., "Mechanical behavior of synthetic silicate melt at the brittle-ductile transition: Experiments and modeling", Japan Geoscience Union Meeting, Chiba City, 2008
5. (\*) D. Rittel, ZG. Wang and M. Merzer, "Experimental investigation of adiabatic shear failure", ICCES05, Chennai, Dec. 2005.
6. (\*) A. Neuberger, S. Peles and D. Rittel, "Scaling the Dynamic Response of Armored Vehicle's Floor Subjected to a Large Buried Charge", 22<sup>nd</sup> Int. Symposium on Ballistics, Nov. 2005.
7. (\*) Neuberger, S. Peles and D. Rittel, "Calibrating Buried Charges with a Simplified Blast Model: Simulations and Experiments", 22<sup>nd</sup> Int. Symposium on Ballistics, Nov. 2005.
8. (\*) D. Rittel and G. Ravichandran, "High strain-rate behavior of a iron under shear dominant loading conditions", 15<sup>th</sup> Technical Meeting DYMAT, (2004), 37-42.
9. (\*) D. Rittel, "Dynamic fracture experiments using on-point impact", *Recent Advances in Experimental Mechanics*, Ed. E. Gdoutos, Kluwer acad., (2002), 267-274.
10. (\*) D. Rittel, "Thermomechanical couplings and fracture of amorphous polymers", *Fracture of Polymers and Composites*, Eds. J.G. Williams and A. Pavan, Elsevier, (2000), 375-382.
11. (\*) D. Rittel, "Thermal effects associated with dynamic crack initiation", *Experimental Mechanics: Advances in Design, Testing and Analysis*, ed. Allison, I.M., A. Balkema pub., (1998), 199-204.
12. (\*) D. Rittel, "Experimental investigation of dynamic failure mode transitions", IUTAM symposium on Non-linear Singularities in Deformation and Flow, ed. Durban, D. and Pearson, J.R.A., Kluwer acad., (1998), 181-192.
13. (\*) D. Rittel and H. Maigre, "On mixed-mode dynamic crack initiation in brittle solids", *Advances in Fracture Research*, ed. Karihaloo, B.L. et al., Vol. 6, Pergamon, (1997), 2941-2948.
14. Shirizly, D. Rittel, Rubinski, L. and J. Tirosh, "On damage distribution in compressing of porous materials", *Symposium on Inelasticity and Damage in Solids Subject to Microstructural Change*, Newfoundland, 1996.
15. (\*) H. Maigre and D. Rittel, "About a new experimental method of identification of the dynamic toughness of materials", *Proceedings of the IUTAM Symposium on Constitutive Relations at High/Very High Strain Rates*, ed. K. Kawata and J. Shioiri, Springer, (1995), 41-48.
16. D. Rittel and H. Maigre, "A new approach to dynamic fracture toughness testing", *Proceedings of the 25th Israel Conference on Mechanical Engineering*, (1994), 319-321.
17. D. Rittel and H. Maigre, "A new approach to dynamic fracture toughness testing", in *Novel Experimental Techniques in Fracture Mechanics*, ed. A. Shukla, ASME, (1993), 173-184.
18. Roman and D. Rittel, "Investigation of failures of maraging steel rocket motor cases", in *Proceedings International Symposium for Testing and Failure Analysis*, ASM Int., (1988), 419-423.
19. D. Rittel, I. Roman and M. Bercovier, "Cyclic plastic zone characterization and its relation to fatigue crack growth", in *Numerical Methods in Fracture Mechanics*, ed. A.R. Luxmoore, Pineridge, (1987), 627-640.

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20. Roman, A. Mittelman and D. Rittel, "Acoustic emission characterization of deformation and fracture in heavy alloys", in *Progress in Acoustic Emission III*, The Japanese Society of NDI, (1986), 446-452.
21. Roman and D. Rittel, "Failure analysis of pressurized aluminum cylinders and its applications to a safer design", in *Analyzing Failures - The Problems and the Solutions*, ed. V.S. Goel, ASM, (1986), 55-59.
22. D. Rittel and I. Roman, "Effects of yield strength and phosphorus content on the high cycle fatigue properties of cast austenitic manganese steels", in *Fatigue Life Analysis and Prediction*, ed. V.S. Goel, ASM, (1986), 109-116.

### Participation in organizing conferences

#### *Chair or Co-Chair*

- 2016 **Co-Chair**, IUTAM Symposium on **Dynamic Instabilities in Solids**, 2016, 17-20 May, Madrid, Spain.
- 2011 **Co-Chair**, LWAG 2011 **New concepts in armor engineering**, Technion 16-17 March, Haifa, Israel.
- 2003 **Co-Chair** of the "**Ringberg Workshop on Dynamic Fracture**", Ringberg Castle, Germany, July 2003.
- 2003 **Co-Chair** and **Secretary** of the "**9<sup>th</sup> International Conference on the Mechanical Behaviour of Materials**", ICM9, Geneva, May 2003.
- 1998 **Co-Chair** of the "**First Israel-France Bi-National Workshop on Failure of Materials**", Kiryat Anavim, May 11-12, 1998.

#### *Organizing or Scientific Committee*

- 2018 International Scientific Committee, **Photomechanics 2018**, March 20-22 2018, Toulouse, France.
- 2017 XXVII International Conference on **Mathematical and Computer Simulation in Mechanics of Solids and Structures: Fundamentals of static and dynamic fracture**, Sept 25-27, Saint Petersburg, Russia.
- 2017 Scientific Committee, **ICF 14 International Conference on Fracture**, June 18-23, Rhodes, Greece.
- 2017 International Scientific Committee, **1st International Conference on Advanced Technologies and Techniques in Oral Implantology (ATTOI)**, May 22-24, Tel-Aviv, Israel.
- 2016 International Scientific Committee, **2016 EMI (Engineering Mechanics Institute)**, Oct. 25-27, Metz, France.
- 2016 Scientific Committee, **BSSM's 11th International Conference on Advances in Experimental Mechanics**, Sept. 5-7, University of Exeter, UK.
- 2016 Scientific Committee, **22<sup>nd</sup> Dymat Technical Meeting**, Oct. 19-21, Grenoble, France.
- 2016 Scientific Committee, **17th International Conference on Experimental Mechanics**, 2016, 3-7 July, Rhodes, Greece.
- 2015 Co-Chair, **Under Extreme Conditions**, 2015, Nov 25, Technion.
- 2015 Scientific Committee, **10th International Conference on Advances in Experimental Mechanics**, 2015, 1-3 September, Edimburgh, UK.
- 2015 Scientific Committee, **CERMODEL 2015**, 1-3 July, Trento, Italy.

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- 2014 International Academic Committee, **SEM Fall Meeting Conference**, 2014, 21-24 September, Beijing, China
- 2014 Scientific Committee, **16<sup>th</sup> International Conference on Experimental Mechanics**, 2014, 7-11 July, Cambridge, UK.
- 2014 Scientific Committee, **4<sup>th</sup> International Conference on Impact loading of lightweight structures**, 2014, January 12-16, Capetown, SA.
- 2013 International Scientific Committee, **Dynamic deformation and fracture of advanced materials – D2FAM**, 2013, Sept. 9-11, Loughborough, UK.
- 2013 Scientific Committee, IOP/DYMAT 21st Technical Meeting - **High speed imaging for dynamic testing of materials and structures**, Nov. 18-20, London, UK.
- 2013 International Advisory Committee, **8th Intl. Symposium on Impact Engineering** 2013, Sept 2-6, Osaka, Japan.
- 2013 Scientific Committee, **Photomechanics 2013**, May 27-29, Montpellier, France.
- 2013 International Advisory Board of the Workshop on “**Processing-Microstructure-Property Relationships & Deformation Mechanisms of Magnesium Alloys**”, Madrid, May 21-24.
- 2013 Scientific Committee, IUTAM symposium “**Recent developments in impact testing of materials and structures**”, 2013, Xian, China.
- 2013 Scientific Committee, IUTAM symposium “**Materials and interfaces under high strain rate and large deformation**”, 2013, Metz, France.
- 2012 Scientific Committee, LWAG 2012 “**Opportunities and Challenges of Lightweight Armour: failure mechanisms, materials, experiments and modelling**”, 25-26 October, Canobbio, Switzerland.
- 2012 Scientific Committee, “**Sixth international symposium on dynamic behavior of materials and safety of structures**” deformation”, 2012, Poznan, Poland.
- 2012 International Advisory Committee, **DYMAT 2012**, Freiburg, Germany.
- 2011 Scientific Committee, 3<sup>d</sup> Intl. Conference on **Impact loading of lightweight structures**, June 28-July 1, Valenciennes, France.
- 2011 Scientific Committee, 2011 Annual International Workshop on **Dynamic Behavior of Structures and Materials, Interaction and Friction**, Metz, France.
- 2011 Scientific Committee, LWAG 2011 **New design concepts in light-weight armour for vehicles**, 27-28 October, Aveiro, Portugal.
- 2011 Scientific Committee, IUTAM symposium “Full Field Measurements and Identification in Solid Mechanics”, July 3-8, 2011, Cachan, France.
- 2010 Scientific Committee, LWAG 2010 Meeting “**Failure and damage mechanisms of armour materials**”, Nov 26, 2010, Madrid, Spain.
- 2009 International Scientific Advisory Committee, **DYMAT 2009**, Brussels, Belgium
- 2009 Scientific Committee, **Dynamic Behavior of Materials**, in memoriam J.R. Klepaczcko, Metz, France
- 2009 Section organizer, **Euromech Solid Mechanics Conference**, Portugal
- 2009 Scientific Committee, **9<sup>th</sup> Meeting, Lightweight Armor Group**, Portugal
- 2008 **Track Leader**, with G. Ravichandran, Advanced Materials, ASME-ESDA 2008, Haifa, July 2008.
- 1992 Secretary, Euromech 297 Colloquium, “**Fatigue Analysis in the Context of Mechanical Design**”, Lozari (Corsica), 1992.