

## List of papers – Richard Degenhardt (Status: 16.01.2011)

### I. PhD-Thesis

Degenhardt, R., “Nichtlineare dynamische Bauwerksprobleme und Interaktion mit dem Baugrund (Nonlinear structural dynamics and soil-structure interaction)“, PhD Thesis, Braunschweiger *Schriften zur Mechanik*, No. 22-1996, ISBN 3-920395-21-2

### II. Books

1. Arbocz J., Bisagni C., Calvi, A, Carrera E., Cuntze R., Degenhardt R., Gualtieri N., Haller H., Impollonia N., Jacquesson M., Jansen E., Meyer-Piening H.R., Oery H., Rittweger A., Rolfes R., Schullerer G., Turzo G., Weller T., Wijker J., *E.C.S.S. Buckling of structures* (ESA), 24 March 2010

### III. Guest editor

1. Special Issue of the *International Journal of Structural Stability and Dynamics*, Title: *Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures*, (19 reviewed papers, 3 technical notes, 360 pages), October 2010

### IV. Scientific Chairman of the following conferences

1. 2<sup>nd</sup> Int. Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures, Braunschweig, Germany, 3-5 September, 2008
2. 3<sup>rd</sup> Int. Conference “Supply on the wings” at the AIRTEC 2008, Frankfurt, Germany, 11-13 November, 2008
3. 4<sup>th</sup> Int. Conference “Supply on the wings” at the AIRTEC 2009, Frankfurt, Germany, 3-5 November, 2009
4. 5<sup>th</sup> Int. Conference “Supply on the wings” at the AIRTEC 2010, Frankfurt, Germany, 2-4 November, 2010
5. 6<sup>th</sup> Int. Conference “Supply on the wings” at the AIRTEC 2011, Frankfurt, Germany, 2-4 November, 2011

### V. Chairman of the following symposia

1. Symposium “Stability of composite structures”, *Int. Conference on Computational & Experimental Engineering and Sciences*, Phuket, Thailand, 8-13 April, 2009
2. Symposium “Aerospace Industry”, 4<sup>th</sup> CFK-Convention, Stade, Germany, 15-16 June, 2010
3. Symposium “Mechanics of composite structures”, 8<sup>th</sup> International Conference of Numerical Analysis and Applied Mathematics, Rhodes, Greece, 19-25 September, 2010
4. Symposium “Buckling and Postbuckling of Composite Plates and Shells”, 16<sup>th</sup> International Conference Composite Structures, Porto, Portugal, 28-30 June, 2011

### VI. Reviewer for a PhD

1. Zoltan Mikulik, “Application of fracture mechanics to predict the growth of single and multi-level delaminations and disbands in composite structures“, PhD thesis, UNSW Sydney, Australia (March 2008)
2. Garth Pearce, “High strain rate response of mechanically fastened joints“, PhD thesis, UNSW Sydney, Australia (January 2010)
3. Adriana W. Blom, „Structural Performance of Fiber-Placed, Variable-Stiffness Composite Conical and Cylindrical Shells“, PhD thesis, TU-Delft, Netherlands (November 2010)

### VII. Full papers in scientific journals (reviewed)

1. Degenhardt R., Rolfes R., Zimmermann R., Rohwer K., “COCOMAT - Improved MATerial Exploitation at Safe Design of COMposite Airframe Structures by Accurate Simulation of COLLapse”, *Composite Structures*, Vol. 73 (2006), pp. 175-178
2. Kling A., Degenhardt R., Zimmermann R., “A Hybrid Subspace Analysis Procedure for Non-Linear Postbuckling Calculation”, *Composite Structures*, Vol. 73 (2006), pp. 162-170
3. Degenhardt R., Kling A., Klein H., Hillger W., Goetting Ch., Zimmermann R., Rohwer K., Gleiter A., “Experiments on Buckling and Postbuckling of Thin-Walled CFRP Structures using Advanced Measurement Systems”, *International Journal of Structural Stability and Dynamics*, Vol. 7, No. 2 (2007), pp. 337-358
4. Orifici A. C., Thomson R. S., Degenhardt R., Bisagni, C., Bayandor J, “Development of a finite element methodology for the propagation of delaminations in composite structures”, *Mechanics of Composite Materials*, Vol. 43, no. 1 (2007), pp. 9-28
5. Degenhardt R., Kling A., Rohwer K., Orifici A. C., Thomson R. S., “Design and Analysis of Stiffened Composite Panels Including Postbuckling and Collapse”, *Computers and Structures* Vol. 86 (2008), pp. 919-929
6. Orifici A. C., Thomson R. S., Degenhardt R., Kling A., Rohwer K., Bayandor J, “Degradation investigation in a postbuckling composite stiffened fuselage panel”, *Composite Structures* Vol. 82, no. 2 (2008), pp. 217-224

7. Degenhardt R., Wilckens D., Klein H., Kling A., Hillger W., Goetting Ch., Rohwer K., Gleiter A., "Experiments to detect the damage progress of axially compressed CFRP panels under cyclic loading", Special volume of *Key Engineering Materials* Vol. 383 (2008) pp 1-24
8. Orifici, A.C., Thomson, R.S., Herszberg, I., Weller, T., Degenhardt, R., Bayandor, J., 'An analysis methodology for failure in postbuckling skin-stiffener interfaces', *Composite Structures* vol. 86, (2008), pp. 186–193
9. Orifici A. C., Thomson R. S., Degenhardt R., Bisagni, C., Bayandor J, "A finite element methodology for analysing degradation and collapse in postbuckling composite aerospace structures", *Journal of Composite Materials*, Vol. 43, pp. 3239-3263, (2009)
10. Bruyneel M., Degenhardt R., Delsemme J., „An industrial solution to simulate post-buckling and damage of composite panels”, *JEC Composites Magazine* N°48, 38-39 (2009)
11. Kelly D.W., Lee M.C.W., Orifici A.C., Thomson R.S., Degenhardt R., "Collapse Analysis, Defect Sensitivity and Load Paths" *Computers, Materials and Continua*, Vol.10(2), pp. 163-194 (2009)
12. Lee M. C. W., Kelly D. W., Degenhardt R., Thomson R., "A study on the robustness of two stiffened composite fuselage panels", *Composite Structures*, Vol. 92(2), (2010), pp. 223-232
13. Lee M. C. W., Mikulik Z., Kelly D. W., Thomson R., Degenhardt R., "Robust design – A concept for imperfection insensitive composite structures", *Composite Structures* Vol. 92 (6), (2010), pp. 1469-1477
14. Degenhardt R., Kling A., Bethge A., Orf J., Kärger L., Rohwer K., Zimmermann R., Calvi A., "Investigations of imperfection sensitivity of unstiffened CFRP cylindrical shells", *Composite Structures*, Vol. 92 (8), (2010), pp. 1939–1946
15. Wilckens D., Degenhardt R., Rohwer K., R., Zimmermann R., Kepke M., Hildebrandt B., Zipfel A., "Cyclic buckling tests of pre-damaged CFRP stringer stiffened panels", *International Journal of Structural Stability and Dynamics*, Vol. 10, No. 4 (2010), pp. 827-852
16. Merrazzi S., Degenhardt R., Rohwer K., "Postbuckling analysis of composite shell structures: Toward fast and accurate tools with implicit fem methods", *International Journal of Structural Stability and Dynamics*, Vol. 10, No. 4 (2010), pp. 941-948
17. Orifici A. C., Thomson R. S., Degenhardt R., Bisagni, C., Bayandor J., "An analysis tool for design and certification of postbuckling composite aerospace structures", *International Journal of Structural Stability and Dynamics*, Vol. 10, No. 4 (2010), pp. 669-682
18. Silva N., Camotim D., Silvestre N., Degenhardt R., "Application of generalised beam theory to the study of the stability behaviour of laminated CFRP cylindrical stiffened panels", *International Journal of Structural Stability and Dynamics*, Vol. 10, No. 4 (2010), pp. 737-760
19. Kalnins K., Rikards R., Auzins J., Bisagni C., Abramovich H., Degenhardt R., "Metamodeling methodology for postbuckling simulation of Damaged composite stiffened structures with physical validation", *International Journal of Structural Stability and Dynamics*, Vol. 10, No. 4 (2010), pp. 705-716
20. Balzani C., Wagner W., Wilckens D., Degenhardt R., Büsing S., Reimerdes H.-G., "Adhesive Joints in Composite Laminates - A Combined Numerical/Experimental Estimate of Critical Energy Release Rates", *International Journal of Engineering Fracture Mechanics* (paper submitted)

### VIII. Conference papers

1. Kling A., Degenhardt R., "Nachbeulverhalten von Flugzeugrumpfschalen", Proceedings of the 13<sup>th</sup> German ABAQUS Users Conference, Freiburg, Germany, 24-25 September, 2001
2. Degenhardt R., Klein H., Kling A., Temmen H., Zimmermann R., "Buckling and postbuckling analysis of shells under quasi-static and dynamic loads", Proceedings Workshop „Schwarzer Rumpf (CFRP for Future Aircraft Structures)“, Braunschweig, Germany, 20 October, 2001
3. Möcker T., Reimerdes H.-G., Degenhardt R., Zimmermann R., "Postbuckling Analysis of CFRP Stringer Stiffened Panels - Benchmarking and Development of Fast Tools", Proceedings of the *International Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures*, Eilat, Israel, March 1-2, 2004
4. Kling A., Degenhardt R., Zimmermann R., "Postbuckling Analysis of CFRP Stringer Stiffened Panels - Development of a Fast Design Tool", Proceedings of the *International Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures*, Eilat, Israel, March 1-2, 2004
5. Degenhardt R., Rolfes R., Zimmermann R., Rohwer K., "COCOMAT - Improved MATerial Exploitation at Safe Design of COmposite Airframe Structures by Accurate Simulation of COllapse", Proceedings of the *International Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures*, Eilat, Israel, March 1-2, 2004
6. Degenhardt R., Rohwer K., Wagner W., Delsemme J.-P., "Postbuckling and collapse analysis of stringer stiffened panels – A GARTEUR activity", Proceedings of the 4<sup>th</sup> *International Conference on Thin-Walled Structures*, Loughborough, England, 22-24 June, 2004
7. Rolfes R., Tessmer J., Degenhardt R., Temmen H., Bürmann P., Juhasz J., "New Design Tools for Lightweight Aerospace Structures", Proceedings of the *Seventh International Conference on Computational Structures Technology*, Lisbon, Portugal, 7-9 September, 2004
8. Degenhardt R., Delsemme J.-P., "Buckling and Postbuckling Analysis of a CFRP Stiffened Panel for a Better Material Exploitation", Proceedings of the *SAMTECH Users Conferences*, Paris, France, 2-3 February, 2005
9. Degenhardt R., Zimmermann R., Rolfes R., Rohwer K., "Improved Material Exploitation of Composite Airframe Structures by Accurate Simulation of Postbuckling and Collapse – The projects POSICOSS and COCOMAT", Proceedings of the 11<sup>th</sup> *Australian International Aerospace Congress*, Melbourne, Australia, 13-17 March, 2005

10. Orifici A. C., Thomson R. S., Gunnion A. J., Degenhardt R., Abramovich H., Bayandor J, "Benchmark Finite Element Simulations of Postbuckling Composite Stiffened Panels", Proceedings of the *11<sup>th</sup> Australian International Aerospace Congress*, Melbourne, Australia, 13-17 March, 2005 (Reviewed paper)
11. Kling A., Degenhardt R., Klein H., Tessmer J., Zimmermann R., "Novel stability design scenario for aircraft structures – simulation and experimental validation", Proceedings of the *5<sup>th</sup> International Conference on Computation of Shell and Spatial Structures*, 1-4 June, 2005 Salzburg, Austria
12. Araújo F. C., Silva K. I., Degenhardt R., "3D analysis of coupled thin-walled structural elements by means of standard boundary-element formulations", Proceedings of the *Mechanics & Materials Conference*, Baton Rouge, Louisiana, 1-3 June, 2005
13. Degenhardt R., Tessmer J., "Advances in Computational Stability Analysis of Composite Aerospace Structures", Proceedings of the *Int. Congress on FEM Technology - 23<sup>rd</sup> CADFEM Users' Meeting*, Bonn, Germany, 9-11 November, 2005
14. Orifici A. C., Thomson R. S., Degenhardt R., Kling A., Rohwer K., Bayandor J, "Degradation investigation in a postbuckling composite stiffened fuselage panel", Proceedings of the *13<sup>th</sup> International Conference of Composite Structures*, Melbourne, Australia, 14-16 November, 2005
15. Gleiter A., Riegert G., Zweschper Th., Degenhardt R., Busse G., „Advanced ultrasound activated Lockin-Thermography for defect selective depth resolved imaging", 28<sup>th</sup> Thermosense Conference, Orlando, USA, 17-20 April, **2006**
16. Orifici A. C., Thomson R. S., Degenhardt R., Bisagni C., Bayandor J, "Development of a Finite Element Analysis Methodology for the Propagation of Delaminations in Composite Structures", Proceedings of the *XIV International Conference on Mechanics of Composite Materials*, Riga, Latvia, 29 May 2 June, 2006
17. Degenhardt R., Kling A., Rohwer K., "Design and Analysis of Composite Panels", Proceedings of the *III European Conference on Computational Mechanics*, Lissabon, 5-8 June, 2006
18. Orifici A. C., Thomson R. S., Degenhardt R., Bisagni C., Bayandor J, "Development of a Degradation Model for the Collapse Analysis of Composite Aerospace Structures", Proceedings of the *III European Conference on Computational Mechanics*, Lissabon, 5-8 June, 2006
19. Degenhardt R., "Improved Exploitation of Composite Airframe Structures by Accurate Simulation of Collapse – The COCOMAT project", Aeronautics Days, Vienna, Austria, 19-19-21 June, 2006
20. Degenhardt R., Kling A., Rohwer K., "Future Design Scenario for Composite Airframe Panels", Proceedings of the *25<sup>th</sup> Congress of International Council of the Aeronautical Sciences*, Hamburg, Germany, 3-8 September, 2006
21. Kling A., Degenhardt R., Zimmermann R., "A Flexible Subspace Analysis Procedure for Non-linear Calculations", Proceedings of the *25<sup>th</sup> Congress of International Council of the Aeronautical Sciences*, Hamburg, Germany, 3-8 September, 2006
22. Temmen H., Degenhardt R., Raible T., "Tailored Fibre Placement Optimization Tool", Proceedings of the *25<sup>th</sup> Congress of International Council of the Aeronautical Sciences*, Hamburg, Germany, 3-8 September, 2006
23. Degenhardt R., Wilhelmi J., Grünwald A., "Development and Application of a new Design Tool for Aerospace Structures", Proceedings of the *25<sup>th</sup> Congress of International Council of the Aeronautical Sciences*, Hamburg, Germany, 3-8 September, 2006
24. Rohwer K., Degenhardt R., "COCOMAT – ein EU-Projekt zur Simulation des Beulverhaltens geschädigter Schalen aus Faserverbundmaterial", *Jubiläum der Zeitschrift Technische Mechanik*, 22 September, 2006
25. Degenhardt R., Klein H., "Stabilität von Faserverbundschalen", *Wissenschaftstag 2006, Strukturmechanik des CFK-Rumpfes*, Braunschweig, Germany, 28 September, 2006
26. Degenhardt R., "Future Design for Composite Airframe Structures – The Projects POSICOSS and COCOMAT", *4<sup>th</sup> International Conference on New Aerospace Trends*, Bilbao, Spain, 26-27 October, 2006
27. Degenhardt R., Tessmer J., "New Achievements in Stability of Composite Airframe Structures", Proceedings of the *12<sup>th</sup> Australian International Aerospace Congress*, Melbourne, Australia, 19-22 March, **2007**
28. Orifici A. C., Thomson R. S., Degenhardt R., Büsing S., Bayandor J, "Development of a Finite Element Methodology for Modelling Mixed-Mode Delamination Growth in Composite Structures", Proceedings of the *12<sup>th</sup> Australian International Aerospace Congress*, Melbourne, Australia, 19-22 March, 2007
29. Kling A., Baaran J., Kärger L., Teßmer J., Degenhardt R., "Potentials and Limitation of FE-based Simulation Methods for Fibre Composite Structures", NAFEMS Seminar Zuverlässiger Einsatz Numerischer Simulationen in der Vorausberechnung, Widerspruch – Herausforderung – Erfolgsfaktoren, Wiesbaden, 28-29 March, 2007
30. Degenhardt R., Tessmer J., "Improved Design Scenario for Composite Airframe Structures", Proceedings of the *48<sup>th</sup> AIAA Conference on Structures, Structural Dynamics and Materials*, Hawaii, USA, 23-26 April, 2007
31. Aschenbrenner L., Temmen H., Degenhardt R., "Tailored Fibre Placement Optimization Technology – Optimisation and Computation of CFRP structures", Proceedings of the *ESAComp User's Meeting*, Braunschweig, Germany, 24-25 April, 2006
32. Rohwer K., Degenhardt R., "Simulating Postbuckling Behaviour and Collapse of Stiffened CFRP Panels", Proceedings of the *NAFEMS World Congress 2007*, Vancouver, Canada, 22-25 May, 2007
33. Degenhardt R., Bethge A., Rohwer K., Zimmermann R., Kling A., "Probabilistic Approach for better Buckling Knock-down Factors of CFRP Cylindrical Shells - Tests and Analyses", Proceedings of the *18<sup>th</sup> Engineering Mechanics Division Conference of the American Society of Civil Engineers*, Blacksburg, Virginia, USA, 3-6 June, 2007
34. Degenhardt R., Bethge A., Rohwer K., Zimmermann R., Kling A., Tessmer J., Calvi A., "Probabilistic approach for an improved buckling knock-down factors of CFRP cylindrical shells", Proceedings of the *1<sup>st</sup> European Air and Space Conference (CEAS)*, Berlin, Germany, 10-13 September, 2007

35. Orifici A. C., Thomson R. S., Degenhardt R., "Development of a Finite Element Methodology for the Collapse Analysis of Composite Aerospace Structures", Proceedings of the *Thematic Conference on Mechanical Response of Composites (ECCOMAS)*, Porto, Portugal, 12-14 September, 2007
36. Orifici A. C., Herszberg I., Thomson R. S., Degenhardt R., Weller T., Degenhardt R., "An analysis methodology for failure in postbuckling skin-stiffener interfaces", Proceedings of the *14<sup>th</sup> Int. Conference on Composite Structures*, Melbourne, Australia (ICCS), 19-21 November, 2007
37. Degenhardt R., Rohwer K., "Achievements in the Exploitation of Composite Airframe Structures by Accurate Simulation of Collapse", Proceedings of the *48<sup>th</sup> Israel Annual Conference on Aerospace Sciences*, Tel-Aviv, Israel, 27-28 February, **2008**
38. Wilckens D., Degenhardt R., Kepke M., Hildebrandt B., Rohwer K., Tessmer J., Gleiter A., "Experiments to detect the damage progress of axially compressed CFRP panels under cyclic loading", Proceedings of the *48<sup>th</sup> Israel Annual Conference on Aerospace Sciences*, Tel-Aviv, Israel, 27-28 February, 2008
39. Lee M. C. W., Thomson R., Degenhardt R., Kelly D. W., "Imperfection investigation of composite stiffened fuselage panels for Postbuckling analyses", Proceedings of the *5<sup>th</sup> International Conference on Thin-Walled Structures*, Brisbane, Australia, 18-20 June, 2008
40. Calvi A., D'Amico J., Degenhardt R., "Recent Experiences and Future Developments on the Validation of Finite Element Models for Spaceflight Hardware", Proceedings of the *8<sup>th</sup> World Congress on Computational Mechanics (WCCM8)*, Venice, Italy, 30 June – 5 July, 2008
41. Degenhardt R., Wilckens D., Rohwer K., Zimmermann R., Tessmer J., „Improved Material Exploitation of Composite Airframe Structures by Accurate Simulation of Collapse - The COCOMAT project.“, Proceedings of the *2<sup>nd</sup> Int. Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures*, Braunschweig, Germany, 3-5 September, 2008
42. Wilckens D., Degenhardt R., Rohwer K., „IBUCK - A fast simulation tool for the design of CFRP aerospace structures“, Proceedings of the *2<sup>nd</sup> Int. Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures*, Braunschweig, Germany, 3-5 September, 2008
43. Degenhardt R., Wilckens D., Rohwer K., Kepke M., Hildebrand B., Zipfel A., „Buckling and collapse tests using advanced measurement systems“, Proceedings of the *2<sup>nd</sup> Int. Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures*, Braunschweig, Germany, 3-5 September, 2008
44. Silva N. M. F., Degenhardt R., Camotim D., Silvestre N., „Application of generalised beam theory to the study of the stability behaviour of laminated CFRP cylindrical stiffened panels“, Proceedings of the *2<sup>nd</sup> Int. Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures*, Braunschweig, Germany, 3-5 September, 2008
45. Lee M., Thomson R., Degenhardt R., Kelly D.W., „A stochastic study on the robustness of a stiffened composite structure“, Proceedings of the *2<sup>nd</sup> Int. Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures*, Braunschweig, Germany, 3-5 September, 2008
46. Orf J., Kärger L., Degenhardt R., Bethge A., Tessmer J., „The influence of imperfections on the buckling behaviour of unstiffened CFRP-cylinders“, Proceedings of the *2<sup>nd</sup> Int. Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures*, Braunschweig, Germany, 3-5 September, 2008
47. Steinmüller P., Breitsch A., Degenhardt R., Rohwer K. Investigations of axially loaded unstiffened CFRP cylindrical shells subject to single perturbation loads “, Proceedings of the 2nd Int. Conference on Buckling and Postbuckling Behaviour of Composite *Laminated Shell Structures*, Braunschweig, Germany, 3-5 September, 2008
48. Wang H., Büschel A., Degenhardt R., Rohwer K., Sun X., Wagner W., „Empirical formula for the critical perturbation load“, Proceedings of the 2nd Int. Conference on Buckling and Postbuckling Behaviour of Composite *Laminated Shell Structures*, Braunschweig, Germany, 3-5 September, 2008
49. Orifici A., Thomson R. S., Degenhardt R., „An analysis tool for design and certification of postbuckling composite aerospace structures“, Proceedings of the *2nd Int. Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures*, Braunschweig, Germany, 3-5 September, 2008
50. Rikards R., Kalnins K., Degenhardt R., „Overview of slow computational and fast simulation tools developed during the project COCOMAT“, Proceedings of the *2nd Int. Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures*, Braunschweig, Germany, 3-5 September, 2008
51. Caruso A., Pietroni V., Masiero E. Poggi S., Degenhardt R., “Material properties, design of structures and degradation models“, Proceedings of the *2nd Int. Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures*, Braunschweig, Germany, 3-5 September, 2008
52. Orifici A., Thomson R. S., Degenhardt R., “The use of damage as a design parameter for postbuckling composite aerospace structures”, Proceedings of the *26<sup>th</sup> Congress of International Council of the Aeronautical Sciences*, Anchorage, Alaska, USA, 14 - 19 September, 2008
53. Degenhardt R., Teßmer J., Kling A., “Collapse Behaviour of Thin-Walled CFRP Structures due to Material and Geometric Nonlinearities – Experiments and Simulation”, Proceedings of the *26<sup>th</sup> Congress of International Council of the Aeronautical Sciences*, Anchorage, Alaska, USA, 14 - 19 September, 2008
54. Degenhardt R., “Challenges in the design of future structures made of CFRP”, Proceedings of the 2<sup>nd</sup> SAIAS Symposium, Stellenbosch, South Africa, 14-16 September 2008
55. Degenhardt R., “Advances in Stability of Composite Airframe Structures Regarding Collapse, Robust Design and Dynamic Loading”, Proceedings of the *ABAQUS Users-Meeting*, Bad-Homburg, Germany, 22.-23. September 2008
56. Degenhardt R., “New Achievements in Stability of Composite Structures”, Proceedings of the *3<sup>rd</sup> Int. Conference Supply on the Wings*, Frankfurt, Germany, 11-13 November, 2008
57. Degenhardt R., Unckenbold W., Sierke B.R.A., Baar. A., “New Course of Studies in Composites and Adaptronics”, Proceedings of the *3<sup>rd</sup> Int. Conference Supply on the Wings*, Frankfurt, Germany, 11-13 November, 2008

58. Degenhardt R., "New achievements in stability of unstiffened CFRP structures", Proceedings of the Int. Conference on Computational & Experimental Engineering and Sciences, Phuket, Thailand, 8-13 April, **2009** (invited keynote)
59. Kelly D. W., Lee M. C. W., Thomson R. S., Degenhardt R., "Collapse Analysis, Defect Sensitivity and Load Paths in Stiffened Shell Composite Structures", Proceedings of the *Int. Conference on Computational & Experimental Engineering and Sciences*, Phuket, Thailand, 8-13 April, 2009
60. Degenhardt R., "Strategien für das Maßschneidern von Faserverbundstrukturen in der Luft- und Raumfahrt", Hannover Industrie-Messe, Suppliers Convention, Hannover, 21 April, 2009 (invited)
61. Lee M. C. W., Mikulik Z., Kelly D. W., Thomson R., Degenhardt R., "Robust design – A concept for imperfection insensitive composite structures", Proceedings of the *15th International Conference on Composite Structures*, Porto, Portugal, 15-17 June, 2009
62. Degenhardt R., Wilckens D., Rohwer K., Kepke M., Hildebrand B., Zipfel A., "Experiments on buckling and postbuckling of thin-walled CFRP structures", Proceedings of the *3<sup>rd</sup> Int. European Conference for Aerospace Sciences*, Paris, France, 6-9 July, 2009
63. Degenhardt R., "Future Design for Composite Airframe Panels", Proceedings of the *Asian Aerospace Shenyang Congress*, Shenyang, China, 7-9 July 2009 (invited keynote)
64. Degenhardt R., "New Achievements in Stability of Composite Structures", Proceedings of the *Asian Aerospace Shenyang Congress*, Shenyang, China, 7-9 July 2009 (invited)
65. Degenhardt R., "Challenges for a multidisciplinary design of the future aircraft", Proceedings of the *Conference on Interdisciplinary research at German universities*, Riga, Latvia, 16 October, 2009
66. Degenhardt R., „CFK-Anwendungen im Flugzeugbau und Schiffbau“, Proceedings of the Conference „*Schiffahrt meets Luftfahrt*“, Hamburg, Germany, 29 October 2009
67. Degenhardt R., Wiedemann M., Hermann Axel, Baar A., "Challenges in the design of future structures made of CFRP, Proceedings of the 11<sup>th</sup> Int. Conference for *Car Body Engineering* (Karosseriebautechnik), Hamburg, Germany, May 11-12, **2010**, (invited)
68. Lee M., Mikulik Z., Degenhardt R., "A Stochastic Approach for Robust Structures under Compressive Loading", Proceedings of the World Congress on Computational Mechanics (WCCM 2010), Sydney, Australia, July 19-23, 2010
69. Degenhardt R., Kling A., de Araújo F. C., "Advances in Computational Stability Analysis of Composite Aerospace Structures", Proceedings of the 8th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2010), Rhodes, Greece, September 19-23, 2010, (invited)
70. de Araújo F. C., Degenhardt R., "Substructure-based Block-diagonal Preconditioning for BEM Systems of Equations - Applications to the Micromechanical Analysis of General Composites", Proceedings of the 8th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2010), Rhodes, Greece, September 19-23, 2010
71. Degenhardt R., "Improved Exploitation of Composite Airframe Structures by Accurate Simulation of Collapse – The COCOMAT project", Aeronautics Days, Madrid, Spain, 29 March – 1 April, **2011**, (invited)
72. Degenhardt R., Kling A., "Future Design for Composite Airframe Structures", Proceedings of the 16th International Conference on Composite Structures (ICCS16), Porto, Portugal, June 28-30, 2011, (invited keynote)

#### **IX. Reviewer activities for**

##### **[1]. Organisations**

1. European Commission
2. Czech Republic, Ministry of Education
3. National Research Foundation of South Africa

##### **[2]. Scientific Journals**

1. Composite Structures
2. Composites Science and Technology
3. International Journal of Structural Stability and Dynamics
4. Journal of Engineering Mechanics
5. Journal of Composite Materials
6. Composites Part A
7. Composites Part B
8. Scientific Research and Essays
9. Aircraft Engineering and Aerospace Technology
10. Journal of Ocean Engineering
11. Journal of Engineering Fracture Mechanics
12. Journal of Civil Engineering and Management
13. Computers, Materials, & Continua
14. Journal of Aircraft

##### **[3]. Conferences**

1. 17th International Conference on Composite Materials, 27 Jul 2009
2. Deutscher Luft- und Raumfahrt Kongress, 8-10 September 2009
3. 4th CFK Convention, Stade, Germany, Stade, Germany, 15-16 June, 2010