Prof Peter R N Childs
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General interests include: creativity; the application of creative tools in industry; mechanical and product design; robotics; manufacture; rotating flow and heat transfer; sustainable energy system design.

Current Roles include:

- Head of School, Dyson School of Design Engineering, Imperial College London
- Joint course director for the Industrial Design Engineering double masters (MA and MSc at Imperial College London and the Royal College of Art.
- Professorial Lead in Engineering Design in the Faculty of Engineering, Imperial.
- Editor Journal of Power and Energy, Part A, Proc. IMechE
- Founder Director and Chief Scientific Officer, QBot Ltd

Prior to current role:

- Professor in the Mechanical Engineering Department, Imperial College London
- Module lead: Design and Manufacture, Design Led Innovation and New Venture Creation, Gizmo.
- Director of the Design Engineering Research Group, Imperial.
- Director of the Design Teaching Subject Group, in Mechanical Engineering, Imperial.
- Founding Director of InQbate, the Higher Education Funding Council for England (HEFCE) funded Centre of Excellence in Teaching and Learning (CETL) in Creativity, University of Sussex.
- Director of the Rolls-Royce University Technology Centre (UTC) for Aero-Thermal Systems
- Professor of Engineering Design, University of Sussex.
- Line manager for over 50 personnel at the University of Sussex in InQbate, the Rolls-Royce UTC and in Product Design.
- Budget holder for InQbate (>£4Million), Rolls-Royce UTC (ca. £400k/annum).
- Supervision of interdisciplinary, collaborative projects, across engineering, design, the humanities and business. Supervision of over thirty Phds.
- Managing director Llama Linda Ltd, director at SEED
- Prior to attending Sussex undertook an apprenticeship as a locksmith, Universal Locks.

Publications and achievements include:

- Over 180 refereed papers.
- Mechanical Design Engineering Handbook, now in its 2nd edition (Elsevier 2013, 2018); Text book on Mechanical Design (Butterworth Heinemann/Elsevier), 2nd edition and reprinted 11 times.
- Six research monographs on temperature measurement and rotating flow.
- Four edited proceedings on vehicle technology and design.
- ✓ Winner of the American Society of Mechanical Engineers – International Gas Turbine Institute John P. Davis award for exceptional contribution to the literature of gas turbine technology;
- ✓ Institution of Mechanical Engineers 2004, ASME 2010, Design 2014, ICED 2017 best paper awards
- ✓ IEEE innovation award 2015, CIBSE innovation award 2018.
- ✓ Elected as Fellow of the Royal Society for the Arts, ASME and IMechE.
- ✓ Appointed by the Peoples Republic of China, under the Programme 111 technology development initiative with the role of developing autonomous design capability.

Keynote speaker at

- Robotics and Automation 2018, IEEE Information and Automation for Sustainability (ICIAfS) 2018
- European Conference on Renewable Systems 2018,
- International Symposium on Jet Propulsion and Power Engineering in 2006, 2010, 2012, 2014, 2017
- International Chinese Turbomachinery Conference 2018, 4th and 5th Int. Gas Turbine Conferences 2008, 2010
- Engineering and Product Design Education Conference in 2011; and EDE12; EdCrunch 2017
- Thermal Energy Storage 2016; CE100 2016; International Aircraft Cabin Air Conference 2017

Industry Experience

- Research and development contracts for Alstom, Ford, Rolls-Royce plc, Snecma, EME, Bosch, DaimlerChrysler, MTU, Volvo, Johnson Matthey, Siemens, ITP, Fiat, Airbus, Rover, BMW, Ricardo Consulting Engineers, Naked Energy, Rio-Tinto, EPSRC, TSB and the EU as well as SMEs
- Principal or co-investigator on contracts totalling over £80 million with extensive management experience.
- Founder Director, QBot Ltd, a spin out company (2012-present); Creative Director ICeni Labs (2013-2016), Director Descreco (2013-present)
- International Advisory Committee for Collaborative Innovation Center for Advanced Aero Engine, China
- Institute for Gas Turbine, China, International Advisor

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Résumé

Peter Childs is Head of the Dyson School of Design Engineering and the Professorial Lead in Engineering Design at Imperial College London. His general interests include: creativity tools and innovation; design process and design rationale; fluid flow and heat transfer, particularly rotating flow and flow system design for gas turbine engine applications; sustainable energy component, concept and system design; robotics. Prior to his current post at Imperial he was director of the Rolls-Royce supported University Technology Centre for Aero-Thermal Systems, director of InQbate and professor at the University of Sussex.

He has contributed to over 180 refereed journal and conference papers, and several books including monographs on rotating flow (Elsevier and ESDU (Engineering Sciences Data Unit)), labyrinth seals (ESDU) and temperature measurement (Elsevier and ESDU), and a text book on mechanical design (Butterworth Heinemann), now in its second edition, and the Handbook on Mechanical Design Engineering (Elsevier, 2013, 2018) as well as co-authoring books on rural urban migration, inclusive sports and sports technology. He is Editor of the Journal of Power and Energy. His research interests include: fluid flow, especially rotating applications in machinery and geophysical flows; heat transfer; temperature measurement; gas turbine engine technologies including turbomachinery design, internal air systems, labyrinth seals, rim seals, static seals, face seals, multi-element seals and active seals; sustainable energy concepts, their design and implementation including energy distribution systems, saturated vapour cycles and recuperation, solar collectors, energy audits and thermodynamics cycles; creativity and creativity tools, especially their application in industry; morphological analysis; detailed design; robotics.

He has been involved in research and development contracts for Rolls-Royce plc, Alstom, Snecma, DaimlerChrysler, MTU, Volvo, Johnson Matthey, Siemens, Industriales Turbinas Propulsores, Fiat Avio, Airbus, Ricardo Consulting Engineers, Ford, Rio Tinto, the EPSRC, TSB. Innovate UK and the EU as well as a number of SMEs (small and medium enterprises) and has been principal or co-investigator on contracts totalling over £80 million. He has produced over 2000 designs ranging from turbines, compressors and turbochargers to aircraft, ventilators and automotive interiors. Recent designs include garments, gear pumps, robotic components and conceptual work for new passenger aircraft.

He was the Chairman of the South Eastern Region of the Institution of Mechanical Engineers for three years. He was the winner of the American Society of Mechanical Engineers – International Gas Turbine Institute John P. Davis award for exceptional contribution to the literature of gas turbine technology and in 2004 won an Institution of Mechanical Engineers best paper award, an ASME best paper award in 2010 and Design 2014 Outstanding Paper award and innovation awards from the IEEE in 2017 and CIBSE in 2018 with QBot Ltd. He is a Fellow of the American Society of Mechanical Engineers, a Fellow of the Institution of Mechanical Engineering and a Fellow of the Royal Society for the Arts and Manufactures. He is a member of the European Turbomachinery Network and an active member of the ASME K14 Heat Transfer Committee and has been the Vanguard Chair for the 2011 ASME Turbo Expo as well as Session Chair from 2004-2016. He has been appointed by the Peoples Republic of China, under the Programme 111 technology development initiative for the period 2007-2012 and was a keynote speaker at the International Symposium on Jet Propulsion and Power Engineering in 2006 on rotating flow systems, 2008 on rotating flow, 2010 on chemical looping and 2012 on future aircraft design and morphological analysis in 2014. He has also given keynotes for the 4th and 5th International Gas Turbine Conferences in 2008 and 2010, on commerce and creativity for the E&PDE Conference in 2011, and on modular thermal energy storage at the Thermal Energy Storage 2016 conference. In 2017 he gave 3 keynotes and 4 in 2018.

His roles at Imperial include being the joint course director for the Innovation Design Engineering with the Royal College of Art, and Design lead for the Manufacturing Futures Lab. He is also Founder Director and Chief Scientific Officer of QBot Ltd.

Publications

Category	Reference
Books and monographs	
14	Childs, P.R.N. Mechanical design engineering handbook, 2nd Edition. Elsevier Butterworth Heinemann, 2018.
13	Childs, P.R.N. ESDU 15012. Flow in rotating cavities. ESDU, 2015. ISBN 978 1 86246 776 7
12	Childs, P.R.N. Mechanical design engineering handbook. Elsevier Butterworth Heinemann, 2013. ISBN 978-0080977591
11	Hall, A., Childs, P.R.N., Zhensheng Liu, Chao Zhao. (Editors). GoGlobal - Rural-Urban. Waterpub, 2012. (239 pages) ISBN 978 7 5084 9423 4
10	Childs, P.R.N., Keech, D., Southgate, D. (Editors). Enabled. The Rio Tinto Sports Innovation Challenge Story. DEG Imperial College London, ISBN 978-0-9572298-0-8, 2012.
9	Childs, P.R.N. Rotating flow. Elsevier, 2011. ISBN 978 0123820983.
8	Childs, P.R.N. Labyrinth seal flow. ESDU 09004. ISBN 978 1 86246 639 5, 2009.
7	Childs, P.R.N. Flow in rotating components - discs, cylinders and cavities. ESDU 07004. ESDU Fluid Mechanics, Internal Flow Series Volume 4c (Flow In Rotating Machinery) ISBN: 978 186 246 605 0 ISSN: 0141-4011, 2007
6	Childs, P.R.N. Temperature measurement. Resistance thermometry. ESDU 06019.ESDU Heat Transfer Series Volume 4 (Insulation And Temperature Measurement) ISBN: 978 186 246 595 4 ISSN: 0141-402X, 2007
5	Childs, P.R.N. Temperature measurement. Thermocouples. ESDU 06018. ESDU Heat Transfer Series Volume 4 (Insulation And Temperature Measurement) ISBN: 978 186 246 594 7, ISSN: 0141-402X, 2007
4	Childs, P.R.N. Mechanical Design. 2nd Edition, Elsevier Butterworth Heinemann 2004 (358 pages) ISBN 0750657715
3	Childs, P.R.N. Temperature measurement. Techniques. ESDU 02006. ESDU Heat Transfer Series Volume 4 (Insulation And Temperature Measurement) ISBN: 978 1 86246 196 3, ISSN: 0141-402X, 2002
2	Childs, P.R.N. Practical Temperature Measurement. Butterworth Heinemann, 2001. ISBN 075065080X. (402 pages).
1	Childs, P.R.N. Mechanical Design. Arnold, 1998. Reprinted 1999, 2001, 2002. (231 pages). ISBN 0340692367.
Edited Proceedings	
7	Southgate, D.F.L, Bull, A.M.J., Childs, P.R.N., (Editors). Sports innovation technology and research. World Scientific, 2016.
6	Markides, C.N., Heyes, A.L., and Childs, P.R.N. (Editors). Proceedings of the 13th UK Heat Transfer Conference, UKHTC13. DEG 2013. ISBN 978-0-9572298-5-3
5	Childs, P.R.N., Bull, A., Ghajari, M. (Editors). Helmet performance and design, IMechE, DEG, 2013 ISBN 978-0-9572298-2-2
4	Childs, P.R.N. and Stobart, R.K. (Editors). 3rd ADSC, IMechE Conference on Total

Category	Reference
	Vehicle Technology, Finding the radical, implementing the practical, Professional Engineering Publishing, 2004. (309 pages) ISBN 1860584608
3	Stobart, R.K., and Childs, P.R.N. (Editors). Getting the Innovation back into design. Proceedings of the 2nd ADSC, IMechE Conference on Total Vehicle Technology, PEP, 2002. (243 pages)
2	Childs, P.R.N., and Stobart, R.K. (Editors). Total Vehicle Technology, Professional Engineering Publications (PEP), 2001.
1	Childs, P.R.N., and Brodhurst, E.K. (Editors). Engineering Design Education EDE 2000, Professional Engineering Publications (PEP), 2000. ISBN 1860582656.
Journal Articles	
48	Han, J., Shi, F., Chen, L., Childs, P.R.N. A computational tool for creative idea generation based on analogical reasoning and ontology. Artificial Intelligence for Engineering Design, Analysis and Manufacturing. Accepted 3rd April 2018.
47	Spyrakos-Papastavridis, E., Kashiri, N., Childs, P.R.N, Tsagarakis, N.G. Impedance regulation techniques for compliant humanoid balancing. Robotics and Autonomous Systems 104 (2018) 0–13, 2018
46	Garvey, B., Chen, L., Shi, F., Han, J., Childs, P.R.N. New directions in computational, combinational and structural creativity. Journal of Mechanical Engineering Science, 2018 https://doi.org/10.1177/0954406218769919
45	Michalakoudis, I., Aurisicchio, M., Childs, P.R.N., Koutlidis, A., Harding, J. Empowering manufacturing personnel through functional understanding. Production Planning & Control Accepted 13-2-18
44	Han, J, Shi, F, Chen, L, and Childs, P.R.N. The Combinator – A computer-based tool for creative idea generation based on a simulation approach. Design Science, 2018. doi: 10.1017/dsj.2017.31 Accepted 110218
43	Childs, P.R.N., Shultz, D.E. Passenger Aircraft Cabin Air Contamination due to Bleed Air. Aerospace, 2018. http://www.mdpi.com/journal/aerospace IN PROGRESS
42	Zhu, L., Li, N., and Childs, P.R.N. Light-weighting in aerospace component and system design. Propulsion and Power Research, 2018. Paper accepted 220318
41	Spyrakos-Papastavridis, E., Medrano-Cerda, G.A., Tsagarakis, N.G., Childs, P.R.N., Dai, J.S., Caldwell, D.G. JMR-17-1137 (Research Paper), Selective-compliance based Lagrange model and multilevel non-collocated feedback control of a humanoid robot. Journal of Mechanisms and Robotics. Paper accepted 14/1/18
40	Han, J., Park, D., Shi, F., Chen, L., Hua, M., and Childs, P.R.N. Three driven approaches to combinational creativity: Problem-similarity- and inspiration-driven. Proc IMechE Part C: J Mechanical Engineering Science, 2017. doi: 10.1177/0954406217750189
39	Shi, F., Chen, L., Han, J., and Childs, P.R.N. A data-driven text mining and semantic network analysis for design information retrieval. ASME. J. Mech. Des., 139(11):111402-111402-14, 2017. doi:10.1115/1.4037649
38	Michalakoudis, I., Aurisicchio, M., Childs, P.R.N. Using Functional Analysis Diagrams to optimize the efficiency of Process Failure Mode and Effects Analysis: A case study. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2017.
37	Michalakoudis, I., Childs, P., Aurisicchio, M., and Harding, J. Using functional analysis diagrams to improve product reliability and cost. Advances in Mechanical

Category	Reference
	Engineering, Vol. 8, pp. 1-11, 2017.
36	Li, W; Zhang, J; Mi, P; Zhao, J; Tao, Z; Childs, P.R.N; Shih, T. The Effect of Gravity on R410A Condensing Flow in Horizontal Circular Tubes. Numerical Heat Transfer, Part A: Applications, 2017. http://dx.doi.org/10.1080/10407782.2016.1264743
35	Baxter, W.L., Aurisicchio, M., Childs, P.R.N. Materials, use and contaminated interaction. Journal of Materials and Design, 2015.
34	Childs, P.R.N., Garvey, B. Using Morphological Analysis to Tackle Uncertainty at the Design Phase for a Safety Critical Application. Propulsion and Power Research 4, pp. 1-8, 2015. DOI information: 10.1016/j.jppr.2015.02.006
33	Baxter, W.L., Aurisicchio, M., and Childs, P.R.N. A psychological ownership approach to designing object attachment. Journal of Engineering Design, 2015
32	Hu, Z., Rao, C., Tao, C., Childs, P.R.N., and Zhao, Y. A case-based decision theory based process model to aid product conceptual design. Cluster Comput., 2017.
31	Hall, A., Wuggetzer, I., Mayer, T., and Childs, P.R.N. Future aircraft cabins and design thinking: optimisation vs. win-win scenarios. Journal of Propulsion and Power Research, Vol. 2(2), pp. 85–95, 2013. http://dx.doi.org/10.1016/j.jppr.2013.04.001
30	Childs, P.R.N. Engineering freakout. International Journal of Mechanical Engineering Education, Vol. 41, pp. 297-305, 2013.
29	Tek-Jin Nam, Childs, P.R.N., Minjung Sohn. Design tackles and tools. International Journal of Mechanical Engineering Education, Vol. 41, pp. 341-353, 2013.
28	Coren, D., Turner, J., Eastwood, D., Davies, S., Atkins, N., Childs, P.R.N., Dixon, J., Scanlon, T. An Advanced Multi-Configuration Turbine Stator Well Cooling Test Facility. Trans. ASME: Journal of Turbomachinery, Vol. 135, pp. 011003-1 to 011003-12, 2013.
27	Yao, W., Childs, P.R.N. Application of design rationale for a robotic system for single-incision laparoscopic surgery and natural orifice transluminal endoscopic surgery. Proceedings of the Institution of Mechanical Engineers, Part H, Journal of Engineering in Medicine, Vol. 207, pp. 821-830, 2013. DOI: 10.1177/0954411913486756
26	Eastwood, D. Coren, D.D., Long, C.A., Atkins, N.R., Childs, P.R.N., Scanlon, T.J. Dixon, J.A., Guijarro Valencia, A. Experimental investigation of turbine stator well rim seal, re-ingestion and interstage seal flows using gas concentration techniques and displacement measurements. Transactions of the ASME, Journal of Engineering for Gas Turbines and Power, Vol. 134, pp 082501-1 to 082501-9, 2012.
25	Howey, D, Childs, P.R.N., Holmes, A. Review of air-gap convection in rotating electrical machines. IEEE Transactions on Industrial Electronics. Vol. 59, Issue 3, pp. 1367-1375, 2012.
24	Childs, P.R.N., McGlashan, N.R., Heyes, A.L. Accessing high thermal efficiency power generation using fluid phase chemical looping. Transactions of Nanjing University of Aeronautics & Astronautics, Vol. 28, No. 1, pp. 1-11, ISSN 1005-1120, 2011.
23	Yang, B., Xu, G., Childs, P.R.N., Tao, Z., and Ding, S. Prediction of coolant deflection tendencies in rotating film cooling. Proc of the IMechE, Journal of Mechanical Engineering Science, Vol. 224, pp. 2435-2447, 2010.
22	McGlashan, N.R., Childs, P.R.N., Heyes, A.L. Chemical looping combustion using the direct combustion of liquid metal in a gas turbine based cycle. Trans. ASME, Journal of Engineering for Gas Turbines and Power, Vol.133, pp. 031701-1 to 031701-13, 2011.

Category	Reference
21	McGlashan, N.R., Childs, P.R.N., Heyes, A.L. and Marquis, A.J. Producing hydrogen and power using chemical looping combustion and water-gas shift, Trans. ASME: Journal of Engineering for Gas Turbines and Power, Vol. 132, pp. 031401-1 to 031401-10, 2010.
20	Childs, P.R.N., Tsai, S.K. Creativity in the design process in the turbomachinery industry. Journal of Design Research, Vol. 8, pp. 145-164, 2010.
19	Adams, D., Beniston, L.J., and Childs, P.R.N. Promoting creativity and innovation in biotechnology. Trends in Biotechnology. Vol. 27, pp. 445-447, 2009.
18	Coren, D.D., Childs, P.R.N. and Long, C.A. Windage Sources in Smooth Walled Rotating Disc Systems. P I MECH ENG C-J MEC, 2009, Vol: 223, Pages: 873 – 888, ISSN: 0954-4062, 2009
17	Tsai, S.K., and Childs, P.R.N. TRIZ Incorporating the BRIGHT Process in Design. The TRIZ Journal, January, 2009. www.triz-journal.com/archives/2009/01/04/
16	Cooke, A.O., Childs, P.R.N., Sayma, A., Long, C.A. A disc to air heat flux error and uncertainty analysis as part of the design of a new experimental rig. Proc ImechE, Vol. 223, Part C. Journal of Mechanical Engineering Science, pp. 659-674, 2009.
15	Long, C.A., Miché N.D.D. and Childs, P.R.N. Flow measurements inside a heated rotating multiple cavity with axial throughflow. International Journal of Heat and Fluid Flow, Vol. 28, pp. 1391–1404, 2007.
14	Long, C.A. and Childs, P.R.N. Shroud heat transfer measurements inside a heated multiple rotating cavity with axial throughflow. International Journal of Heat and Fluid Flow, Vol. 28, pp. 1405-1417, 2007.
13	Morris, R.D., Childs, P.R.N., and Hamilton, T. Sustainability by Design: A reflection on the suitability of pedagogic practice in design and engineering courses to the teaching of sustainable design. European Journal of Engineering Education, Vol. 32, No. 2, pp. 135-142, 2007.
12	Long, C.A. and Childs, P.R.N. The effect of inlet conditions on the flow and heat transfer in a multiple rotating cavity with axial throughflow. Journal of Aerospace Power, Vol. 22, No. 5, pp. 683-693, 2007.
11	Cooke, AO and Childs, P.R.N. Optical fiber IR thermometry and its use within gas turbines. IASME Trans., Vol. 1, pp. 551-559, 2004. ISSN 1790031X.
10	Long, C.A., Childs, P.R.N., Greenwood, J.R., and Tham, K.M. Manufacture and calibration of robust heat flux sensors for rotating turbomachinery. Int. Journal of Experimental Heat Transfer. Vol. 17, pp. 181-197, 2004. ISSN 08916152
9	Ozturk, H.K., Turner, A.B. and Childs, P.R.N. The effect of labyrinth seal clearance on stator-well flow and windage heating. Int. J Turbo and Jet Eng, Vol. 19 (4), pp. 219-231, 2002.
8	Turner, A.B., Davies, S.J., Childs, P.R.N., Harvey, C.G., Millward, J.A. Development of a novel gas turbine driven centrifugal compressor. Proceedings of the Institution of Mechanical Engineers, Part A, Journal of Power and Energy, Vol. 214, Part A, pp. 423-437, 2000.
7	Ozturk, H.K., Turner, A.B., Childs, P.R.N., Bayley, F.J. Stator well flows in axial compressors. Proc. International Journal of Heat and Fluid Flow, Vol. 21, pp. 710-716, 2000.
6	**Childs, P.R.N., Greenwood, J.R., Long, C.A. Review of Temperature measurement. Review of Scientific Instruments, Vol. 71, pp. 2959-2978, 2000. ** Invited review paper.
5	Greenwood, J.R., Childs, P.R.N., and Chaloner, P. Gold leads to PRTs for monitoring high temperatures. Gold Bulletin, Vol. 32(3), pp. 85-89, 1999.
4	*Childs, P.R.N., and Noronha, M.B., 1999. The impact of machining techniques on centrifugal compressor impeller performance. Trans. ASME, Journal of Turbomachinery. Vol. 121, pp. 637-643, 1999. * This paper was the subject of the 1999 J.P. Davis IGTI/ASME (International Gas Turbine Institute/American Society

Category	Reference
	of Mechanical Engineers) award for exceptional contribution to the literature on turbomachinery.
3	Childs, P.R.N., Greenwood, J.R., and Long, C.A. Heat flux measurement techniques. Proc. I.Mech.E., Journal of Mechanical Engineering Science. Vol. 213, pp. 655-677, 1999.
2	Bayley, F.J., and Childs, P.R.N. Prediction of ingress rates to turbine and compressor wheelspaces. International Journal of Heat and Fluid Flow, Vol. 18, No. 2, pp. 218-228, 1997.
1	Childs, P.R.N., and Long, C.A. A review of forced convective heat transfer in stationary and rotating annuli. Proceedings of the Institution of Mechanical Engineers, Journal of Mechanical Engineering Science, Vol. 210, pp. 123-134, 1996.
Conference Papers	
115	Han J., Shi F., Park D., Chen L., and Childs P.R.N. The conceptual distances between ideas in combinational creativity. Proceedings of the DESIGN 2018 15th International Design Conference, 2018
114	Chen L., Wang P., Shi F., Han J., and Childs P.R.N. A computational approach for combinational creativity in design. Proceedings of the DESIGN 2018 15th International Design Conference, 2018
113	Hua M., Han J., Wang P., and Childs P.R.N. Towards a comprehensive understanding of design sketch-A literature review of design sketch taxonomy and considerations for future research. Proceedings of 2018 2nd International Conference on Design Engineering and Product Innovation (ICDEPI 2018), 2018.
112	Childs, P.R.N. Gas turbine engine internal and secondary flow system. Proceedings of Third Chinese International Turbomachinery Conference, CITC, Chong Qing, China, Paper CITC 201803261, 2018.
111	Sikhwal, R.K., and Childs, P.R.N. Design for mass individualisation: introducing networked innovation approach. World Mass Customization & Personalization Conference (MCPC2017), RWTH Aachen, Germany, November 20-21, 2017.
110	Sikhwal, R.K., and Childs, P.R.N. Product design for mass individualisation for industrial application. International Conference on Industrial Engineering and Engineering Management (IEEM2017), Singapore, December 10-13, 2017.
109	Spyrakos-Papastavridis, E., Childs, P.R.N., and Tsagarakis, N.G. An analysis of the effect of feedback on compliant biped walking controllers, IEEE Int. Work. Adv. Motion Control, AMC 2018.
108	Spyrakos-Papastavridis, E., Childs, P.R.N., and Tsagarakis, N.G. Variable impedance walking using time-varying lyapunov stability margins. IEEE-RAS Int. Conf. Hum. Rob., HUMANOIDS 2017.
107	Zhu, L., Li, N., and Childs, P.R.N. Light-weighting in aerospace component and system design. ISJPPE, 2017.
106	Baxter, W., Aurisicchio, M., Mugge, R., and Childs, P.R.N. Positive and negative contamination in user interaction. ICED 2017. Best Paper
105	Han, J, Shi, F., Chen, L., and Childs, P.R.N. The analogy retriever – An idea generation tool. DS 87: Proceedings of the 21st International Conference on Engineering Design, ICED17, pp. 11-20, 2017.
104	Han, J, Park, D., Shi, F., Chen, L., and Childs, P.R.N. Three driven approaches to combinational creativity. DS 87: Proceedings of the 21st International Conference on Engineering Design, ICED17, pp. 259-268, 2017.
103	Chen, L., Shi, F., Han, J, and Childs, P.R.N. A network-based computational model for creative knowledge discovery bridging human-computer interaction and data mining. ASME/IDETC, 2017. doi:10.1115/DETC2017-67228
102	Shi, F., Chen, L., Han, J, and Childs, P.R.N. Implicit knowledge discovery in design semantic network by applying pythagorean means on shortest path

Category	Reference
	searching. ASME/IDETC, 2017. doi:10.1115/DETC2017-67230
101	Shi, F., Han, J., and Childs, P.R.N. A data mining approach to assist design knowledge retrieval based on keyword associations. DS 84: Proceedings of the DESIGN 2016 14th International Design Conference, pp. 1125-1134, 2016.
100	Han, J., Shi, F., and Childs, P.R.N. The combinator: a computer-based tool for idea generation. DS 84: Proceedings of the DESIGN 2016 14th International Design Conference, pp. 639-648, 2016.
99	Michalakoudis, I., Childs, P., and Harding, J. Using functional analysis diagrams for production cost optimization. Proceedings of the IEEE International Conference on Advanced Materials for Science and Engineering. IEEE-ICAMSE 2016 - Meen, Prior & Lam (Eds). ISBN 978-1-5090-3869-5, pp. 554-547, 2016.
98	Chen, X., Li, W., Yan, Y., Sokolova, E., Childs, P.R.N., and Mi, P. Experimental investigation of evaporation heat transfer inside horizontal micro-fin tubes. ASME 2016, SHTC, Paper HT2016-7156, 2016.
97	Holloway, M., Childs, P.R.N., and Julia, M. Folding mechanism for a remotely deployable robotic vehicle. . ISR 2016, Munich, 47st International Symposium on Robotics, Germany, 2016. ISBN 978-3-8007-4231-8
96	Holloway, M., Childs, P.R.N., and Julia, M. A robot for spray applied insulation in underfloor voids. ISR 2016, Munich, 47st International Symposium on Robotics, Germany, 2016. ISBN 978-3-8007-4231-8
95	Julia, M., Holloway, M., Reinoso, O., and Childs, P.R.N. Autonomous surveying of underfloor voids. ISR 2016, Munich, Germany. 47th International Symposium on Robotics, 2016. ISBN 978-3-8007-4231-8
94	Baxter, W.L., Aurisicchio, M. and Childs, P.R.N. Using psychological ownership to guide strategies for slower consumption. PLATE conference 17-19 June 2015
93	Stevens, J., Fujikawa, M., Mueller, K., Childs, P.R.N., Pennington, M., and Lundberg, S. Design without borders: a multi-everything masters, LearnX2015, 2015.
92	Yan, Y., and Childs, P.R.N. Creativity tool selection for design engineers in idea generation. ICED15, 2015.
91	Michalakoudis, I, Childs, P.R.N., Aurisicchio, M., Pollpeter, N., and Sambell, N. Using functional analysis diagrams as a design tool. IMECE, Paper IMECE2014-37557, 2014. doi:10.1115/IMECE2014-37557 http://proceedings.asmedigitalcollection.asme.org/proceeding.aspx?articleID=2205642
90	Jiang, P., Lee, S., and Childs, P.R.N. Experience in the use of engineering product design principles to extend novice engineer capability. DS 77: Proceedings of the DESIGN 2014 13th International Design Conference. 2014.
89	Yan, Y., Jiang, P., Squires, A., and Childs, P.R.N. Ill-defined engineering problem solving empirical study. Proceedings of International Conference on Advanced Design Research and Education (ICADRE14). 2014.
88	Childs, P.R.N., and Garvey, B. Using morphological analysis to tackle uncertainty at the design phase for a safety critical application. Proceedings of the 5th International Symposium on Jet Propulsion and Power Engineering, Beijing, China, Paper, 2014-ISJPPE-0008, 2014.
87	Yan, Y., Jiang, P., Squires, A., and Childs, P.R.N. Stimulation of creative output by means of the use of creativity tools – A case study. International Design Conference, Design2014, Dubrovnik - Croatia, May 19 - 22, 2014. Design2014 outstanding award
86	Lipinski, T., Lee, S-H, and Childs, P.R.N. Domestic passive ventilation with heat

Category	Reference
	recovery (PVHR): Performance criteria, tests and operational variations. Proceedings of the 15th International Heat Transfer Conference, IHTC-15, 2014.
85	Masen, M., Brand, A., Yan, Y., Varley, J., and Childs, P.R.N. Demanding it all from the novice mechanical engineer through design and manufacture. EPDE14, 2014.
84	Southgate, D., and Childs, P.R.N. Harnessing student creativity to design novel sports equipment: The Rio Tinto Sports Innovation Challenge. FISU Winter Universiade 2013 conference on University Sport: Inspiring Innovation.
83	Lee, Szu-Hung, Jiang, P., and Childs, P.R.N. Functional analysis diagrams with the representation of movement transitions. IMECE2013-63738, 2013.
82	Lipinski, T., Lee, Szu-Hung, and Childs, P.R.N. Passive ventilation of buildings with heat recovery (PVHR). UKHTC2013-097, 2013.
80	Ekong, G.I., Long, C.A., and Childs, P.R.N. The Effect of Heat Transfer Coefficient Increase on Tip Clearance Control in Gas Turbine Engine H.P. Compressors. IMECE2013-64958, 2013.
79	Ekong, G.I., Long, C.A., Childs, P.R.N. Application of creativity tools to Gas Turbine Engine Compressor Clearance Control. ASME Paper IMECE2013-64932, 2013.
78	Wang, Z., Jiang, P., and Childs, P.R.N. Using web crawler technology to support design-related web information collection in idea generation. ICED13.
77	Lee, Szu-Hung, Jiang, P., and Childs, P.R.N Design for functional requirements enabled by a mechanism and machine element taxonomy. ICED 13, 2013.
76	Yan, Y., Childs, P.R.N. and Hall, A. An assessment of personality traits and their implication for creativity amongst Innovation Design Engineering masters students using the MBTI and KTS instruments ICED13, 2013.
75	Childs, P.R.N., Zhao, Y., and Grigg, J.F. Narrative in design development. E&PDE13, 2013. Pp. 108-113, In Design Education – Growing Our Future, Editors Bohemia, E. et al., Design Society, 2013.
74	Banner-Martin, C.L., and Childs, P.R.N. A novel thermally activated R744 heat pump cycle. ASME Paper GT2013-95040, ASME Turbo Expo 2013.
73	Wang, Z., Lee, H.K., McGlaughlin, D., and Childs, P.R.N. Application of an effects database in idea generation approach for helmet design. Paper HPD-2013-12, Helmet Performance and Design, 2013.
72	Garvey, B., and Childs, P.R.N. Applying problem structuring methods to the design process for safety helmets. Paper HPD-2013-12, Helmet Performance and Design, 2013.
71	Wang, Z., and Childs, P.R.N. Using design-relevant effects and principles to enhance information scope in idea generation. ICord13, 2013.
70	Childs, P.R.N. Engineering freakout. International Symposium on Engineering and Design Education in Higher Education, EDE12, Brunel University 3rd December, 2012.
69	Tek-Jin Nam, Childs, P.R.N., and Minjung Sohn. Design tackles and tools. International Symposium on Engineering and Design Education in Higher Education, EDE12, Brunel University 3rd December, 2012.
68	Hall, A., Wuggetzer, I., Mayer, T., and Childs, P.R.N. Future aircraft cabins and design thinking: Optimisation vs. win-win scenarios. Paper ISJPPE-2012-F0077, 4th ISJPPE Conference, Xi'An, China, 2012.
67	Ekong, G.I., Long, C.A., Atkins, N.R., and Childs, P.R.N. Tip clearance concepts in gas turbine HP compressors. ASME, IMECE2012-93063, 2012.
66	Leon, N., Childs, P.R.N, and Runcie, C. Design led innovation. E&PDE12, 2012.
65	Li Lin, Jing Ren, Honhde Jiang, and Childs, P.R.N. Heat transfer characteristics of a rotor-stator system with small radial outflow. ASME Paper GT2012-69759, 2012.
64	Childs, P.R.N. Use of six hats in STEM subjects. STEM Annual Conference 2012, HEA Academy, 2012.

Category	Reference
63	Ekong, G.I., Long, C.A., Atkins, N.R, and Childs, P.R.N. The development of concepts for the control of tip clearance in Gas turbine HP compressors using TRIZ. TRIZ Future 2011, pp. 437-440, Dublin, Ireland
62	Aurisicchio, M., Eng, N., Ortiz Nicolas, J.C., Childs, P.R.N., and Bracewell, R. On the functions of products. ICED11, paper number: 367, 2011.
61	Brezing, A., Childs, P.R.N., Hyunjune Yim, Rau, P. et al. Approaches to a cross-cultural engineering design theory. E&PDE11, 2011. Design Education for Creativity and Business Innovation. 13th International Conference on Engineering and Product Design Education. Kovacevic, A., Ion, W., McMahon, C., Buck, L., and Hogarth, P. (Editors), Design Society, DS69-1, pp. 487-492, 2011.
60	Childs, P.R.N. and Fountain, R. Commercivity. E&PDE11, 2011. Design Education for Creativity and Business Innovation. 13th International Conference on Engineering and Product Design Education. Kovacevic, A., Ion, W., McMahon, C., Buck, L., and Hogarth, P. (Editors), Design Society, DS69-1, pp. 3-8, 2011.
59	McGlashan, N.R., Heyes, A.L., and Childs, P.R.N. A *PB/ZN* based chemical looping system for hydrogen and power production with carbon capture. ASME Paper GT2011-46002, 2011.
58	Coren, D.D., Atkins, N.R., Long, C.A., Eastwood, D., Childs, P.R.N, Guijarro Valencia, A., and Dixon, J.A. The influence of turbine stator well coolant flow rate and passage configuration on cooling effectiveness. ASME Paper GT2011-46448, 2011.
57	Heyes, A.L., McGlashan, N.R., Botsis, L., and Childs, P.R.N. A thermodynamic analysis of chemical looping combustion. ASME Paper GT2011-45480, 2011.
56	Eastwood, D. Coren, D.D., Long, C.A., Atkins, N.R., Turner, J.R. Childs, P.R.N, Scanlon, T.J. Dixon, J.A., and Guijarro Valencia, A. Experimental investigation of turbine stator well rim seal, reingestion and inter-stage seal flows using gas concentration techniques and displacement measurements. ASME Paper GT2011-45874, 2011.
55	Regan, N., Peng, Z., Atkins, N., Long, C., and Childs, P. An investigation to oil spray characteristics under cross flow environment of internal air system. . Paper 2010-ISJPPE-3016, Proceedings of the 3rd International Symposium on Jet Propulsion and Power Engineering, Nanjing, China, September 2010.
54	Childs, P.R.N., McGlashan, N.R., and Heyes, A.L. Accessing high thermal efficiency power generation using fluid phase chemical looping. Paper 2010-ISJPPE-0001, Proceedings of the 3rd International Symposium on Jet Propulsion and Power Engineering, Nanjing, China, September 2010.
53	Childs, P.R.N., McGlashan, N.R., and Heyes, A.L. Power generation with fluid phase chemical looping combustion. The Future of Gas Turbine Technology, 5th International Conference Brussels, Belgium, 27-28 October, Paper ETN 2010-068, 2010.
52	McGlashan, N.R., Childs, P.R.N., and Heyes, A.L. Chemical looping combustion using the direct combustion of liquid metal in a gas turbine based cycle. ASME Paper GT2010-23393, 2010.
51	Coren, D., Turner, J., Eastwood, D., Davies, S., Atkins, N., Childs, P.R.N., Dixon, J., and Scanlon, T. An advanced multi-configuration turbine stator well cooling test facility. ASME Paper GT2010-23450, 2010.
50	Childs, P.R.N., and Robb, D.R. Design, make, test. Paper EPDE2010/215, In Boks, C., McMahon, C., Ion, W., and Parkison, B. (Editors), When Design Education and Design Research Meet. 12th International conference on engineering and product design education. Norwegian University of Science and Technology, Trondheim, Norway. 2 & 3 September 2010, pp. 174-179.
49	Childs, P.R.N., McGlashan, N.R., Aurisicchio, M., Gosling, G. Linking design, analysis, manufacture and test in the engineering student experience. Paper EPDE2010/216, In Boks, C., McMahon, C., Ion, W., and Parkinson, B. (Editors), When Design Education and Design Research Meet. 12th International conference

Category	Reference
	on engineering and product design education. Norwegian University of Science and Technology, Trondheim, Norway. 2 & 3 September 2010, pp. 210-215.
48	Patounas, D.S., Long, C.A. and Childs, P.R.N. Disc heat transfer in gas turbine compressor internal air systems. 8th European Conference on Turbomachinery, Graz, Austria. Conference proceedings, pp. 377-386, March 23-27, 2009.
47	Hall, A. and Childs, P.R.N. Innovation design engineering: non-linear progressive education for diverse intakes. Pp. 312-317, In Clarke, A., Ion, B., McMahon, C. and Hogarth, P. (Editors) Proceedings of the 11th Engineering and Product Design Education International Conference, 10th & 11th September 2009.
46	Robb, D. Flora, H. and Childs, P.R.N. Sketching to solid modelling skills for mechanical engineers. Pp. 275-280, In Clarke, A., Ion, B., McMahon, C. and Hogarth, P. (Editors) Proceedings of the 11th Engineering and Product Design Education International Conference, 10th & 11th September 2009.
45	Regan, N.J., Atkins, N.R., Long, C.A., Childs, P.R.N., Hutchenson, P. and Hart, K. An experimental study of sprays in cross flows representative of conditions within gas turbine engine secondary air system. Proceedings of ASME Turbo Expo 2009: Power for Land, Sea and Air, June 8-12, 2009, ASME Paper GT2009-59709, 2009.
44	McGlashan, N., Childs, P.R.N., Heyes, A.L, and Marquis, A.J. Producing hydrogen and power using chemical looping combustion and water gas shift. . Proceedings of ASME Turbo Expo 2009: Power for Land, Sea and Air, June 8-12, 2009, ASME Paper GT2009-59492, 2009. * selected by the Cycle Innovations Committee as a Best Paper award winner from ASME Turbo Expo 2009.
43	Tsai, S.K., and Childs, P.R.N. TRIZ incorporating the BRIGHT process in design, 8th ETRIA World TRIZ Future Conference, Enschede, The Netherlands, 5-7 November, 2008.
42	Farahani, A., and Childs, P.R.N. Validation and comparison of strip seal designs for gas turbine engine nozzle guide vanes, ASME Paper IMECE2008-68311, 2008.
41	Hounsam, S., Stobart, R.K., Cooke, A.O. and Childs, P.R.N. Energy recovery systems for engines. SAE Paper 2008-01-0309, SAE World Congress, 2008.
40	Hamilton, T., Morris, R. and Childs, P. Learning from higher arts education in designing constructivist learning spaces: A case study of InQbate: The Centre of Excellence in Teaching and Learning in Creativity. In Boddington, A. and Clews, D. (Editors) Teachers' Academy Papers: Proceedings of the 3rd ELIA Teachers' Academy, Brighton, England, 12-14th July 2007, Burlington Press, Cambridge, pp105 – 108
39	Peng, Z., New, P., Long, C.A., and Childs, P.R.N. An experimental investigation of a high radius pre-swirl cooling system. Proceedings of 8th International Symposium on Experimental and Computational Aerothermodynamics of Internal Flows. Editors X. Ottavy and I. Trebinjac, July 2-5, 2007, pp. 511-518.
38	Cooke A., Childs P.R.N. and Long C.A. Investigation into the effect of uncertainty in thermal properties on turbomachinery disc heat transfer using both a monte carlo simulation technique and a taylor series uncertainty propagation method, Paper GT2007-27573, Proceedings of ASME Turbo Expo 2007: Power for Land, Sea and Air, May 14-17, 2007, Montreal, Canada
37	Georgakis, C. Whitney,C. and Woollatt, G. Stefanis, V. Childs P.R.N. Turbine stator well CFD studies: effect of upstream egress ingestion. ASME Paper GT2007-27406, ASME Turbo Expo, Montreal, Canada, May 14th – 17th, 2007.
36	Farahani, A. and Childs, P.R.N. Characterisation of static strip seal flow. ASME Paper GT2007-27469, ASME Turbo Expo, Montreal, Canada, May 14th – 17th, 2007.
35	Pett, A.D.W., Coren, D.D. and Childs, P.R.N. Model validation for a shrouded rotor-stator system with a superposed cooling and static protuberances. ASME Paper GT2007-27744, ASME Turbo Expo, Montreal, Canada, May 14th – 17th,

Category	Reference
	2007.
34	Childs, P.R.N. Gas turbine engine internal air systems. Invited Keynote. Proceedings of the 1st International Symposium on Jet Propulsion and Power Engineering, 17th-22nd September 2006, Kunming, China, pp. 25-27.
33	Long, C.A. and Childs, P.R.N. The effect of inlet conditions on the flow and heat transfer in a multiple rotating cavity with axial throughflow. Proceedings of the 1st International Symposium on Jet Propulsion and Power Engineering, 17th-22nd September 2006, Kunming, China, pp. 321-328.
32	Peng, Z., New, P., Long, C.A. and Childs, P.R.N. Operating characteristics of a high radius pre-swirl cooling system. Proceedings of the 1st International Symposium on Jet Propulsion and Power Engineering, 17th-22nd September 2006, Kunming, China, pp. 235-241.
31	Childs, P.R.N., Hamilton, T., Morris, R.D. and Johnston, G. Centre for technology enabled creativity. In Rothbucher, B., Kolar, M., Ion, B. and Clarke, A. (Editors) Proceedings of the 4th Engineering and Product Design Education International Conference, Salzburg, Austria, 7th-8th September, 2006, Hadleys, pp. 367-372.
30	Farahani, A., and Childs, P.R.N. Nozzle Guide Vane Static Strip Seals. ASME Paper GT2006-90185, 2006.
29	Childs, P.R.N., Dullenkopf, K., and Bohn, D. Internal Air Systems Experimental Rig Best Practice. ASME Paper GT2006-90215, 2006.
28	Childs, P.R.N., and Pizarro, C. An Investigation of Lock Plate Flow. ASME Paper GT2006-90652, 2006.
27	Cooke, A.O., Childs, P.R.N., and Long, C.A. An investigation into the uncertainty of turbomachinery disc heat transfer obtained via inverse analysis of temperature measurements. ASME Paper GT2006-90143, 2006.
26	Dixon, J., Brunton, I.L., Scanlon, T.J., Wojiechowski, G., Stefanis, V., and Childs, P.R.N. Turbine Stator Well Heat Transfer and Cooling Flow Optimisation. ASME Paper GT2006-90306, 2006.
25	Robinson, L.A., Childs, P.R.N., and Stobart, R.K. Escaping the straitjacket of engineering education. In Lloyd, P at al. (Editors) The Changing Face of Design Education 2nd Int Engineering and Product Design Education Conference, TU Delft, 2004, pp. 299-306.
24	Morris, R.D., Thomas, A.L., and Childs, P.R.N. Cabin and passenger environment design for the Airbus A380 – A case study for education. In Lowe, JR, Ethics in Engineering Design, Professional Engineering Press, 2003, pp. 51-58.
23	Childs, P.R.N. Degree Design – Exploring Creativity from the Start. Proc. 24th SEED Annual Design Conference and 8^{9h} National Conference on Product Design Education, 2002.
22	* Atkins, R.D., Kennedy Ping, R., and Childs, P.R.N. Idea transfer and company constraints in the design of a two-seater sports car. In Stobart, R.K., and Childs, P.R.N. (Editors). Getting the Innovation back into design. Proceedings of the 2nd ADSC, ImechE Conference on Total Vehicle Technology, PEP, 2002. *Won Best Paper Award.
21	Smout, P.D., Chew, J., and Childs, P.R.N. ICAS-GT a European collaborative research program on internal cooling systems for gas turbines. ASME Paper GT-2002-30479.
20	Milburn, C., and Childs, P.R.N. The Styling Process. In Total Vehicle Technology, Professional Engineering Publications (PEP), pp. 275-287, 2001.
19	Childs, P.R.N., Downie, J., and Katz, T. Design models and their value in education. In Edwards, K.L., and Brodhurst, E.K. (Eds.), Proc. 23rd SEED Annual Design Conference and 8th National Conference on Product Design Education, pp. 179-186, 2001.
18	Scott, R.M., Childs, P.R.N., Hills, N.J., and Millward, J.A. Radial inflow into the downstream cavity of a compressor stator well. ASME Paper 2000-GT-0507, 2000.

Category	Reference
17	Simons, R.W., and Childs, P.R.N. Estimating in engineering design. In Childs, P.R.N. (Editor), Integrating Design Education Beyond 2000. PEP, pp.261-266, 2000.
16	Childs, P.R.N., and Simons, R.W. Small priced tools and equipment. The Continuum of Design Education, Proc. 21st SEED Annual Design Conference and 6th National Conference on Product Design Education, pp. 275-278, 1999. ISBN 1860582087.
15	Jackson, R.A., Peyton-Jones, J.C., Pan, J., Roberts, J.B., and Childs, P.R.N. Chemical aspects of the dynamic performance of a three-way catalyst. SAE Paper 1999-01-0312, March, 1999.
14	Childs, P.R.N., and Nilsson, K., 1999. Flow phenomena and functionality of the infant Flow system. 5th Annual Reason Conference, University of Warwick, 5th-6th September, 1999.
13	Ozturk, H.K., Childs, P.R.N., Turner, A.B., Hannis, J.M., and Turner, J.R. A three dimensional computational study of windage heating within an axial compressor stator well. ASME Paper 98-GT-119, ASME IGTI Aeroengine Congress, Stockholm, 1998.
12	Turner, A.B., Long, C.A., Childs, P.R.N., Hills, N.J., and Millward, J.A. A review of some current problems in gas turbine internal air systems. American Society of Mechanical Engineers, ASME Paper 97-GT-325, ASME Aeroengine Congress, Orlando, Florida, 1997.
11	Ozturk, H.K., Childs, P.R.N., and Turner, A.B. Numerical solution of flow and heat transfer in axial compressor stator wells. Institution of Chemical Engineers, IChemE 5th UK National Heat Transfer Conference, 1997.
10	Ozturk, H.K., Turner, A.B., and Childs, P.R.N. Numerical prediction of axial compressor stator well flows. International Centre for Heat and Mass Transfer, International Symposium on Advances in Computational Heat Transfer, Cesme, Izmir, Turkey, May 26th – 30th, 1997.
9	Childs, P.R.N., and Noronha, M.B. The impact of machining techniques on centrifugal compressor impeller performance. American Society of Mechanical Engineers, ASME Paper 97-GT-456. 1997. JP Davies Award 1999
8	Bayley, F.J., and Childs, P.R.N. Calculation of hot gas ingress and egress rates in turbo-machine wheelspaces. 2nd European Conference on Turbomachinery – Fluid Dynamics and Thermodynamics, Antwerp, Proceedings, pp. 521-528, 1997.
7	Turner, A.B., Long, C.A., Childs, P.R.N., and Morse, A.P. Gas turbine aero-thermal systems research at the University of Sussex. Propulsion Research Forum, Royal Aeronautical Society, 1996.
6	Childs, P.R.N., Long, C.A., and Turner, A.B. A review of convective heat transfer in open and closed rotating annular cavities. IMechE Conference Transactions, 4th UK National Conference on Heat Transfer, Paper C510/084/95, pp. 67-71, 1995.
5	Bayley, F.J., Childs, P.R.N. Air temperature rises in compressor and turbine stator wells. American Society of Mechanical Engineers, ASME Paper 94-GT-185, 1994
4	Childs, P.R.N., Turner, A.B., 1994. Heat transfer on the surface on the surface of a cylinder rotating in an annulus at high axial and rotational Reynolds number. Proc. 10th International Heat Transfer Conference, Brighton, UK, Vol. 3, pp. 13-18.
3	Childs, P.R.N., Turner, A.B., Vaughan, C.M., Rayner, D., and Bayley, F.J. Heat transfer to a rotating drum in an annulus with a stator blade row and axial throughflow. American Society of Mechanical Engineers, ASME Paper 92-GT-249, 1992.
2	Childs, P.R.N., Rayner, D., Turner, A.B., 1992. Heat transfer to a cylindrical drum rotating in an annulus under a single stator blade row. International Centre for Heat and Mass Transfer, International Symposium, Heat Transfer in Turbomachinery, Athens, Greece. (12 pages). Proceedings of the 1992 International Symposium on Heat Transfer in Turbomachinery. Edited by: R. J.

Category	Reference
	Goldstein, D. E. Metzger, A. I. Leontiev, 1995. ISBN: 1-56700-016-9
1	Rayner, D., Vaughan, C.M., Childs, P.R.N., and Turner, A.B. Numerical simulation of the heat transfer in turbulent, swirling annular flows. Advanced Computational Methods in Heat Transfer II, Vol. 2, Ch 43, pp. 511-531, Natural/Force Convection and Combustion Simulation, 1992.
Book Chapters	
12	Baxter, W., and Childs, P.R.N. Designing circular possessions. Chapter 26, pp. 391-404 in Chapman, J. (editor), Routledge Handbook of Sustainable Product Design, Routledge, 2017.
11	Childs, P.R.N. Temperature measurement. Chapter 7, In Kutz, M. (Editor), Mechanical Engineers' Handbook, 4th Edition, Energy and Power (Volume 4), pp. 247-284, Wiley; Volume 4 edition, 2015.
10	Childs, P.R.N., and Pennington, M. Industrial, and innovation design engineering. In Chakrabarti, A., and Lindemann, U. (Editors) Impact of Design Research on Industrial Practice, pp. 133-149, Springer, 2015. Doi: 10.1007/978-3-319-19449-3_9
9	Garvey, B., and Childs, P.R.N. Design as an unstructured problem: New methods to help reduce uncertainty – A practitioner perspective. In Chakrabarti, A., and Lindemann, U. (Editors) Impact of Design Research on Industrial Practice, pp. 133-149, Springer, 2015. Doi: 10.1007/978-3-319-19449-3_9
8	Childs, P.R.N. Nanoscale Thermometry and Temperature Measurement. In Carlos, L, and Palacio, F. (Editors), Thermometry at the nanoscale. RSC Nanoscience & Nanotechnology Series, 2015. ISBN: 978-1-84973-904-7
7	Tek-Jin Nam and Childs, P.R.N. Design Tackles and Tools. In Tek-Jin Nam and Hall, A (Editors), Designing Social City Experiences, pp. 71-83, 2013.
6	Childs, P.R.N,, Hall, A., and Tek-Jin Nam. Manufacture based innovation. Paradigm shifting into designing ecologies. In Tek-Jin Nam and Hall, A (Editors), Designing Social City Experiences, pp. 85-94, 2013.
5	Childs, P.R.N. Temperature measurement. In Kutz, M. (Editor), Handbook of Measurement in Science and Engineering, Vol. 1, Wiley, 2013.
4	Childs, P.R.N, and Brand, A. Morphological analysis. In Childs, P.R.N, Keech, D., Southgate, D. (Editors). Enabled. The Rio Tinto Sports Innovation Challenge Story. DEG Imperial College London, ISBN 978-0-9572298-0-8, pp. 78-81, 2012.
3	**Childs, P.R.N. Advances in Temperature Measurement. Advances in Heat Transfer, Vol. 36, pp 111-181, AIP, 2001. ** Invited paper.
2	People metrics, Childs, P.R.N., In Ball, P. (editor) Assessing creativity in design: emerging themes for engineering. ISBN 978-1-904804-83-3 http://www.engsc.ac.uk/guides/assessing-creativity-in-design
1	Ethics, Childs, P.R.N., In Ball, P. (editor) Assessing creativity in design: emerging themes for engineering. ISBN 978-1-904804-83-3 http://www.engsc.ac.uk/guides/assessing-creativity-in-design
Thesis	Childs, P.R.N., 1991. Heat transfer at the surface of a cylinder rotating in an annulus with an axial throughflow of air. D.Phil. Thesis, University of Sussex. (148 pages)