

Abbreviated Curriculum Vitae

Prof. Dr. Dr. Kelvin W. Willoughby

Address (university):

Professor and Chairholder (Lehrstuhlinhaber)

Stiftungsfonds Deutsche Bank Chair of Innovation Management and Entrepreneurship

HHL Leipzig Graduate School of Management

Jahnallee 59, Leipzig 04109 Germany

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Higher Education

Postdoctoral Fellowship

The University of California at Berkeley

Haas School of Business & Institute of Urban and Regional Development

(Fields: strategic management and economic development planning)

Doctor of Philosophy (Ph.D.)

The University of Western Australia, Graduate School of Management

(Fields: strategic management and technology management)

Doctor of Philosophy (Ph.D.)

Murdoch University, School of Environmental and Life Sciences

(Field: technology studies)

Master of Laws (LL.M.)

Universität Augsburg. Munich Intellectual Property Law Center: Max-Planck-Institut für

Geistiges Eigentum, Wettbewerbs- und Steuerrecht; Technische Universität München;

George Washington University; Universität Augsburg.

(Field: intellectual property)

Bachelor of Arts with First Class Honours (B.A. Hons. 1st Class)

Murdoch University, School of Mathematical and Physical Sciences

(Fields: technology studies, population & resource studies)

Previous Academic Positions

Skolkovo Institute of Science and Technology, Moscow, Russia

Center for Entrepreneurship and Innovation. (2014-2021)

Director, Innovation and Intellectual Property Laboratory (2015-2021)

& Associate Dean of Education (2015-2016)

Professor of Innovation and Intellectual Property

Curtin University

Faculty of Science and Engineering & Graduate School of Business

Perth, Australia (2010-2014)

Professor of Entrepreneurship and Intellectual Property

Technische Universität München

Lehrstuhl für Wirtschaftsrecht und Geistiges Eigentum

Fakultät für Wirtschaftswissenschaften (TUM School of Management)

Munich, Germany (2010)

Gastprofessor & Wissenschaftlicher Mitarbeiter

Max Planck Institut für Geistiges Eigentum, Wettbewerbs- und Steuerrecht

(Max Planck Institute for Intellectual Property, Competition and Tax Law)

Munich, Germany (2007-2008/2009)

Max Planck Gesellschaft Fellowship for International Scientific Cooperation

Mahidol University

College of Management & Faculty of Science

Professor of Management; Chair, Entrepreneurship Management Program; Chair, New

Technology Ventures Program; Academic Director, International Initiatives; Executive

Council Member, College of Management. Bangkok, Thailand (2006-2007)

Abbreviated Curriculum Vitae: Prof. Kelvin W. Willoughby

Academic Positions (cont.)

The University of Minnesota

Center for the Development of Technological Leadership, Institute of Technology Honeywell / W. R. Sweatt Endowed Chair in the Management of Technology
Professor & Program Director, Management of Technology Program (2004-2006)

Westminster University

Gore School of Business, *Professor of Management and Entrepreneurship* (2001-2004)

State University of New York at Stony Brook

College of Engineering and Applied Sciences

Director, Management of Technology Program; Director, Industrial and Business Initiatives & Associate Professor (Business & Technology Management) (1998-2001)

The University of Utah

Director, Management of Technology Program, College of Engineering & David Eccles School of Business; & *Clinical Associate Professor of Management*, Department of Management, David Eccles School of Business (1994-1998)

The University of Western Australia

Faculty of Economics and Commerce (Graduate School of Management & Department of Organisational and Labour Studies). *Lecturer (Assistant Professor), Business Policy and Strategy* (Tenured); *Director, Honours Program in Management*. (1990-1994)

The University of California at Berkeley

Research Associate, Institute of Urban and Regional Development (1988-1993)

Lecturer, Department of City and Regional Planning (1990)

Selected Awards and Honors

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| 2022 | <i>Otto Mønsted Gæsteforskerat</i> , awarded by the Otto Moensted Foundation for the Otto Moensted Visiting Professorship at the Copenhagen Business School. |
| 2019 | <i>IEEE Senior Member</i> , IEEE (Institute of Electrical and Electronics Engineers). |
| 2018 | <i>HRH Princess Maha Chakri Sirindhorn</i> award for contribution to educational and research collaboration between the Kingdom of Thailand and the Russian Federation. |
| 2018-2022 | Guest Professor, School of Intellectual Property, Nanjing University of Science and Technology, Nanjing, China. |
| 2018-2020 | Adjunct Professor, School of Electrical Engineering, Computing and Mathematical Sciences, Curtin University, Australia. |
| 2012-2013 | Resident Entrepreneur, Innovation Centre of Western Australia. |
| 2007-2008 | <i>Diplôme d'honneur, Propriété Intellectuelle Européenne</i> , EIPIN (European Intellectual Property Institutes Network): Strasbourg, Munich, Zurich, London, Alicante. |
| 2006 | BioBusiness Alliance of Minnesota, Honorable Recognition.
Recognition of profound impact on the future of biobusiness in Minnesota for work as Co-chair of the Minnesota Statewide Biobusiness Assessment Project, 2005-2006. |
| 2001 | Study Award for Outstanding Young American Management Executives, Carl Duisberg Gesellschaft e.V., Gemeinnützige Organisation für Internationale Weiterbildung und Personalentwicklung. Munich and Berlin, July 2001. Sponsored by the State of Bavaria. |
| 2000 | Outstanding Faculty Award, conferred by the Institute for Industrial Policy Studies for outstanding teaching in the Master of Science in Technology Management degree program of the State University of New York at Stony Brook, during 1999-2000. |
| 1988-1990 | Fulbright Award, 1988-1990
Awarded for postdoctoral fellowship at the University of California, Berkeley. |
| 1991 | Gold Medal, Technology Transfer Society (Lang-Rosen Award), 1991
Awarded by the Technology Transfer Society (United States) for the best scholarly paper published in <i>The Journal of Technology Transfer</i> during 1990-1991. |
| 1987 | Government of Western Australia, Certificate of Special Recognition, 1987
Awarded by the Premier of Western Australia for valued contribution to the advancement of science, industry and technology in the State of Western Australia. |

Publications

Refereed Scholarly Journal Articles

"A Framework to Map Corporate Intellectual Property Capabilities in Large Tech Organizations: Lessons from Airbus," *Research-Technology Management*, 69, 1 (2026), 55-72. Punyapat Saksupapchon, Kelvin W. Willoughby & Alistair F. Scott.

<https://doi.org/10.1080/08956308.2025.2586445>

"The Middle Way: A Disciplined Approach to Innovation and International Patenting Strategies," *Journal of Entrepreneurship and Innovation in Emerging Economies*. 12, 1 (2026), 1-34. Nadezhda I. Mullina, Dmitry S. Smirnov and Kelvin W. Willoughby.

<https://doi.org/10.1177/23939575251404123>

"Intellectual Property and SMEs ... What's the State of Play?" *World Patent Information*, 83 (2025), 102401. Christopher T. Lohrey & Kelvin W. Willoughby.

<https://doi.org/10.1016/j.wpi.2025.102401>

"The Coevolution of Corporate Capabilities in Intellectual Property Management and Technological Innovation," *European Journal of Innovation Management*, 28, 8 (2025), 3771-3795. Punyapat Saksupapchon, Kelvin W. Willoughby & Alistair F. Scott.

<https://doi.org/10.1108/EJIM-09-2023-0824>

"The Effective Use of Artificial Intelligence in Patent Searches: A Case Study in Using AI-based Classifiers to Identify AI Inventions," *World Patent Information*, 82 (2025), 102387. Aleksei L. Kalinichenko and Kelvin W. Willoughby.

<https://doi.org/10.1016/j.wpi.2025.102387>

"Identifying Mechanisms for Translating the Economic Benefits of International Patenting into National Wealth," *Economics of Innovation and New Technology*. Revise and resubmit, 19 May 2026. EINT_ID_259824713-r1. Nadezhda I. Mullina, Aparna Sharma, Kelvin W. Willoughby.

"Staying Embedded: Locally Embedded Relationships, Trust and Entrepreneurial Adaptation in Post-Transition Damascus," *Journal of Enterprising Communities: People and Places in the Global Economy*, Under review, 19 July 2026. EC-07-2026-0387. Marek Meis, Hanan Allaham, Simona Gentile-Luedecke and Kelvin W. Willoughby.

"Intellectual Property Management and the Lifecycle of Start-ups," *Journal of Entrepreneurship, Management and Innovation*, Under review, 21 June 2026. Manisha Mozumder, Kelvin W. Willoughby, Martin A. Bader & Sevim Süzeroğlu-Melchior.

"How is Generative AI Transforming Agile Teams and Practices?" *Project Leadership and Society*, Under review, 2 May 2026. PLS-D-26-00070. Xingyue Yang, Kelvin W. Willoughby and Erik Lankut.

"Context matters: A process framework for contextualizing Responsible AI in high-stakes domains," *Technological Forecasting and Social Change*. Under review, 10 February 2026. TFS-D-26-01238. Vanessa Brummund and Kelvin W. Willoughby

"Entrepreneurship in Fragile States: A Systematic Literature Review of Fragility Reduction and Perpetuation Mechanisms," *Journal of Innovation and Entrepreneurship*. Under review, 4 May 2026. JIAE-D-26-00280. Marek Meis and Kelvin W. Willoughby.

"Digital Entrepreneurship Under Conditions of Institutional Fragility: Constraints, Institutional Repositioning, and Venture Trajectories," *Journal of Entrepreneurship and Innovation in Emerging Economies*. Under review, 30 May 2026. EIE-2026-0362. Marek Meis, Simona Gentile-Luedecke, Hani Haidar and Kelvin W. Willoughby.

"Crisis as Competitive Reversal: How Host-Country Fragility Inverts Refugee Entrepreneurial Disadvantage" to *Journal of Entrepreneurship in Emerging Economies*," *Journal of Entrepreneurship in*

Abbreviated Curriculum Vitae: Prof. Kelvin W. Willoughby

Emerging Economies. Under review, 6 May 2026. JEEE-05-2026-0501. Marek Meis, Jay Joseph and Kelvin W. Willoughby.

"Innovation, International Patenting and Economic Development: Strategic Balancing of Congruence and Complexity," *International Journal of Technology, Policy and Management*, Under review, 15 April 2026. IJTPM-329416. Nadezhda I. Mullina, Kelvin W. Willoughby and Cecilia Anthony Das.

"A Gamification Approach for Enhancing Older Adults' Technology Adoption and Knowledge Transfer: A Case Study in Mobile Payments Technology," *Technological Forecasting and Social Change*, 205 (2024), 123456. Accepted for publication 15 May 2024. Siyang An, Chi Fai Cheung & Kelvin W. Willoughby.
<https://doi.org/10.1016/j.techfore.2024.123456>

"How Can Business Schools Generate and Appropriate Value in University-based Technological Innovation?" *International Journal of Innovation and Technology Management*, 20, 8 (2023) 2350052 (58 pages). Dmitry S. Smirnov & Kelvin W. Willoughby.
<https://doi.org/10.1142/S0219877023500529>

"Different Settings, Different Terms and Conditions: The Impact of Intellectual Property Arrangements on Co-creation Project Performance," *The Journal of Product Innovation Management*, 40, 5 (2023), 679-704. Anja Tekic, Kelvin W. Willoughby & Johann Füller.
<https://doi.org/10.1111/jpim.12668>

"Global Innovation and Competition in Quantum Technology, Viewed Through the Lens of Patents and Artificial Intelligence," *International Journal of Intellectual Property Management*, 13, 1 (2023), 40-61. Zeki Can Seskir & Kelvin W. Willoughby.
<https://doi.org/10.1504/IJIPM.2021.10044326>

"Product Modularity, Design Imitation and Intellectual Property: Creating Value Through Patent Strategy," *IEEE Engineering Management Review* (under review, November 2022). Georgy D. Klushin & Kelvin W. Willoughby.

"Reverse Innovation, International Patenting and Economic Inertia: Constraints to Appropriating the Benefits of Technological Innovation," *Technology in Society*, Volume 67, August 2021, 101712 (pp.1-51). Kelvin W. Willoughby & Nadezhda Mullina.
<https://doi.org/10.1016/j.techsoc.2021.101712>

"Rethinking the Dynamics of Innovation, Science, and Technology: The Curious Case of Stirling Engines and Stirling Refrigerators," *Energy Research & Social Science*, Volume 79, September 2021, 102159. Dmitry S. Smirnov & Kelvin W. Willoughby.
<https://doi.org/10.1016/j.erss.2021.102159>

"Contextual Factors Affecting Patent Licensing Provisions in Collaboration Agreements of Complex Technological Organizations," *International Journal of Intellectual Property Management*, 11, 3 (2021), 280-315. Punyapat Saksupapchon & Kelvin W. Willoughby.
<https://doi.org/10.1504/IJIPM.2020.10032645>

"Intellectual Property Management, Dynamic Capabilities and Competitive Innovation in the Commercial Aircraft Industry," *International Journal of Intellectual Property Management*, 11, 3 (2021), 236-262. Punyapat Saksupapchon & Kelvin W. Willoughby.
<https://doi.org/10.1504/IJIPM.2020.10032446>

"Endogenous innovation, outward-bound international patenting and national economic development," *The Journal of Technology Transfer*, 45, 3 (2020), 844-869. Kelvin W. Willoughby.
<https://doi.org/10.1007/s10961-018-9705-1>

"Product Modularity, Design Imitation and Intellectual Property: The Role of Patent Protection, A Review," *International Journal of Management Reviews* (under review, February 2022). Georgy D. Klushin & Kelvin W. Willoughby.

"Configuring intellectual property management strategies in co-creation: A contextual perspective," *Innovation: Organization and Management*, 22, 2 (2020), 128-159. Anja Tekic & Kelvin W. Willoughby.

Abbreviated Curriculum Vitae: Prof. Kelvin W. Willoughby

<https://doi.org/10.1080/14479338.2019.1585189>

“Co-creation — child, sibling or adopted cousin of open innovation?” *Innovation: Organization and Management*, 21, 2 (2019), 274-297. Anja Tekic & Kelvin W. Willoughby.
<https://doi.org/10.1080/14479338.2018.1530565>

“Contextualized co-creation: Innovating with individual external contributors throughout the product life cycle,” *International Journal of Product Development*, 22, 3 (2017), 230-245. Anja Tekic & Kelvin W. Willoughby.
<https://doi.org/10.1504/IJPD.2017.087380>

“A knowledge-based system for assessing and managing intellectual property managerial risks for small-and-medium sized technological enterprises,” *International Journal of Intellectual Property Management*, 7, 1/2 (2014), 57-83. C. F. Cheung, W. M. Wang, X. Xu & Kelvin W. Willoughby.
<https://doi.org/10.1504/IJIPM.2014.062795>

“What impact does intellectual property have on the business performance of technology firms?” *International Journal of Intellectual Property Management*, 6, 4 (2013), 316-338. Kelvin W. Willoughby.
<https://doi.org/10.1504/IJIPM.2013.057634>

“Intellectual property management and technological entrepreneurship,” *International Journal of Innovation and Technology Management*, 10, 6 (2013), 1340027. Kelvin W. Willoughby.
<https://doi.org/10.1142/s0219877013400270>

“How much does technology really matter in patent law? A comparative analysis of doctrines of appropriate patentable subject matter in American and European patent law,” *Federal Circuit Bar Journal*, 18, 1 (2008), 63-138. Kelvin W. Willoughby.

“How do entrepreneurial technology firms really get financed, and what difference does it make?” *International Journal of Innovation and Technology Management*, 5, 1 (2008), 1-28. Kelvin W. Willoughby. <https://doi.org/10.1142/s0219877008001266>

“Interorganizational cooperation, knowledge intensity and the sources of innovation in the bioscience-technology industries,” *Knowledge, Technology and Policy*, 18, 3 (2006), 56-73. Kelvin W. Willoughby & Peter Galvin. <https://doi.org/10.1007/s12130-005-1005-z>

“Technological semantics and technological practice: Lessons from an enigmatic episode in Twentieth Century technology studies,” *Knowledge, Technology and Policy*, 17, 3-4 (2005), 11-43. Kelvin W. Willoughby. <https://doi.org/10.1007/s12130-004-1002-7>

“The Affordable Resources strategy and the Milieux Embeddedness strategy as alternative approaches to facilitating innovation in a knowledge-intensive industry,” *The Journal of High Technology Management Research*, 15, 1 (2004), 91-121. Kelvin W. Willoughby.
<https://doi.org/10.1016/j.hitech.2003.09.006>

“The virtualization of university education: Concepts, strategies and business models,” *Journal of Applied Educational Technology*, 2, 1 (2004), 4-24. Kelvin W. Willoughby.

“Building internationally competitive technology regions: The Industrial-Location-Factors approach and the Local-Technological-Milieux approach,” *Journal of International and Area Studies*, 7, 2 (2000), 1-36. Kelvin W. Willoughby.

“Generic strategies and action modes: A philosophical challenge for strategic management,” *Journal of International Business and Economy*, Fall (2000), 69-90. Kelvin W. Willoughby.

“Informal communication, formal collaboration, and the growth of research-intensive entrepreneurial firms in the biotechnology industry,” *Frontiers of Entrepreneurship Research*, November (1999), 571-585. Kelvin W. Willoughby.

“The economic potential of biotechnology,” *International Journal of Technology Management, Biotechnology Review*, 1 (1993), 7-10. Kelvin W. Willoughby & E. J. Blakely.

Abbreviated Curriculum Vitae: Prof. Kelvin W. Willoughby

"The economic-development potential of California's biotechnology industry," *International Journal of Technology Management, Biotechnology Review*, 1 (1993), 11-27. Kelvin W. Willoughby, E. J. Blakely & N. Nishikawa.

"Transfer or generation? Biotechnology and local industry development," *Journal of Technology Transfer*, 15, 4 (1990), 31-38. Kelvin W. Willoughby and E. J. Blakely.
<https://doi.org/10.1007/BF02371521>

[Awarded Gold Medal by the Technology Transfer Society for best paper published in the *Journal of Technology Transfer*, 1990-1991.]

"Local enterprise initiatives: Between state and market in Esperance," *Australian Journal of Public Administration*, 49, 1 (1990), 23-37. Kelvin W. Willoughby & J. Moon.
<https://doi.org/10.1111/j.1467-8500.1990.tb02249.x>

"Economic development and technological change in rural Australia: Some critical policy issues," *Berkeley Planning Journal*, 4, 1 (1989), 53-82. Kelvin W. Willoughby.
<https://doi.org/10.5070/BP34113158>

"Prospects for appropriate technology: Clues from the philosophy of E.F. Schumacher," *International Journal of Environmental Education and Information*, 4, 1 (1985), 54-82. Kelvin W. Willoughby.

Books / Monographs

Kelvin W. Willoughby, *What Can Be Patented? Confronting the Confusion in Patent Law About Patent-Eligible Subject Matter* (Saarbrücken: Scholars' Press, 2014). 216 pages. ISBN: 9783639700688.

Kelvin W. Willoughby, *Technology Choice: A Critique of the Appropriate Technology Movement* (London: Routledge, 2019). ISBN 9780367289690 (Hardback), 9780429308444 (eBook). 350 pages.
First edition: (Boulder and San Francisco: Westview Press, 1990). ISBN: 0813378060.

Kelvin W. Willoughby, *Technology and the Competitive Advantage of Regions: A Study of the Biotechnology Industry in New York*, IURD Monograph No. 44 (Berkeley: University of California, 1993). 184 & xxii pages. Library of Congress (US), LC Control No.: 93622391.

Kelvin W. Willoughby & J. Moon (coauthors), *An Evaluation of Local Enterprise Initiatives: The Case of Esperance* (Canberra: Australian Government Publishing Service, 1989). 48 pages. ISBN: 0644087617.

Kelvin W. Willoughby, *Technology for Employment Creation*, Second Edition (Fremantle & Sydney: APACE Publications, 1985). ISBN 0959030913.

Zhouying Jin (author), Kelvin W. Willoughby (editor & co-translator) & Ying Bai (co-translator), *Global Technological Change: From Hard Technology to Soft Technology*, Second Edition (Bristol, UK; Portland, Oregon, USA: Intellect Books, 2011). 366 pages. ISBN: 9781841503769.

Zhouying Jin (author) & Kelvin W. Willoughby (editor & co-translator), *Global Technological Change: From Hard Technology to Soft Technology*, First Edition (Bristol, UK; Portland, Oregon, USA: Intellect Books, 2005). 317 pages. ISBN: 9781841501246.

Kelvin W. Willoughby & Edward J. Blakely (editors), *The Management and Economic Potential of Biotechnology* (Geneva: Inderscience Enterprises Ltd., 1993). 191pages. ISBN: 0907776122. Library of Congress (US), LC Control No.: 93622391.

Book Chapters and Sections in Books

Kelvin Willoughby and Peter Karl Kresl, "Cities as Innovation Spaces: Smart Infrastructure Hub Meetup," pp. 122-143 of *City Innovation in a Time of Crisis*, ed. Peter Karl Kresl (Cheltenham UK: Edward Elgar, 2024). <https://doi.org/10.4337/9781035327980.00012>

Abbreviated Curriculum Vitae: Prof. Kelvin W. Willoughby

Kelvin W. Willoughby, "Les niches technologiques," pp. 74-83 of *Une anthologie pour comprendre les Low-Tech*, dirigée par Clément Gaillard (Postface Philippe Bihouix) (Paris: T&P Publishing, 2023). ISBN: 979-10-95513-20-9.

Kelvin W. Willoughby, "What Can Be Patented? Technological Innovation and the Contemporary Mess in Patent Law," pp. 171-178 of ИНТЕЛЛЕКТУАЛЬНЫЕ ПРАВА: ВЫСОБЫ 21-го ВЕКА, Материалы Международной конференции, 14-16 ноября 2019 г., Под редакцией Э.П. Гаврилова, С.В. Бутенко (Томск: Издательский Дом Томского государственного университета, 2019). DOI:10.17223/9785946218559/26

Kelvin W. Willoughby, "Gifted Education, Scientific Research and Technological Innovation: The Philosophy and Practice of Skoltech," in *The 1st Thai-Russian Roundtable (TRRT): Collaboration on Gifted Education and Research* (Bangkok: Office of the Education Council, Kingdom of Thailand, 2018) pages 57-66.

Maximilian von Zedtwitz, Zeljko Tekic and Kelvin W. Willoughby, "Foreign R&D Investment in Russia: How to Translate into Innovation?" in *The Life of Russian Business: (Re)cognizing, (Re)activating and (Re)configuring Institutions*, edited by Tomas Casas i Klett and Yuliya Ponomareva (Information Age Publishing Inc., 2018), pages 141-146.

Kelvin W. Willoughby, Preface, *A Problem-based Approach for Management Education: Preparing Managers for Action*, P. Hallinger & E. M. Bridges (Berlin: Springer, 2007).

Kelvin W. Willoughby, "Technological semantics and technological practice: Lessons from an enigmatic episode in Twentieth Century technology studies," in *Theory of Technology*, edited by David Clarke (New Brunswick, NJ: Transaction Publishers, 2005), pages 150-180.

Kelvin W. Willoughby, "The local milieux of knowledge-based industries: What can we learn from a regional analysis of commercial biotechnology," in *Cities in Competition: Productive and Sustainable Cities for the 21st Century*, edited by J. Brotchie, M. Batty, E. Blakely, P. Hall, & P. Newton (London: Longman; Melbourne: Longman Australia, 1995), pages 252-285.

Kelvin W. Willoughby, "The 'Kingdom of Camelot'* and the Quest for the 'Holy Grail'# (**'our place') (#'global technological competitiveness')," in *Local Matters: Perspectives on the Globalisation of Technology*, edited by John Phillimore (Perth, Aust.: Murdoch University, Institute for Science and Technology Policy, 1995), pages 129-136.

Kelvin W. Willoughby & U. E. Gattiker, "Technological competence, ethics and the global village: Cross-national comparisons for organization research," in *Handbook of Organizational Behavior*, edited by R. Golembiewski (New York & Basel: Marcel Dekker, 1993), pages 457-485.

Kelvin W. Willoughby & A. Morkel, "Orbital Engine Company," in *The Strategy Process: Contexts and Cases*, edited by James Brian Quinn and Henry Mintzberg (Englewood Cliffs, NJ: Prentice Hall, 1993), pages 309-323. [third published version of case] Republished in 3rd Edition (1999).

Kelvin W. Willoughby & Bernard Wong, "Orbital Engine Company Pty Ltd," in *Australian Strategic Management*, edited by G. Lewis, A. Morkel, and G. Hubbard (New York: Prentice Hall, 1993), pages 596-612. [second published version of case]

Kelvin W. Willoughby & Bernard Wong, "Orbital Engine Company Pty Ltd," in *Cases in Australian Strategic Management*, edited by G. Lewis, A. Morkel, and G. Hubbard (New York: Prentice Hall, 1991), pages 319-334. [first published version of case]

Kelvin W. Willoughby & Bernard Wong, "Delta West Ltd," in *Australian Strategic Management*, edited by G. Lewis, A. Morkel, and G. Hubbard (New York: Prentice Hall, 1993), pages 580-595. [second published version of case]

Kelvin W. Willoughby & Bernard Wong, "Delta West Limited," in *Cases in Australian Strategic Management*, edited by G. Lewis, A. Morkel, and G. Hubbard (New York: Prentice Hall, 1991), pages 240-255. [first published version of case]

Abbreviated Curriculum Vitae: Prof. Kelvin W. Willoughby

Kelvin W. Willoughby, Review of the contributions of Dr Keith R. Roby in the field of technology studies, in Barns, I. (ed), *Challenges for Einstein's Children: Keith Roby's Vision of Science in Community Life* (Perth: Murdoch University, 1984), pages 111-113.

Other Publications

More than 160 other publications related to my general area of academic expertise, in addition to the above formal refereed academic publications, including the following:

- 26 Published Working Papers, Published Occasional Papers or Published Technical Monographs, Industry Reports and Government Reports
- Over 120 Conference Papers, Invited Lectures and Guest Seminar Presentations
- 14 Professional Reports, Business Cases & Other Publications

For a complete list of Professor Willoughby's publications go to:

http://www.drkelvinwilloughby.com/Professor_Kelvin_W._Willoughby/Full_List_of_Publications.html

Teaching Experience

More than 30 years of professional teaching and supervision of research at the graduate level at the following universities: HHL Leipzig Graduate School of Management, Skolkovo Institute of Science and Technology, Copenhagen Business School, National Research University Higher School of Economics (Russia), Curtin University, the University of Minnesota, the State University of New York at Stony Brook, the University of Utah, Westminster College, the University of Western Australia, the University of California at Berkeley, and Mahidol University.

Guest teaching at the following universities: Copenhagen Business School, the Hong Kong Polytechnic University, Helsinki School of Economics and Business Administration; Seoul National University; W.A. Institute of Technology; Murdoch University; Winston-Salem State University; Tsinghua University.

Subject matter of courses taught have included:

Technology Entrepreneurship; Intellectual Property, Technological Innovation and Entrepreneurship; Intellectual Property, Technological Innovation and Academic Research; Disruptive Technologies and Business Models; Innovation Management; Entrepreneurship and Agile Working Methods; Research Methodology in Engineering Systems; Comparative International Patent Law; Innovation Workshop; Philosophy of Science, Technology and Innovation; Strategic Management; Introduction to Business Planning; Entrepreneurship; The Art of Managing Entrepreneurship; Technology Transfer and Commercialization; Legal Framework and Sustainability in Electrical Engineering; Managing Organizations in a Technological Environment; Developing New Technology Products; International Management of Technology Project; Management of Technology Capstone Projects; Design and Evolution of Technology Commercialization Strategy; Enactment of Technology Commercialization Strategy; Introduction to the Process of Technological Innovation; Technical Standards and Competition in High Technology Industries; Organizations, Technology and Society; International Dimensions of Technology Management; Licensing Strategy; Technology Commercialization, Research Institutions and Government; Business Law and the Management of Intellectual Property in the Information Age; Technology Management and Industrial Context (Telecommunications); Strategic Management of Technological Innovation; Strategic Management and the Banking Industry; Strategic Management of Technology; Management of Technology (A): The Technology Based Firm; Management of Technology (B): Technological Contexts; International Management; Entrepreneurship in Emerging Technology; Entrepreneurial Bioengineering; Managing Innovation and Technology; Innovation and Technological Design; Rural/Small Town Planning and Policy: US and International Perspectives; Urban and Regional Development in the Third World; Resources Planning.

Research Grants Awarded / Principal Investigator

European Union, Horizon Grant Program, HORIZON-CL5-2023-D2-02, Grant of € 252,135. Principle Investigator for research on intellectual property and technology commercialization strategies for enhanced safety and environmental sustainability in lithium-ion batteries for mobility applications. Part of SAFELOOP research consortium.

Project title: "Securely Advancing Future EVs with Li-IOn batteries through Optimized Pathways - SAFELOOP" (2024-2026)

Abbreviated Curriculum Vitae: Prof. Kelvin W. Willoughby

Otto Moensted Foundation, Grant of DKK 210.000,00 for Otto Moensted Visiting Professorship (Otto Mønsted Gæsteforsker) for research at the Copenhagen Business School. Project topic: "Intellectual property strategies for international technological competitiveness for companies, countries and regions" (2020-2022)

The Hong Kong Polytechnic University, University Research Grant (\$249,800). Joint project with Prof. Chi Fai Cheung, Dr. Woo Yong Park & Prof. Kelvin W. Willoughby.

Project title: "A scenario-based product-service system for servitization of gerontechnology for aging in place." (2017-2018)

The Hong Kong Polytechnic University, University Research Grant (\$128,000). Joint project with Assoc. Prof. Chi Fai Cheung, Dr. Wai Ming Wang Prof. Kelvin W. Willoughby and Dr. Artie Ng.

Project title: "Development of a multi-faceted technology assessment system for measuring the performance of innovative technology-intensive enterprises." (2011-2012)

Thailand-Global Entrepreneurship Research Project (incorporating the GEM - Global Entrepreneurship Monitor - Project), Mahidol University & Office of Small and Medium Enterprise Promotion, Thailand. (3,360,000 baht)

Project title: "Thai Entrepreneurship in a Global Context." (2007-2008)

Federal Laboratory Consortium for Technology Transfer (operating budget 2003, \$5,000; operating budget 2004, \$7,000 & \$8,000) Entrepreneurial Technology Apprenticeship Program (graduate assistant expenses 2003, \$16,000; 2004, \$8,000)

Project title: "Technology Transfer Training and Education Resources Project." (2002-2004)

TumTech GmbH (Technical University of Munich) & Degussa AG (Duesselforf, Germany) (Euro 25,000) "The Virtualization of Universities." (2001-2002)

Ministry of Education, Research, Science and Technology (Federal Republic of Germany); joint research project with Roland Berger & Partner GmbH & Fraunhofer Management Gesellschaft mbH. Total budget approx. DM 700,000. Project title: "Study of the Development and Operating Mechanisms of Technological Competence Centers in Germany." (1998)

Utah Life Science Industries Association (\$17,260)

Project title: "Study of the Bioscience Technology Industries in Utah." (1998)

Research Foundation of the State University of New York (\$40,500)

Project title: "Study of the Biotechnology and Biomedical Engineering Industries in New York." (1996)

The University of Utah (\$10,000)

Project title: "Options for a University-wide Graduate Program in Technology Management." (1993)

Australian Research Council, 1993 Small Grants Scheme (\$10,117)

Project title: "Local industrial networks and international activity in knowledge-based businesses: A study of the biotechnology industry in Australia, California and New York State." (1993)

Research Foundation of the State University of New York, administered by the Center for Biotechnology, State University of New York at Stony Brook and the New York Biotechnology Association (US\$35,000)

Project title: "Strategies for the Development of Biotechnology in New York." (1991)

University of California at Berkeley, Center for Research in Management (US\$10,000)

Project title: "Strategic Analysis of the Biotechnology Industry." (1989/1990)

Commonwealth of Australia, Office of Local Government, and the Western Australian Department of Regional Development and the North West (\$18,000)

Project title: "Evaluation of local enterprise development programs in Western Australia."

Joint project with J. Moon. (1988)

Commonwealth of Australia, Department of Industry, Technology and Commerce, NIES Scheme (\$32 500 year 1, \$96 300 over 3 years; 1987 - 1990)

Project title: "The Ingredients of Successful Entrepreneurship in a Middle Economy: The Case of Knowledge Based Companies in Western Australia". Joint project with A. Morkel. (1987)

Abbreviated Curriculum Vitae: Prof. Kelvin W. Willoughby

Government of Western Australia, Technology and Industry Development Authority (\$17,000)
Project title: "Technology, Agriculture and Regional Development". (1986 -1987)

Other Academic and Professional Experience

Chair of Technology Exploitation Committee, SAFELOOP Lithium-Ion Battery research and innovation consortium, European Union, Horizon Grant Program, HORIZON-CL5-2023-D2-02.
Project title: "Securely Advancing Future EVs with Li-IOn batteries through Optimized Pathways - SAFELOOP" (2024-2026)

Academic member of *comité de suivi individuel*, *Ecole Doctorale de l'Institut Polytechnique de Paris* - ED 626, École Polytechnique. Doctoral student: Juan Diaz. (2023-2025).

Otto Mønsted Visiting Professor, Department of International Economics, Government and Business, Copenhagen Business School, Copenhagen, Denmark (April - July 2022)

Visiting Professor, Department of Industrial and Systems Engineering, The Hong Kong Polytechnic University, Kowloon, Hong Kong. (2011 - 2024)

Guest Professor, School of Intellectual Property, Nanjing University of Science and Technology, Nanjing, China. (2018 - 2022)

Visiting Professor, Department of International Economics, Government and Business, Copenhagen Business School, Copenhagen, Denmark. (2022)

Adjunct Professor, School of Electrical Engineering, Computing and Mathematical Sciences, Curtin University, Australia (2018 - 2020)

Associate Dean of Education (university-wide), Skolkovo Institute of Science and Technology, Moscow, Russia (2015-2016); Chair of Curriculum Committee (2014-2016); member of Institute-wide Doctoral Research Committee (2015-2016); member of Policy Review Committee (2014-2015); member of Personnel Committee / Faculty Appointment Committee (2014-2015); member of Education Committee (2016 onwards); member of Library Committee (2014-2015); member of President and Academic Council (2015); member of Disciplinary Board, Skoltech (2017-2018); Director, Laboratory for Innovation and Intellectual Property Management* (2014 - onwards). [*previously "Innovation and Intellectual Property Management Research Unit"].

Founding Director (Skoltech, Moscow), *H.R.H. Princess Maha Chakri Sirindhorn Skoltech Scholarship* program. Scholarship program managed jointly between the Skolkovo Institute of Science and Technology (Moscow, Russia) and the H.R.H. Princess Maha Chakri Sirindhorn Information Technology Foundation (Thailand) that awards scholarships annually to outstanding graduate students from Thailand to study science in Russia. (2018-2021)

International Scientific Committee member, 6th International Conference on Knowledge Management in Asia Pacific (KMAP 2012), Shanghai, China, October 10-12, 2012.

International Symposium on Trade and Management, Pakse, Lao People's Democratic Republic (Laos), Keynote Speaker, Topic: "Trading Ideas! Is That Real Business? Asia and the Global Knowledge Economy." (May 30, 2012)

Elected Professoriate Member, Strategic Review Board, Curtin Business School, Curtin University (2011 -)

Member of Minerals and Energy Strategic Planning Committee, Curtin University (2011).

President, *Willoughby International, LLC*.

Willoughby International LLC is an international professional firm, based in Minneapolis, USA, providing research, consulting and management services in the fields of intellectual property, regional technology-based industry development and international business. Clients have included private companies, high-technology industry associations, national governments, state/provincial governments, educational institutions and research organizations in the United States, Europe and Asia. (1997-present)

Abbreviated Curriculum Vitae: Prof. Kelvin W. Willoughby

Intern, Max Planck Innovation, Munich, Germany; advanced-ceramics patent analysis and strategy project. Max Planck Innovation is the technology commercialization / technology transfer organization of the Max-Planck-Gesellschaft zur Förderung der Wissenschaften e. V. (<http://www.max-planck-innovation.de>) (2008).

Congress Participant, Ninth EIPIN (European Intellectual Property Institutes Network) Congress 2007-08, Zurich / Gerzensee (Switzerland), Strasbourg (France) and London / Windsor (U.K.). Team participant, Topic: IP Enforcement, Technical Compatibility and Standards. (2007-2008)

Convenor, The IP Roundtable, Munich Germany. (2007-2008)

Vice-President, Technology and Life-Sciences Entrepreneurship Division, U.S. Association for Small Business and Entrepreneurship (2007); Vice-President Elect (2006); Program Chair (2005); Program Chair-Elect (2004).

Director, Thailand-Global Entrepreneurship Research Project (incorporating the GEM - Global Entrepreneurship Monitor - Project), Mahidol University & Office of Small and Medium Enterprise Promotion, Thailand (2007).

Co-Chair, Statewide Bio-industry Assessment Project, BioBusiness Alliance of Minnesota, Minneapolis-St. Paul (2005-2006).

Visiting Professor, School of Business, Curtin University of Technology, Australia (2006).

Visiting Research Fellow, Research Center for Advanced Science and Technology (RCAST), Department of Intellectual Property, The University of Tokyo, Tokyo, Japan (2005).

Member, Education and Training Committee, Federal Laboratory Consortium for Technology Transfer, United States Government (2003-2004)

Faculty Member & Member of Planning Group, Emerging Minority Business Leaders Program, U.S. Minority Business Development Administration (2003-2004)

Visiting Scholar, Milano Graduate School of Management and Urban Policy, New School University, New York City (2003).

Chair Elect of the Faculty, Westminster College (2003); Member of the Faculty Senate, Westminster College (2003-); Member of College-wide Strategic Planning Committee, Educational Signature, Westminster College (2003); Chair, Sabbatical and Merit Leave Committee, Westminster College. (2002, 2003); Coordinator, Re-accreditation Process, Gore School of Business (2003).

Director, Education and Training Project for Technology Transfer and Technology Management in the Federal Government Laboratories. Joint venture with the Federal Laboratories Consortium of the U.S. Government. Chair: L. Murray (F.L.C.) Co-director: J. Miller (F.L.C. & N.T.T.C.). (2002, 2003 -)

Board Member, MediaPort, Inc., Salt Lake City [digital technology communications company]. (2002-)

Faculty Mentor for Westminster College MBA Student Business Planning Team that won First Place in the state-wide business planning competition, the *Utah Entrepreneurship Challenge*. (2002)

Principle designer of curriculum for new graduate degree programs: Master of Business Administration in Technology Management & Master of Science in Technology Commercialization, Gore School of Business, Westminster College. (2001).

External Reviewer, Master of Business Administration in Technology Management, State University of New York, Institute of Technology, Utica/Rome. (2001)

Academic Director and Program Manager, international graduate program, Master of Science in Technology Management (with a focus on Information and Telecommunications), offered in Seoul, Korea, and in New York, by the College of Engineering and Applied Sciences, State University of New York at Stony Brook (in Association with the Institute of Industrial Policy Studies). (1999-2001)

Member, Working Group on Technology and Economic Development in the Tri-State Region, New York Academy of Sciences. (1998-2001)

Member, International Council, State University of New York at Stony Brook. (1999-2001)

Member, Advisory Board, School of Professional Development and Continuing Education, State University of New York at Stony Brook. (1999-2001)

Abbreviated Curriculum Vitae: Prof. Kelvin W. Willoughby

Member, Provost's Advisory Committee on Undergraduate Business Education, State University of New York at Stony Brook. (2000)

Received a US\$1.2 million industry grant to endow the David Eccles School of Business contribution to the Management of Technology Program at the University of Utah [with Dean of Business and the Development Director, David Eccles School of Business] (1997).

Member, Evaluation Team, Utah State Board of Regents, Review of Technology Management Baccalaureate Degree Program, Utah Valley State College. (1996)

Member, Advisory Board, Bachelor of Science in Technology Management, Utah Valley State College. (1996)

Visiting Scholar, Columbia University, New York, Urban Planning Program. (1993)

Research Scholar and Project Director, State University of New York at Stony Brook, Center for Biotechnology. (1991-1992)

Visiting Assistant Professor, State University of New York at Stony Brook, W. Averell Harriman School of Management and Policy. (1991)

Member, Technology Studies Consultative Committee, Western Australian College of Advanced Education. (1988-1994)

Advisor/Consultant, Prince of Songkla University, Thailand. Establishment of a new university-wide program in management of technology and technology transfer. (1988)

Member, Central Valley Project, Agricultural Issues Center, University of California, Davis (1989-1990)

Visitor, Department of Business and Management, University of Stirling, Scotland, United Kingdom. (August 1988)

Permanent Alternate Member (representing the University of Western Australia), Management Committee, Institute for Small Business Research, Western Australia. (1988-)

Expert Advisor, Interdepartmental Advisory Committee on Local Economic Initiatives, Government of Western Australia. (August 1988)

Convenor of Department of Management (University of Western Australia) Research Seminar Series (1988). Co-convenor (with Prof. A. Morkel) of the cross-campus seminar series on Industry Strategy and Technology Policy. (1986, 1987).

Planned and chaired joint project of Western Australian Science, Industry and Technology Council, and W.A. Department of Employment and Training, on "Technology Choice for Employment Generation" (an empirical and theoretical study aimed at producing investment criteria for use in technology, innovation and industry development policies). (\$30 000; 1984-1986)

Consultant to the Technology Directorate of the Government of Western Australia on the employment impacts of technology. (1984)

Council Member, Science, Industry and Technology Council, Government of Western Australia. (1984-1986) Chairman of Working Parties on (1) Social and Industrial Impact of Technology, (2) Technology Taxonomy and (3) Technology for Aboriginal Communities. Member of Working Parties on (1) Education and Technology and (2) Technology Assessment.

Foundation President and C.E.O., The Appropriate Technology Development Group, Inc. (an organization which provides technical information, consulting and publishing services, runs educational seminars, and develops small community-based business ventures), and APACE Aid Inc. (an organization which operates training courses for unemployed people). (1982-1984; honorary advisor and Vice President 1984-1985; Honorary Life Member 1997 -)

Association with Scholarly Journals

Reviewer: *Journal of Product Innovation Management*. 2024 -
Reviewer: *Technovation*. 2005 -
Reviewer: *World Patent Information*. 2019 -
Reviewer: *Technological Forecasting and Social Change*. 2019 -
Reviewer: *Innovation: Organization and Management*. 2019 -
Reviewer: *International Journal of Innovation and Technology Management*. 2019 -
Reviewer: *Journal of Knowledge Management*. 2016 -
Reviewer: *SAGE Open*. 2020 -
Reviewer: *IEEE Access*. 2020 -
Reviewer: *International Journal of Intellectual Property Management*. 2016 -
Editorial Board, Member: *International Journal of Intellectual Property Management*. 2020 -
Reviewer: *International Journal of Technology Management*. 2016 -
Reviewer: *IEEE Transactions on Engineering Management*. 2006 -
Reviewer: *Journal of Management and Organization*. 2011 -
Editorial Board, Member: *International Journal of Technoentrepreneurship*. 2007 - 2019.
Reviewer: *Research Policy*. 2008 -
Reviewer: *Journal of High Technology Management Research*. 2004 -
Editorial Review Board, Member: *Journal of Applied Educational Technology*. 2004 -
Associate Editor, *Technology Studies* (Berlin and New York: de Gruyter). 1991-1994.
Reviewer, *The Journal of Technology Transfer* (Indianapolis: Technology Transfer Society). 1990.
Reviewer, *Studies in Technological Innovation and Human Resources*, refereed book series (Berlin and New York: de Gruyter). 1989.
Guest Editor, special issue of *International Journal of Technology Management*, 1992.
Reviewer: *Futures* (London: Butterworths); books, Walter de Gruyter, Berlin. 1990.
Reviewer: *Journal of the Community Development Society*. 2002.
Reviewer: *Academy of Management*. 2000.
Reviewer: *International Journal of Public Finance*. 2003.