

## Curriculum Vitae

Name **Prof. Kelvin Wayne WILLOUGHBY**

*Professor, Innovation and Intellectual Property*  
**Skolkovo Institute of Science and Technology**

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### Academic and Professional History

- Current  
(from July 2014) Professor (Full Professor), Innovation and Intellectual Property  
**Skolkovo Institute of Science and Technology (Skoltech)**, Moscow, Russia.  
Director, Innovation and Intellectual Property Laboratory  
Associate Dean of Education, Skoltech (2015-2016).
- 2010-2014 Professor of Entrepreneurship and Intellectual Property, **Curtin University**.  
Curtin Business School (2010-2012): Director, Master of Business Administration &  
Deputy Director, Curtin Graduate School of Business. Faculty of Science and Engineering  
(2012-2014): School of Electrical Engineering and Computing.  
**Curtin University**.
- 2010 Gastprofessor & Wissenschaftlicher Mitarbeiter  
Lehrstuhl für Wirtschaftsrecht und Geistiges Eigentum  
Fakultät für Wirtschaftswissenschaften (TUM School of Management)  
**Technische Universität München**, Munich, Germany.
- 2007-2008/9 Max Planck Gesellschaft Fellowship for International Scientific Cooperation  
**Max Planck Institut für Geistiges Eigentum, Wettbewerbs- und Steuerrecht**  
(Max Planck Institute for Intellectual Property, Competition and Tax Law)  
Munich, Germany.
- 2006-2007 Professor, College of Management & Faculty of Science, Mahidol University  
Chair, Entrepreneurship Management Program, College of Management  
Chair, New Technology Ventures Program, College of Management  
Academic Director, International Initiatives, College of Management  
**Mahidol University**, Bangkok, Thailand.
- 2004-2006 Honeywell / W. R. Sweatt Chair in the Management of Technology  
Professor & Program Director, Management of Technology Program  
Center for the Development of Technological Leadership  
Institute of Technology  
**The University of Minnesota**.
- 2001-2004 Professor of Management and Entrepreneurship  
Gore School of Business,  
**Westminster College**.

(June 2021)

*Curriculum Vitae: Professor Kelvin W. Willoughby*

- 1998-2001 Director, Management of Technology Program  
Director, Industrial and Business Initiatives  
& Associate Professor (Business & Technology Management)  
College of Engineering and Applied Sciences  
**State University of New York at Stony Brook.**
- 1994-1998 Director, Management of Technology Program  
The University of Utah  
(College of Engineering and David Eccles School of Business);  
& Clinical Associate Professor of Management,  
Department of Management,  
David Eccles School of Business,  
**The University of Utah.**
- 1990-1994 Lecturer in Business Policy and Strategy (Tenured)  
**The University of Western Australia,**  
Faculty of Economics and Commerce  
(Graduate School of Management & Department of Organisational and Labour Studies)  
Director, Honours Program in Management.  
Granted tenure in July 1993.
- 1988-1993 Research Associate  
**The University of California at Berkeley**  
Institute of Urban and Regional Development.
- 1993 Visiting Scholar  
**Columbia University,** New York  
Urban Planning Program.
- 1991-1992 Research Scholar and Project Director  
**State University of New York at Stony Brook**  
Center for Biotechnology.
- 1991 Visiting Assistant Professor  
**State University of New York at Stony Brook**  
W. Averell Harriman School of Management and Policy.
- 1990 Lecturer  
**The University of California at Berkeley**  
Department of City and Regional Planning.
- 1988-1990 Postdoctoral Fellow  
**The University of California at Berkeley.**  
Departmental appointments:  
Haas School of Business, Center for Research in Management (Postdoctoral Fellow);  
Institute of Business and Economic Research (Postdoctoral Fellow); Institute of Urban  
and Regional Development (Research Associate); Institute of Governmental Studies  
(Fellow); Agricultural Issues Center (University of California System-wide).
- 1987-1988 Research Fellow  
**The University of Western Australia**  
Faculty of Economics and Commerce, Department of Management.
- 1986 Extension Officer  
**The University of Western Australia,** University Extension.
- 1980-1986 Doctoral Student and part-time tutor/lecturer  
**Murdoch University**  
School of Environmental and Life Sciences & School of Education.

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

- 1984-1986 Council Member  
**Science, Industry and Technology Council**  
Government of Western Australia.  
Chairman of Working Parties on (1) Social and Industrial Impact of Technology, (2) Technology Taxonomy and (3) Technology for Aboriginal Communities. Member, Working Parties on (1) Education and Technology and (2) Technology Assessment.
- 1982-1985 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)
- 1978-1979 Graduate Assistant  
**Metropolitan Region Planning Authority**  
Government of Western Australia.

## Higher Education

### Master of Laws (LL.M.)

Universität Augsburg, 2008.

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)

Dissertation: "*Technology and the Law of Patent Eligible Subject Matter.*"

### Doctor of Philosophy (Ph.D.)

The University of Western Australia, 1999.

Graduate School of Management

(Fields: strategic management and technology management)

Dissertation: "*Strategies for the Local Development of Advanced Technology Industry: Clues from the Case of Biotechnology in New York State.*"

### Fulbright Postdoctoral Fellowship

The University of California at Berkeley, 1988-1990.

(Fields: strategic management and economic development planning)

### Doctor of Philosophy (Ph.D.)

Murdoch University, 1987.

School of Environmental and Life Sciences

(Field: technology studies)

Dissertation: "*Appropriate Technology: An Integrated Framework for Policy and Practice*"

### Bachelor of Arts with First Class Honours (B.A. Hons. 1<sup>st</sup> Class)

Murdoch University, 1980.

School of Mathematical and Physical Sciences

(Fields: technology studies, population & resource studies)

Dissertation: "*Technology and Traditional Wisdom: A Study of the Thought and Work of Ernst Friedrich Schumacher*"

## **Awards and Honors**

- 2020-2022 *Otto Mønsted Gæsteprofessorat*, awarded by the Otto Moensted Foundation for the Otto Moensted Visiting Professorship at the Copenhagen Business School.
- 2019 Elevated to *IEEE Senior Member* status, IEEE (Institute of Electrical and Electronics Engineers).
- 2018 *HRH Princess Maha Chakri Sirindhorn* award for contribution to educational and research collaboration between the Kingdom of Thailand and the Russian Federation (TRRT).
- 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.
- 2018- Director, GLORAD, Center for Global R&D and Innovation
- 2011-2018 Visiting Professor, Department of Industrial and Systems Engineering, The Hong Kong Polytechnic University, Kowloon.
- 2012-2013 Resident Entrepreneur, Innovation Centre of Western Australia. Government of Western Australia.
- 2009 Appointed as the 314<sup>th</sup> Honorable Member of the Mahidol University Alumni Association under the Patronage of His Majesty the King of Thailand, 2009.
- 2007-2008 *Diplôme d'honneur, Propriété Intellectuelle Européenne*, EIPIN (European Intellectual Property Institutes Network): Strasbourg, Munich, Zurich, London, Alicante.
- 2007-2008 Max Planck Gesellschaft Fellowship for International Scientific Cooperation. Fellowship to study intellectual property law at the Max-Planck-Institut für Geistiges Eigentum, Wettbewerbs- und Steuerrecht, Munich, 2007-2008.
- 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 *The Journal of Technology Transfer* during 1990-1991.
- 1988 Popular and Effective Lecturer Award for MBA Lecturers, 1988. Awarded 1st place by the Western Australian Institute of Business Administration (Inc.) for teaching in the Master of Business Administration program at the University of Western Australia.
- 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.
- 1986 Murdoch University Convocation Award, 1986. Granted for outstanding scholarship (with a special emphasis on interdisciplinary research and teaching), service to Murdoch University, and building cooperation between the University and the wider community.
- 1980-1985 Commonwealth Postgraduate Research Scholarship.  
Awarded to carry out doctoral research.
- 1997 Honorary Life Membership,  
The Appropriate Technology Development Group, Inc. (APACE Western Australia), 1997 -

## Publications

### Refereed Scholarly Journal Articles

“Rethinking the Dynamics of Innovation, Science, and Technology: The Curious Case of Stirling Engines and Stirling Refrigerators,” *Energy Research & Social Science* (accepted for publication, in print, 6 June 2021). Dmitry S. Smirnov & Kelvin W. Willoughby.

“Reverse Innovation, International Patenting and Economic Inertia: Constraints to Appropriating the Benefits of Technological Innovation,” *Technology in Society* (under review, January 2021). Kelvin W. Willoughby & Nadezhda Mullina.

“An Approach to AI-Enhanced Patent Analysis for Emerging Advanced Technology Industries: Insights from the Domain of Quantum Technology,” *World Patent Information* (under review, December 2020). Zeki Can Seskir & Kelvin W. Willoughby.

“Customized to Fit: Intellectual Property Management in Innovation-focused Co-creation Projects,” *The Journal of Product Innovation Management* (revise and re-submit, January 2021). Anja Tekic, Kelvin W. Willoughby & Johann Füller.

“Contextual Factors Affecting Patent Licensing Provisions in Collaboration Agreements of Complex Technological Organizations,” *International Journal of Intellectual Property Management* (accepted for publication, in print, 8 June 2020). 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* (accepted for publication, in print, 12 May 2020). 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>

“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.  
<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>

## Curriculum Vitae: Professor Kelvin W. Willoughby

"Intellectual property management and technological entrepreneurship," *International Journal of Innovation and Technology Management*, 10, 6 (2013), 1-42. 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.

"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>

## Curriculum Vitae: Professor Kelvin W. Willoughby

“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 W. Willoughby, “What Can Be Patented? Technological Innovation and the Contemporary Mess in Patent Law,” pp. 171-178 of ИНТЕЛЛЕКТУАЛЬНЫЕ ПРАВА: ВЫЗОВЫ 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 1<sup>st</sup> 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. ISBN-10: 164113450X ISBN-13: 978-1641134507

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.

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

Kelvin W. Willoughby, "The local milieu 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. [revised version of case] Republished in 3<sup>rd</sup> Edition (1999).

Kelvin W. Willoughby & A. Morkel, "Orbital Engine Company," 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 & A. Morkel, "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.

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.

### **Published Working Papers or Occasional Papers**

Kelvin W. Willoughby, "Intellectual Property Management and Technological Entrepreneurship: One Size Does Not Fit All," Working Paper, Entrepreneurship Research and Policy Network (ERPN), Social Sciences Research Network (June 13, 2010). Available at SSRN: <http://ssrn.com/abstract=1630666>

Alejandra Castenada, Stéphane A. Dasonville, Tim Heitmann, Marc Mimler, and Kelvin W. Willoughby, "Compatibility and Standards: Should Apple Open Up Its 'Fairplay' DRM System?" EIPIN Team Reports, Working Paper 4 (2008), Berkeley Electronic Press. <http://www.bepress.com/ndsip/eipin/art4>.

Kelvin W. Willoughby, "The Virtualization of University Education: Concepts, Strategies and Business Models," *Instructional Technology Forum*, Discussion Paper #75, September 15-19, 2003. <http://it.coe.uga.edu/itforum/paper75/paper75.html>

Kelvin W. Willoughby & E. J. Blakely, *The Economic Geography of Biotechnology in California*, Working Paper No. 90-176, Center for Real Estate and Urban Economics, Institute for Business and Economic Research, University of California at Berkeley, February 1990. 56 pages.

Kelvin W. Willoughby & E. J. Blakely, *Choosing a Strategy for Local Industry Development from Biotechnology: Transfer or Incubate?* Working Paper No. 520, May 1990, Institute of Urban and Regional Development, University of California at Berkeley. 35 pages.

Kelvin W. Willoughby & E. J. Blakely, *Making Money from Microbes: Finance and the California Biotechnology Industry*, Working Paper No. 89-166, Center for Real Estate and Urban Economics, Institute for Business and Economic Research, University of California, Berkeley, August 1989. 75 pages.

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

Kelvin W. Willoughby, *Technological Change and the Rural Economy: Lessons from Down Under*, Working Paper No. 495, March 1989, Institute of Urban and Regional Development, University of California, Berkeley. 37 pages.

Kelvin W. Willoughby & A. Pecotich, *The Ambiguous Status of Science and Technology: A Study of Management Attitudes and Public Policy in Australia*, IGS Working Paper No. 89-9, April 1989, Institute of Governmental Studies, University of California, Berkeley, 41 pages.

### **Published Technical Monographs, Industry Reports and Government Reports**

Kelvin W. Willoughby, *Minnesota's Competitive Position in the BioBusiness Technology Industries*. St. Louis Park, MN: BioBusiness Alliance of Minnesota, 2011. 92 pages.

Christoph Ann (principle author), Kelvin W. Willoughby (collaborative author / Mitarbeiter) & Stephanie Bergmann (collaborative author/ Mitarbeiter), *Strategien zur Piraterieabwehr für den Mittelstand*. München: bayme vbm, Die bayerischen Metall- und Elektro-Arbeitgeber, 2011. 68 pages.

Kelvin W. Willoughby, *Biobusiness: Minnesota's Present Position and Future Prospects*. St. Louis Park, MN: BioBusiness Alliance of Minnesota, 2006. 102 pages.

Kelvin W. Willoughby, *The Competitive Position of Biobusiness Technology Industries in Minnesota within the United States*. St. Louis Park, MN: BioBusiness Alliance of Minnesota, 2006. 77 pages.

Kelvin W. Willoughby, *Utah Life Sciences Industry Directory* (including Summary of Economic Highlights of Utah's Bioscience Technology Industry). Second Edition. Salt Lake City: Utah Life Science Association, 1999. 80 pages.

Bernd Grohs, Kelvin W. Willoughby, et al., *Untersuchung der Wirkungsmechanismen von Kompetenzzentren am Beispiel ausgewählter Technologieregionen in Deutschland*. Report for Bundesministerium für Bildung, Wissenschaft, Forschung und Technologie, Bonn. Munich: Roland Berger & Partner GmbH, International Management Consultants, 1998. 148 pages.

Kelvin W. Willoughby, *Utah's Bioscience Technology Industry Complex: A Census and Analysis of the Biotechnology, Medical Technology, and Life Systems Technology Industries in the State of Utah*. Salt Lake City: Utah Life Science Association & State of Utah, Division of Business and Economic Development, 1998. 161 & xxvi pages.

Kelvin W. Willoughby, *New York's Evolving Bioscience Technology Industries: Managing Knowledge, Production and Services for Economic Development*. Stony Brook, New York: State University of New York, Center for Biotechnology, 1997. 161 pages.

Kelvin W. Willoughby, *Biotechnology in New York: A Global Industry in a Global Community*. Stony Brook, New York: State University of New York, Center for Biotechnology, 1992. 190 & xii pages.

Kelvin W. Willoughby, T. K. Bradshaw & E. J. Blakely, *Controlling Urban Growth in Rural California: What is Happening in the Central Valley?* Central Valley Briefs #4, January 1990, University of California Agricultural Issues Center, University of California, Davis. 6 pages.

Kelvin W. Willoughby & T. K. Bradshaw, *Implications of Changing Employment Patterns in the Central Valley*, Central Valley Briefs #1, July 1989, University of California Agricultural Issues Center, University of California, Davis. 4 pages.

Kelvin W. Willoughby, Summary of Conference Deliberations on Employment in the California Central Valley, Proceedings of Conference, "Growth and Change in the Great Central Valley: People and Agriculture," June 3rd 1989, Agricultural Issues Center, University of California, Davis.

Kelvin W. Willoughby & E. J. Blakely, *California Biotechnology Industry Profile*, Biotechnology Industry Research Group, University of California, Berkeley, November 1988. 4 pages.

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

Kelvin W. Willoughby, *Technology, Agriculture and Regional Development: Choosing a Future for Western Australia* (Perth, WA: Technology and Industry Development Authority, Government of Western Australia, 1988), 70 pages.

Kelvin W. Willoughby, *Aboriginal Communities and Technology: A Role for the Government of Western Australia?* (Perth: Western Australian Science, Industry and Technology Council, 1988). 7 pages.

Kelvin W. Willoughby, A. Bollard & D. Annandale, *Technology Choice for Employment Generation*. (Perth: Government of Western Australia [W.A. Science, Industry and Technology Council, and Department of Employment and Training], 1987). 208 pages. (Chairman of project and editor of Report by consultants).

Kelvin W. Willoughby, *Continuing Education in Dentistry: A Needs Assessment for Western Australia*, Report of an empirical research project for the Postgraduate Dental Education Committee, University of Western Australia, August 1986, 33 pages.

### **Business Cases (Mimeographed)**

Kelvin W. Willoughby, *Western Biotechnology Limited*. Graduate School of Management, The University of Western Australia, November 1989.

### **Other Reports**

Kelvin W. Willoughby, *Strategies for Solving the Problems of Backlog and Unreliable Examination Quality in the Global Patent System: An Outline of a Systematic and Quantitative Strategic Approach to Analyzing an Array of Potential Solutions to the Problems*. Working Paper, Munich Intellectual Property Law Center, Munich, 28 December 2008.

Kelvin W. Willoughby, Tim Heitmann, Marc Mimler, Stéphane Dassonville & Alejandra Castañeda Andrade, *Should Apple Open Up Its 'FairPlay' DRM System? Untangling the Knot of Copyright and Competition Law for Online Businesses*. Working Paper prepared for the 2007-2008 Congress of EIPIN (the European Intellectual Property Institutes Network), held in Gerzensee (Switzerland), Strasbourg (France) and Windsor (United Kingdom), March 2008. 27 pages.

Kelvin W. Willoughby & Kevin Michael Permenter, *Issues in Planning for Education and Training in Technology Transfer for Federal Laboratory Personnel: Insights from Analysis of the FLC Technology Transfer Training Resources Database*. Federal Laboratory Consortium for Technology Transfer, Education and Training Committee, May 2004. 15 pages.

Kelvin W. Willoughby, *Economic Impact of Engineering Education in SUNY on New York State*. College of Engineering and Applied Sciences, State University of New York at Stony Brook, 1999. 14 pages. Revised 2000.

Kelvin W. Willoughby, *Proposal for a Program in the Management of Technology for the University of Utah*. David Eccles School of Business & College of Engineering, University of Utah, Salt Lake City, October 1993, 25 pages.

Kelvin W. Willoughby, *Research Management in the Department of Management*. Department of Management, The University of Western Australia, 14 pages.

Kelvin W. Willoughby, *Employment Creation through the Appropriate Technology Development Strategy*. Report to the Technology Directorate of the Government of Western Australia, June 1984, 208 pages.

## Conference Papers

Si Yang An, Chi Fai Cheung, Mei Na Cheng and Kelvin W. Willoughby, "A Roadmap of Information and Communication Technology-Oriented Product-Service Systems for Older Adults in Hong Kong," IEEE 2021 9th International Conference on Information and Education Technology (ICIET 2021), Okayama, Japan, March 27-29, 2021. Paper ID C068. Accepted for publication in *IEEE Explore* on 10 February 2021.

Kelvin W. Willoughby and Nadezhda Mullina, "Intellectual Property Strategy and Reverse Innovation," 81st Annual Meeting of the Academy of Management, virtual meeting, 30 July-3 August 2021. (accepted, May 2021)

Zeki Can Seskir and Kelvin W. Willoughby, "An Approach to AI-Enhanced Patent Analysis for Emerging Advanced Technology Industries: Insights from the Domain of Quantum Technology," 81st Annual Meeting of the Academy of Management, virtual meeting, 30 July-3 August 2021. (accepted, May 2021)

Dmitry S. Smirnov and Kelvin W. Willoughby, "What Comes First, Technology or Science? Clues from the Field of Energy Conversion Technology," 81st Annual Meeting of the Academy of Management, virtual meeting, 30 July-3 August 2021. (accepted, May 2021)

Nadezhda Mullina & Kelvin W. Willoughby, "Are Exports an Indicator of Innovation Flows?" ISPIIM Connects Global 2020: Celebrating the World of Innovation - Virtual Conference, 6-8 December 2020. Event Proceedings: LUT Scientific and Expertise Publications: ISBN 978-952-335-566-8

Punyapat Saksupapchon & Kelvin W. Willoughby, "The Evolution of Patent Application Strategies of Companies in Commercial Aircraft Industry Through a Dynamic Capability Lens," Paper for the IEEE 4th Technology Innovation Management and Engineering Science International Conference (TIMES-iCON 2019), Faculty of Engineering, Mahidol University, Bangkok, Thailand, 11-13 December 2019.

Punyapat Saksupapchon & Kelvin Willoughby, "Contextual Factors Affecting Decisions About Intellectual Property Licensing Provisions in Collaboration Agreements for Open Innovation Projects of Complex Technological Organizations," 2019 IEEE International Symposium on Innovation and Entrepreneurship (TEMS-ISIE), Hangzhou, China, 24-26 October 2019.

Kelvin W. Willoughby & Nadezhda Mullina, "Global Innovation, Outbound International Patenting and Emerging Countries," Paper for R&D Management Conference, Research and Development Management Association, École Polytechnique and HEC Paris, Paris, France, 17-21 June 2019.

Anja Tekic & Kelvin W. Willoughby, "Intellectual property management in co-creation: Exploring the value of contextual and configurational perspectives for the development of strategy by employing the Qualitative Comparative Analysis methodology," Paper for the 79th Annual Meeting of the Academy of Management, Boston, USA, 9-13 August 2019.

Anja Tekic & Kelvin W. Willoughby, "Construing the conceptual mess around co-creation: An Innovation Management Perspective," Paper for the 24th Innovation and Product Development Management Conference (IPDMC), Reykjavik University, Iceland, 11-13 June 2017.

Anja Tekic & Kelvin W. Willoughby, "Co-creation and open innovation: Related but distinct concepts in innovation management," Paper for the R&D Management Conference 2016 From Science to Society: Innovation and Value Creation, Cambridge University, United Kingdom, 3-6 July 2016.

Anja Tekic & Kelvin W. Willoughby, "The strategic coupling of intellectual property management and co-creation strategies," Paper for the 23rd Innovation and Product Development Management Conference, Glasgow, United Kingdom, 12-14 June 2016.

Kelvin W. Willoughby and Alexander Vidiborskiy, "Technological Innovation, International Patenting and National Economic Development: A Multinational Multi-year Study," INFORMS (Institute for Operations Research and the Management Sciences) 2016 Annual Meeting, Nashville, Tennessee, November 13-16, 2016.

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

Kelvin W. Willoughby, "What impact does intellectual property have on the business performance of technology firms?" INFORMS (Institute for Operations Research and the Management Sciences) 2014 Annual Meeting, San Francisco, California, November 8-12, 2014.

Kelvin W. Willoughby, "Intellectual Property and Open Innovation: Friends or Foes?" Paper from Invited Lecture, 12th Annual Triple Helix International Conference, Tomsk, Russia, 11-13 September 2014.

Kelvin W. Willoughby, "The Rise of Regional Bioscience-Technology Industries in the United States" Paper from Invited Lecture, 12th Annual Triple Helix International Conference, Tomsk, Russia, 11-13 September 2014.

Kelvin W. Willoughby, "Intellectual Property and Technology Start-ups: Size Matters," INFORMS (Institute for Operations Research and the Management Sciences) 2012 Annual Meeting, Phoenix, Arizona, October 14-17, 2012.

Kelvin W. Willoughby, "Standing Apart in the Crowd: Alternative Pathways for Economic Development in Minnesota through BioBusiness," Economic Development Association of Minnesota, 2006 Winter Conference, Minneapolis, January 19-20, 2006.

Kelvin W. Willoughby, "How do entrepreneurial technology firms really get financed, and what difference does it make?" Paper for the Annual Meeting of the United States Association for Small Business and Entrepreneurship, Tucson, Arizona, January 12-15, 2006.

Kelvin W. Willoughby, "Four Heterodox Ideas about Technology and Economic Development," Paper presented to the International Association for Management of Technology, Annual Conference, Vienna, Austria, May 2005.

Kelvin W. Willoughby and Edgar C. Harrell, "Networking: The Key to Strong Performance in Technology Incubators," Paper presented to the International Association for Management of Technology, Annual Conference, Vienna, Austria, May 2005.

Kelvin W. Willoughby, "The 'Affordable-Resources' strategy and the 'Milieux-Embeddedness' strategy as alternative approaches to growth for entrepreneurial firms in the biotechnology industry," Paper, Academy of Management Conference, August 2000, Toronto, Canada.

Kelvin W. Willoughby, "Alternative strategies for success in technology incubators: Evidence from Maryland, New York, California, Utah and Australia," National Business Incubator Association, National Conference, Cleveland, Ohio, May 2000 (with E. Harrell).

Kelvin W. Willoughby, "Informal Communication, Formal Collaboration, and the Growth of Research-Intensive Entrepreneurial Firms in the Biotechnology Industry," Paper presented to the 1999 Babson College/Kauffman Foundation Entrepreneurship Research Conference, University of South Carolina, Columbia, May 12-15, 1999.

Kelvin W. Willoughby, "Strategies for Interorganizational Activity in Industrial-Technological Networks: Communication and Collaboration in Commercial Biotechnology," Paper presented to Thirteenth International Conference of the Strategic Management Society, Chicago, Illinois, September 12-15, 1993.

Kelvin W. Willoughby, "Innovative Milieux and the Role of Knowledge Based Industries," Paper presented to Fourth International Workshop on Technological Change and Urban Form, CIB W72, University of California at Berkeley, April 14-16, 1993.

Kelvin W. Willoughby, "Biotechnology and Economic Development in New York State," Paper presented to 2nd Annual Meeting of New York State Network for Economic Research, Nelson A. Rockefeller Institute of Government, State University of New York. Albany, New York, 26th September, 1991.

Kelvin W. Willoughby, "The Regional Form of Advanced Technology Industries: Clues from the Case of Biotechnology in California," Paper presented to the 30th North American Meeting of the Regional Science Association, Santa Barbara, California, November 10-12, 1989.

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

Kelvin W. Willoughby, Report of Workshop on "Science, Technology and People-oriented Development Processes," University of Philippines (Quezon City), Manila, December 1983, in Yuzon, L.A. (ed), *Towards an Asian Sense of Science and Technology* (Singapore: C.C.A., 1984), pages 173-177.

Kelvin W. Willoughby, Report of Workshop on "Appropriate Technology for Australia" (chaired by K. Willoughby), University of Melbourne, December 1983, in Ledger, C. (ed), *1984 and Beyond*, (Sydney: Australian Council of Churches, 1984), pages 80-82.

Kelvin W. Willoughby, (Contributor, pages 85-86) "New Approaches to Environmental Assessment," paper by D.C. O'Connor in *Environmental Impact Assessment and Procedures*, Proceedings of public seminar organized by the Department of Conservation and Environment, July 1983 (Perth: Government of Western Australia, 1983), pages 83-102.

Kelvin W. Willoughby, "Appropriate Technology: an outline of the concept using the philosophy and practice of E.F. Schumacher," Paper presented to E.F. Schumacher Memorial Conference, Macquarie University, Sydney, December 1982, 21 pages.

Kelvin W. Willoughby, "Appropriate Technology for Australian Industry: a challenge to philosophical analysis and policy formulation," Paper presented to Section 37 (History, Philosophy & Sociology of Science) of the 52nd ANZAAS Congress, Australia's Industrial Future, Macquarie University, Sydney, May 1982, 42 pages.

Kelvin W. Willoughby, "Social Responsibility Towards the Natural Environment," Seminar #3, ANZAAS Seminar Series: Social Responsibilities of Scientists and Professionals, The University of Western Australia, 19th August 1981.

## **Invited Lectures and Guest Seminar Presentations**

Keynote speaker, *First GBA (Greater Bay Area, China) International Summit on Intellectual Property and Technology Transfer*, Xi'an Jiatong-Liverpool University, Nansha Guangzhou, China, 31 May 2021. <https://www.youtube.com/watch?v=pwlzjAJE8HY>

Topic: "Endogenous Innovation, Outward-bound International Patenting and National Economic Development: China and the World"

Invited speaker, *Russia-Japan STS Forum (Science and Technology in Society, STS Forum & JETRO* (Tokyo), Sk Сколково & Skoltech (Moscow), 17 November 2020. <https://events.skoltech.ru/sts-forum>.  
Topic: "Technological Innovation, National Economic Development and International Intellectual Property Management"

Invited speaker, *Skolkovo IP Academy (IP Академия Сколково), Distant and Digital*, Technopark, Skolkovo, Moscow, Russia, 8-9 October 2020. Master Class.  
Topic: "How Intellectual Property Drives Innovation Companies to Go Global?"

Invited speaker, *International Conference, "Intellectual Rights: Challenges of the 21st Century,"* Tomsk State University, National Research University, Tomsk, Russia, 14-16 November 2019.  
Topic: "Endogenous Innovation, Outward-bound International Patenting and National Economic Development"

Invited speaker, *International Conference, "Intellectual Rights: Challenges of the 21st Century,"* Tomsk State University, National Research University, Tomsk, Russia, 14-16 November 2019.  
Topic: "What Can Be Patented? Technological Innovation and the Contemporary Mess in Patent Law"

Invited speaker, *Skolkovo IP Academy (IP Академия Сколково), Technopark, Skolkovo, Moscow, Russia*, 18-20 September 2019. Master Class.  
Topic: "Universities, Intellectual Property and Global Technological Innovation"

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

Invited speaker, *National Science and Technology Agency, Kingdom of Thailand*, Thailand Science Park, Bangkok, 21 January 2019.

Topic: “Fostering Linkages Between Research and Education with Innovation and Entrepreneurship”

Invited speaker, Suranaree University of Technology, Nakhon Ratchasima, Thailand, Seminar Series in Entrepreneurship Development, 14 January 2019.

Topic: “Entrepreneurship and Innovation Practice at Skoltech, Russia”

Invited speaker, Walailak University, Nakhon Si Thammarat, Thailand, 10 January 2019. Special Seminar, Invitation of President.

Topic: “Endogenous Innovation, Technology Entrepreneurship and Economic Development: Does Intellectual Property Matter?”

Invited speaker, Walailak University, Nakhon Si Thammarat, Thailand, 10 January 2019. Special Seminar, Invitation of President.

Topic: “How Can a University Generate Impact in Business and Society Through Technological Innovation?”

Invited speaker, *Skolkovo Patent School (Патентная Школа Сколково)*, Technopark, Skolkovo, Moscow, Russia, 1-2 November 2018. Seminar on Best Practice in Managing Intellectual Property in Universities and Institutes.

Topic: “Raking Leaves in the Wind: Managing University IP in Turbulent Times”

Keynote speaker, *International Conference on Business and Sustainable Development (JCBSD 2018)*, University of Rajshahi, Rajshahi, Bangladesh, 8-9 March 2018.

Topic: “Endogenous Innovation, Outward-bound International Patenting and National Economic Development: What is Happening in Asia?”

Keynote speaker, *China Intellectual Property Conference*, Nanjing University of Science and Technology, College of Intellectual Property, Nanjing, China, 15-16 December 2017.

Topic: “Endogenous Innovation, Outward-bound International Patenting and National Economic Development: China and the World”

Keynote speaker, *28th DAAAM International Symposium*, Intelligent Manufacturing and Automation, DAAAM International Vienna, Technical University of Vienna & University of Zadar, Croatia, 8-11 November 2017.

Topic: “What is Technology?”

Invited speaker and seminar leader, *National Innovation Agency (NIA)*, Government of the Kingdom of Thailand, Bangkok, Thailand, NIA Innovation Space, 24 January 2017.

Topic: “Intellectual Property Management for Entrepreneurs”

Invited speaker, *Skoltech Gen-Y Cross Disciplinary Conference for Young Scientists*, Skolkovo Institute of Science and Technology, Rosa Khutor, Sochi, Russia, 27 September to 1 October 2017.

Topic: “Innovation, Intellectual Property and the Creation of Wealth: What’s at Stake for Nations and Entrepreneurs?”

Invited panel member, *Problems and Prospects for Patent-Eligible Subject Matter in European and United States Patent Law*, Contribution to Panel Discussion on patent-eligible subject matter, Patent Track, 25th Annual Fordham Intellectual Property Law & Policy Conference, Fordham University, School of Law, New York City, 21 April 2017.

Keynote speaker, *7th International Conference on Mass Customization and Personalization in Central Europe (MCP-CE 2016)* and the *1st Regional Conference on Entrepreneurship and Open Innovation (IDEALab 2016)*, University of Novi Sad, Novi Sad, Serbia, 20-23 September 2016.

Topic: “Open Innovation and Intellectual Property”

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

Invited speaker, *Intellectual Property Management Teaching Workshop*, University of Cambridge & Chalmers University; Sponsored by EITIM (European Institute for Technology and Innovation Management), EPO (European Patent Office), UKIPO (U.K. Intellectual Property Office), and WIPO (World Intellectual Property Organization), 16 September 2016.

Topic: "Technology Licensing Games and IP Management Education."

Invited seminar presentation, Rajiv Gandhi School of Intellectual Property Law, Indian Institute of Technology, Kharagpur, India, 19 May 2016.

Topic: "Contemporary Issues in the Law of Patent-eligible Subject Matter in the United States and Europe."

Invited seminar presentation, Rajendra Mishra School of Engineering Entrepreneurship, Indian Institute of Technology, Kharagpur, India, 18 May 2016.

Topic: "Financing Technology Entrepreneurship."

Keynote speaker, Startup Village 2015, Skolkovo Innovation Center, Annual Conference organized by Skolkovo Foundation, Moscow, Russia, 2 June 2015.

Topic: "Why is the Subject of Intellectual Property Important for Startups?"

Invited seminar presentation, John Curtin Institute of Public Policy, Curtin University, Perth, Australia: Policy Forum on the *Next Era of Major Global Technological Innovation*, 17 June 2014.

Topic: "The Biological Nexus of Technological Innovation."

Invited seminar presentation, MIT-Skoltech Innovation Symposium, Skolkovo Innovation Center, Moscow, Russia, 4 June 2014.

Topic: "What Can Be Patented? Technological Innovation and the Contemporary Mess in Patent Law."

Invited seminar presentation, Massachusetts Institute of Technology, Sloan School of Management, Cambridge, Massachusetts, 21 October 2013.

Topic: "Intellectual Property and Technological Entrepreneurship."

Invited Speaker, Innovation Centre WA, Resident Entrepreneur Program, Government of Western Australia, Technology Park, Perth (6 November 2013).

Topic: "Leveraging the Value of Consulting for Technological Entrepreneurship."

Invited Keynote Speaker, Inter-University Summer School for Postgraduate Research Excellence (InSPiRE) [The University of Western Australia, The University of Notre Dame, Murdoch University, Curtin University, Edith Cowan University], Perth, Western Australia, 11-15 February 2013. (Lecture: 14 February 2013).

Topic: "Intellectual Property and the Commercialization of Technical Ideas: Australia, Asia and the Global Knowledge Economy."

Invited Keynote Speaker, Innovation Centre WA, Resident Entrepreneur Program, Government of Western Australia, Technology Park, Perth (13 February 2013).

Topic: "Where Three Rivers Meet ... The Sources of Entrepreneurial Wealth."

Invited Keynote Speaker, Yangon Technological University, Yangon, Myanmar, Sponsored by the Ministry of Science and Technology of the Republic of the Union of Myanmar (Myanmar/Curtin Symposium). (21 November 2012)

Topic: "Developing Local Capabilities for Entrepreneurship and Innovation."

Invited Keynote Speaker, International Symposium on Trade and Management, Pakse, Lao People's Democratic Republic (Laos) (May 30, 2012).

Topic: "Trading Ideas! Is That Real Business? Asia and the Global Knowledge Economy."

Invited Speaker, International Trade Day Conference of the Export Council of Australia and the Chamber of Commerce and Industry of Western Australia, Perth, Western Australia. (30 August 2012)

Topic: "Trading Ideas! Is That Real Business? Australia and the Global Knowledge Economy."

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

University-wide lecture: Universidad de Puerto Rico Recinto de Mayagüez, Mayagüez, Puerto Rico.  
Invited Speaker. (16 August 2012)

Topic: “Appropriate Technology: From Idea to Experiment to Sustainable Practice.”

International Symposium on Trade and Management, Ubon Ratchatane, Thailand.

Keynote Speaker. (May 30, 2012)

Topic: “Trading Ideas! Is That Real Business? Asia and the Global Knowledge Economy.”

Invited Presentation to the Minnesota State House of Representatives, *Jobs and Economic Development Finance Committee*, State Capitol, St. Paul, Minnesota, USA (15 February 2011).

Topic: “The State of the Biobusiness Economy in Minnesota and the United States.”

Invited Presentation to the Minnesota State Senate, *Jobs and Economic Growth Committee*, State Capitol, St. Paul, Minnesota, USA (15 February 2011).

Topic: “The State of the Biobusiness Economy in Minnesota and the United States.”

Human Resources Summit—Asia, Sentosa Island, Singapore (GDS International).

Invited Speaker. (June 15, 2011)

Topic: “Flexible Delivery of Management Education in a Complex World of International Business.”

BioAsia, 2008 Conference, Bangkok, Thailand.

Invited Speaker. (November 27, 2008)

Topic: “Intellectual Property: Friend or Foe for BioBusiness?”

Global University Network for Innovation - Asia and the Pacific (GUNI-AP), 2006 Conference, Bangkok, Thailand.

Invited Speaker. (November 10, 2006)

Topic: “The Role of Technology Firms in Accelerating Commercialization of Science and Technology in the Asia-Pacific Region.”

The Future 500 China 2006 Global Conference, Chinese Academy of Social Sciences, Beijing, China.

Invited Speaker. (October 24, 2006)

Topic: “How Can We Turn the Triple Bottom Line from an Idea in to Reality?”

Federal Laboratory Consortium for Technology Transfer, Annual Meeting, Minneapolis.

Invited Speaker. (May 4, 2006)

Topic: “Opportunities for Education and Training in Technology Transfer.”

Curtin University of Technology, Graduate School of Business, Perth, Australia.

Invited Speaker. (March 10, 2006)

Topic: “Alternative Financing Options for Entrepreneurs.”

Economic Development Association of Minnesota, 2006 Winter Conference, Minneapolis, Minnesota.

Invited Speaker. (January 19, 2006)

Topic: “Standing Apart in the Crowd: Alternative Pathways for Economic Development in Minnesota through BioBusiness.”

Tsinghua University, School of Economics and Management, Beijing, China.

Invited Speaker. (October 27, 2005)

Topic: “Organizing for Technological Innovation.”

The Future 500 China 2005 Conference, Chinese Academy of Social Sciences, Beijing, China.

Invited Speaker. (October 19, 2005)

Topic: “Soft Technology Strategy: A Key to Corporate Citizenship.”

The University of Tokyo, Research Center for Advanced Science and Technology, Doctoral Seminar Series in Intellectual Property, Tokyo, Japan.

(July 28, 2005)

Topic: “Intellectual Property Management: Empirical Evidence from the Bioscience Technology Industries in the United States.”

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

Licensing Executives Society, Minneapolis, Minnesota.

Invited Speaker. (July 12, 2005)

Topic: "Networking and the Performance of Knowledge Intensive Firms in Technology Industries."

Minnesota High Technology Association, Spring Conference, Minneapolis.

Invited Speaker. (May 3, 2005)

Topic: "Technology Commercialization and Global Competitiveness."

T2M Horizons Conference, The University of Utah.

Keynote Speaker. (October 1, 2004)

Topic: "Technology and Economic Development."

Edison Conference, The University of Utah.

Panel member. (May 19-20, 2004)

Topic: "Identifying the Market."

Edison Conference, The University of Utah.

Workshop leader. (May 19-20, 2004)

Topic: "Building a better business plan."

National Technology Transfer Center, Wheeling, West Virginia. Entrepreneurial Technology Apprenticeship Program (Sponsored by the Minority Business Development Administration) (June 25-27, 2003)

Topic: "Technology commercialization careers in a variety of contexts."

Griffith University, Graduate School of Management, Brisbane, Australia.

(January 3, 2003)

Topic: "Alternative strategies for innovation in high technology industries."

Society of Public Accountants, Annual Professional Development Program, Salt Lake City, Utah.

(September 28, 2001)

Topic: "The Surprises of Financing Utah's High Technology Industries."

National Academy of Sciences, Washington, D.C., National Research Council Seminar on "Ways and Means of Science" (seminar on the impact of corporate funding on the conduct of research).

(July 14, 2000)

Topic: "The university-industry complex as a creative milieu for science."

Seoul National University, School of International and Area Studies, Seoul, Korea.

(April 18, 2000)

Topic: "E-commerce Infrastructure and the Development of Cyber-business."

1999 Rocky Mountains Biotechnology Symposium, Salt Lake City.

(January 29, 1999)

Topic: "Utah's Bioscience Technology Industry Complex: Prospects for the New Millennium."

New York Software Summit, 1999, New York City.

(January 21, 1999)

Topic: "The Shortage of People in Computing-related Professions and Engineering in New York."

Bio '98, Biotechnology Industry Organization, International Biotechnology Meeting, New York City.

(June 17, 1998)

Topic: "Long Island's Biotechnology Industry." (in Panel on regional Clustering of Bioscience Companies)

Roland Berger & Partner / Government of Bavaria, Munich, Germany.

(November 7, 1997)

Topic: "Factors which lead to technology-based economic development in regions."

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

New York Biotechnology Association, 6th Annual Meeting, New York City.  
(October 24, 1996)

Topic: "New York's Biotechnology and Bio-medical Engineering Industries."

Utah Information Technologies Association, Going Global Conference, Salt Lake City, Utah.  
(November 21, 1995)

Topic: "Utah's Information Technology Industry: Going Global."

Fourth International Medical Devices Industry Congress, Park City, Utah.  
(August 16, 1995)

Topic: "International Business and Biomedical Technology Industry."

Edison Biotechnology Center, Cleveland, Ohio.  
(January 20, 1994)

Topic: "Methodological Considerations in the Evaluation of Economic Impacts of Biotechnology Centers."

Case Western Reserve University, Weatherhead School of Management, Cleveland, Ohio.  
(January 19, 1994)

Topic: "Strategies for the Local Development of Advanced Technology Industries: Clues from the Case of Biotechnology."

Columbia University, New York City, Graduate School of Architecture, Planning and Preservation.  
(December 9, 1993)

Topic: "Technology and the Competitive Advantage of Cities."

Western Australian Technology Studies Society, Inaugural Public Lecture,  
Western Australian Technology Park, Bentley.  
(March 18, 1993)

Topic: "Technology and the Competitive Advantage of Regions."

New York Biotechnology Association, Inc., Annual Meeting, World Trade Center, New York City.  
(September 26, 1991)

Topic: "What's at Stake Here? Can New York Compete in Biotechnology?"

Centre for International Research on Communication and Information Technology, Melbourne, Australia.  
(November 1990)

Topic: "Spatial Dimensions of the Information Economy."

Australian Graduate School of Management, The University of New South Wales.  
(July 1990)

Topic: "Strategic Issues in the Development of Advanced Technology Industries."

Division of Agriculture and Natural Resources, Office of the President, University of California (System wide).

(June 1990)

Topic: "Is Local Enterprise Development Possible in Rural Areas with Limited Resources?"

State University of New York at Stony Brook, Center for Biotechnology.  
(June 1990)

Topic: "Lessons for New York from California's Biotechnology Industry."

Fordham University, Graduate School of Business Administration, New York City.  
(June 1990)

Topic: "Strategic Issues in the Development of Advanced Technology Industries."

The University of Lethbridge, Faculty of Management, Alberta, Canada.  
(March 1990)

Topic: "Technology and Regional Economic Development."

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

Institute of Governmental Studies, University of California at Berkeley, Rural Development Seminar Series. (March 1990)

Topic: "Agriculture, Productivity and Rural Development."

Institute of Governmental Studies, University of California at Berkeley, Faculty Seminar.

(October 1989)

Topic: "Technological Semantics and Technological Practice."

California State University, Stanislaus, Institute of International Studies.

(April 1989)

Topic: "People, Technology and a Sense of Place: Critical Choices in Economic Development."

Fulbright Annual Conference, Asilomar, California. Keynote Speaker.

(March 1989)

Topic: "New Forms of International Collaboration."

Judge and Resource Person, Biotechnology Symposium, Lawrence Hall of Science, University of California at Berkeley. (November 1988)

Prince of Songkla University, Faculty of Management Sciences, Thailand.

(January 1988)

Topics: "Research Methodology" and "Technology Policy and Management."

2nd E. F. Schumacher Memorial Conference, The University of Newcastle, N.S.W.

(November 1986)

Topic: "Technology and Work: Applying Schumacher's Philosophy."

### **Other Publications**

Kelvin W. Willoughby & Kevin Michael Permenter, "Technology Transfer Training Resource Database," Federal Laboratory Consortium for Technology Transfer, USA. (2004)

Online database: <http://www.federallabs.org/training>

Kelvin W. Willoughby, "Finance and California Biotechnology," *BioWorld*, 2, 47 (March 12, 1990).

Kelvin W. Willoughby, "Appropriate Technology: Will it work?" *Environment WA*, 5, 2 (Autumn 1983), 8-13.

Kelvin W. Willoughby, A review of *Small is Possible*, by George McRobie (London: Abacus, 1982), in *Environment Victoria*, #47 (June/July 1983), 15.

Kelvin W. Willoughby, A series of articles, reviews and commentaries in the national APACE Newsletter (Sydney) and the APACE Western Australia Newsletter (North Fremantle).

Kelvin W. Willoughby, Submission to the Inquiry into "New Technology and Employment," of the Senate Standing Committee on Science, Technology and the Environment (Hansard, June 1985, pages 1124-1225); incorporated into final report of the Standing Committee. Parliament of the Commonwealth of Australia, Technology Assessment in Australia (Canberra: A.G.P.S., 1987).

## **Teaching Experience**

### **Professor / Lecturer**

"Intellectual Property, Technological Innovation and Academic Research" DC060006, Doctor of Philosophy Program, Skolkovo Institute of Science and Technology, Moscow. (2016, 2017, 2018, 2019, 2020, 2021)

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

"Intellectual Property, Technological Innovation and Entrepreneurship" MC060006, Master of Science, Skolkovo Institute of Science and Technology, Moscow. (2015, 2016, 2017, 2018, 2019, 2020, 2021)

"Innovation and Intellectual Property Studies Doctoral Seminar" DC060009, Doctor of Philosophy Program, Skolkovo Institute of Science and Technology, Moscow. (2016, 2017, 2018, 2019, 2021)

"Research Methodology in Engineering Systems" DA030102cf, Doctor of Philosophy Program, Skolkovo Institute of Science and Technology, Moscow. Co-taught course led by C. Fortin. (2020, 2021)

"Philosophy of Science, Technology and Innovation" PE06026k, Doctor of Philosophy Program, Skolkovo Institute of Science and Technology, Moscow. (2017-2018)

"Comparative International Patent Law," Faculty of Law, National Research University, Higher School of Economics, Moscow. (2016)

"Technology Entrepreneurship," Master of Science, Skolkovo Institute of Science and Technology, Moscow. Co-taught with Zeljko Tekic. (2015)

"Innovation Workshop," Master of Science, Skolkovo Institute of Science and Technology, Moscow. (2014, 2018, 2019)

"Legal Framework and Sustainability in Electrical Engineering, 400," Bachelor of Engineering, Department of Electrical and Computer Engineering, Faculty of Science and Engineering, Curtin University. (2013, 2014)

"Entrepreneurship and Creativity, 660," Master of Business Administration, Curtin Graduate School of Business, Curtin University. (2010, 2011, 2012)

"Technology Transfer and Commercialization, ISE-5001," Master of Science in Technology Management, Department of Industrial and Systems Engineering, The Hong Kong Polytechnic University. (2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021)

"Strategic Management, MGMG-509," Master of Management, College of Management, Mahidol University. (2007)

"Introduction to Business Planning, MGMG-562," Master of Management, College of Management, Mahidol University. (2007) Co-taught with Aj. D. Fuchs.

"Managing Organizations in a Technological Environment, MOT-8121," Master of Science in Technology Management, Center for the Development of Technological Leadership, The University of Minnesota. (2005, 2006)

"Developing New Technology Products, MOT-8212," Master of Science in Technology Management, Center for the Development of Technological Leadership, The University of Minnesota. (2005, 2006)

"International Management of Technology Project, MOT-8950," Master of Science in Technology Management, Center for the Development of Technological Leadership, The University of Minnesota. (2005, 2006)

"Management of Technology Capstone Projects, MOT-8234," Master of Science in Technology Management, Center for the Development of Technological Leadership, The University of Minnesota. (2004, 2005, 2006)

"Design and Evolution of Technology Commercialization Strategy, MBA-TM-628," Master of Business Administration in Technology Management, Gore School of Business, Westminster College. (2003, 2004)

"Enactment of Technology Commercialization Strategy, MBA-TM-629," Master of Business Administration in Technology Management, Gore School of Business, Westminster College. (2003, 2004)

"Introduction to the Process of Technological Innovation, MBA-TM-610.01," Master of Business Administration in Technology Management, Gore School of Business, Westminster College. (2002, 2003, 2004)

"Technical Standards and Competition in High Technology Industries, MBA-TM-611.01," Master of Business Administration in Technology Management, Gore School of Business, Westminster College. (2002, 2003, 2004)

"Organizations, Technology and Society, MBA-TM-625," Master of Business Administration in Technology Management, Gore School of Business, Westminster College. (2004) Co-taught with Dr. K. Dodson.

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

- "International Dimensions of Technology Management, MBA-TM-624," Master of Business Administration in Technology Management, Gore School of Business, Westminster College. (2004) Co-taught with Dr. A. Krause.
- "Licensing Strategy, MBA-TM-622," Master of Business Administration in Technology Management, Gore School of Business, Westminster College. (2003)
- "Technology Commercialization, Research Institutions and Government, MBA-TM-623," Master of Business Administration in Technology Management, Gore School of Business, Westminster College. (2003)
- "Strategic Management, MBA-651.02," Master of Business Administration, Gore School of Business, Westminster College. (2001, 2002, 2003)
- "Strategic Management, MBA-651.W," Master of Business Administration, Gore School of Business, Westminster College. (2002)
- "Entrepreneurship, MBA 560," Master of Business Administration, Gore School of Business, Westminster College. (2002)
- "Strategic Management, MBA-651.01," Master of Business Administration, Gore School of Business, Westminster College. (2001, 2002, 2003)
- "The Art of Managing Entrepreneurship, MBA-626.W," Master of Business Administration, Gore School of Business, Westminster College. (2001)
- "Business Law and the Management of Intellectual Property in the Information Age, TMP-555a," Master of Science in Technology Management, College of Engineering and Applied Sciences, State University of New York at Stony Brook. Taught in Seoul, Korea. (2000, 2001)
- "Technology Management and Industrial Context (Telecommunications), TMP-555b," Master of Science in Technology Management, College of Engineering and Applied Sciences, State University of New York at Stony Brook. Taught in Seoul, Korea. (2000)
- "Strategic Management of Technological Innovation, TMP597," Master of Science in Technology Management, College of Engineering and Applied Sciences, State University of New York at Stony Brook. Taught in Seoul, Korea. (1999, 2000)
- "Strategic Management and the Banking Industry," Master of Business Administration, Helsinki School of Economics and Business Administration. Taught in Seoul, Korea. (2000)
- "Strategic Management of Technology, TNT-506," Executive Program for Managers of Chinese Information Technology Enterprises (Sponsored by Chinese Academy of Sciences & Computer Associates), College of Engineering and Applied Sciences, State University of New York at Stony Brook. (1999)
- "Management of Technology (A): The Technology Based Firm, MGT673," Master of Business Administration, David Eccles School of Business, The University of Utah. (1996, 1997, 1998)
- "Management of Technology (B): Technological Contexts, MGT675," Master of Business Administration, David Eccles School of Business, The University of Utah. (1996, 1997, 1998)
- "International Management, MGT690," Master of Business Administration, David Eccles School of Business, The University of Utah. (1998)
- "Entrepreneurship in Emerging Technology, CSCI-686-2," Department of Computer Science, The University of Utah. (1997)
- "Entrepreneurial Bioengineering, BIOEN595-4," Department of Bioengineering, The University of Utah. (1996) (jointly with Dr. Richard Normann)
- "Entrepreneurship, MGT678," Master of Business Administration, David Eccles School of Business, The University of Utah. (1995)
- "Managing Innovation and Technology, MGT673," Master of Business Administration, David Eccles School of Business, The University of Utah. (1995)
- "Innovation and Technological Design, MGT575," Master of Business Administration, David Eccles School of Business, The University of Utah. (1995 & 1996)
- "Strategic Management 450.552," Master of Business Administration, Graduate School of Management, The University of Western Australia. (1991, 1992)

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

"Strategic Management 450.321," Bachelor of Commerce, Department of Management, The University of Western Australia. (1992, 1993, 1994)

"Rural/Small Town Planning and Policy: US and International Perspectives," CP221, 1990, Department of City and Regional Planning, University of California at Berkeley (co-taught with T. Bradshaw)

"Organisations, Technology and Society 450.543," Master of Business Administration, Graduate School of Management, The University of Western Australia. (1988, 1990, 1991)

"Management of Technology 450.343," Bachelor of Commerce, Department of Management, The University of Western Australia. (1990, 1991)

"Strategic Management 450.441," and "Strategic Management 450.442," Honours Program, Department of Management, The University of Western Australia. (1990, 1992, 1993, 1994)

Course Controller, Honours Program in Management, Department of Management, The University of Western Australia (1991, 1992)

A series of courses in Economic Development Policy, University Extension, The University of Western Australia. (1982-1986)

### **Occasional Lecturer**

"Strategic Management," School of Business and Economics, Winston-Salem State University, Winston-Salem, North Carolina. (2004)

"Executive MBA in Utilities Management," Helsinki School of Economics and Business Administration, Seoul, Korea (Institute of Industrial Policy Studies). (1999)

"Urban and Regional Development in the Third World" Masters course, Department of City and Regional Planning, University of California at Berkeley. (1989)

"Engineering and Society 400," fourth year course, Faculty of Engineering, The University of Western Australia. (1988)

"Technology Studies," Diploma of Education Course, Faculty of Education, The University of Western Australia. (1988)

"Entrepreneurship 445 and 446," joint undergraduate course of Dept. of Management and Department of Electrical and Electronic Engineering, The University of Western Australia. (1986)

Undergraduate science course, "Energy and Life Systems," Murdoch University. (1985)

Interdisciplinary undergraduate course, "Science, Technology & Society," Murdoch University. (1979-1984, 1986, 1987, 1990)

Postgraduate course, "Resources Planning," Department of Town Planning, Curtin University of Technology (previously WAIT) (1981, 1983, 1984, 1987). Course lecture series organizer in 1981.

Undergraduate science course, "Environmental Praxis," Murdoch University. (1982-1984)

### **Tutor**

Undergraduate science course, "Energy and Life Systems," Murdoch University. (1983)

Interdisciplinary undergraduate course, "Science, Technology and Society," Murdoch University. On-campus mode and distance-education mode. (1980-1983)

Interdisciplinary undergraduate course in humanities and social sciences, "Structure, Thought and Reality," Murdoch University. Distance-education mode. (1980)

Undergraduate science course, "The Scientific Perspective," Murdoch University, School of Mathematical and Physical Sciences. (1979)

### **Supervision and Examination of Graduate Research Students**

Supervisor of graduate research students (Ph.D., Masters & Honours) for the Skolkovo Institute of Science and Technology, Curtin University, the University of Minnesota, the University of Western

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

Australia, the University of California at Berkeley, the University of Utah, Fachhochschule Pforzheim (Germany), the State University of New York at Stony Brook, Westminster College; and external examiner (Ph.D., Masters & Honors) for the University of New South Wales, Curtin University of Technology, and Murdoch University. (1990 onwards)

### **Online Courses**

Designed and developed an online course for Philadelphia University, Philadelphia, Pennsylvania, on "Global Business Management," as part of a Certificate Program in preparation for the Certified Global Business Professional certification of NASBITE organization (North American Small Business International Trade Educators). (2004)

Managed the development of the whole Certified Global Business Professional Certification Online Preparatory program for Philadelphia University (Pennsylvania) and MindEdge, Inc. (Massachusetts), comprising four courses and corresponding exams: Global Business Management, Global Marketing, Supply Chain Management, and Trade Finance. <http://www.philau.edu/globalbusiness/index.htm> (2004)

### **Research Grants Awarded / Principle Investigator**

Otto Moensted Foundation, Grant of DKK 210.000,00 for Otto Moensted Visiting Professorship (Otto Mønsted Gæsteprofessorat) 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 (Duesseldorf, 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)

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

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)

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**

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, Innovation and Intellectual Property Laboratory\* (2014 - onwards). [\*previously "Innovation and Intellectual Property Management Research Unit"]

Director, GLORAD, Center for Global R&D and Innovation (2018 - onwards)

Guest Professor, School of Intellectual Property, Nanjing University of Science and Technology, Nanjing, China. (December 2017 - December 2022)

Visiting Professor, Department of Industrial and Systems Engineering, The Hong Kong Polytechnic University, Kowloon, Hong Kong (2011 - 2020).

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

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

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

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

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

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).

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, Graduate 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)

Curriculum Development Consultant, MindEdge, Inc., online education (2004)

Professor, Etisalat University / Etisalat College of Engineering, Sharjah, United Arab Emirates (visitor, 2004)

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

Coordinator, Re-accreditation Process, Gore School of Business (2003)

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)

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

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)

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

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).

Academic Director and Program Manager for proposed international graduate program, Master of Science in Technology Management, to be offered in Guangzhou, China, and in New York, by the College of Engineering and Applied Sciences, State University of New York at Brook. (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)

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 [jointly with the Dean of Business and the Development Director of the 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)

Vice President (and co-founder), Western Australian Technology Studies Society. (1992-1994)

Director, Honours Program, Department of Organizational and Labour Studies, The University of Western Australia. (1991-1994)

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)

## *Curriculum Vitae: Professor Kelvin W. Willoughby*

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)

Member of Organizing Committee, 1988 Conference, Australian and New Zealand Association of Management Educators.

Associate, APACE Development Consultants Ltd., Sydney, Australia.

Prepared a proposal to the Government of Western Australia on behalf of the Vice-Chancellor's Office of the University of Western Australia for the establishment of a science and technology policy research centre. (1987)

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)

Australian delegate to International Consultation, "The Future: Science, Faith and Justice in Asia," University of Philippines (Quezon City), Manila, Philippines, December 18-22, 1983.

Convenor, Community Science Group, Murdoch University. (1981-1983)

Member of various ad hoc working groups of government departments; numerous talks to community groups and service organizations. (1980-1988)

## **Association with Scholarly Journals**

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.

## **Professional Associations**

International Association for the Advancement of Teaching & Research in Intellectual Property\* ATRIP  
Institute of Electrical and Electronics Engineers\* IEEE  
Academy of Management\* AOM  
Licensing Executives Society\* LES  
International Society for Professional Innovation Management\* ISPIM  
Institute for Operations Research and the Management Sciences INFORMS  
International Association for Management of Technology IAMOT  
U.S. Association for Small Business and Entrepreneurship USASBE  
Association of University Technology Managers AUTM  
Strategic Management Society SMS  
New York Academy of Sciences NYAS  
American Association for the Advancement of Science AAAS  
\*active

## **Other Interests and Activities**

Member, The Western Australian Club, Inc. (2010 - 2013)  
Founding Convenor, The I.P. Roundtable, Munich. (2007-2008)  
Founder, the group without a name (Salt Lake City, 2002 - )  
Member, Bethel African Methodist Episcopal Church, Setauket, New York (2000 - )  
Board Member, International Visitors Utah Council. (1997-1998)  
Committee Member, IMAGE de Utah (hispanic affairs organization). (1995)  
Founding Member, The Scholars' Forum, The University of Western Australia. (1992)  
Founding Member, Murdoch University Convocation Standing Committee. (1980-1983)  
Founding Member, Cooperative Employment Development Agency, Western Australia. (1983-1985)  
Founding Member, Community Task Force of the Fremantle City Council. (1983)

## **Publications in Progress**

“How Do Innovating Countries Translate International Patenting in to National Economic Benefit?”  
Scholarly journal paper, manuscript under preparation (Nadezhda Mullina & Kelvin Willoughby).

“Patent Strategy for Modular Products.”  
Scholarly journal paper, manuscript under preparation (Georgy Klushin & Kelvin Willoughby)

“Perils of the Second Quantum Revolution: Changes in Technological Leadership and the Emergence of a New Techno-Economic Paradigm.”  
Scholarly journal paper, manuscript under preparation (Zeki Can Seskir, Kelvin Willoughby & Jacob Biamonte)

“International Knowledge Flows and Culture”  
Scholarly journal paper, manuscript under preparation (Ralf Mischkowski, Max von Zedtwitz & Kelvin Willoughby).

“Intellectual Property Protection of AI-related Inventions: Legal, Conceptual and Definitional Challenges.” Scholarly journal paper, manuscript under preparation (Aleksei Kalinichenko & Kelvin W. Willoughby).

“Patent research strategies based on a new classification framework for AI technology and systems.”  
Scholarly journal paper, manuscript under preparation (Aleksei Kalinichenko & Kelvin W. Willoughby).

“Maturity Levels in the Intellectual Property Capabilities of Organizations.” Scholarly journal paper, manuscript under preparation (Punyapat Saksupapchon & Kelvin W. Willoughby).

“Construing the Conceptual Mess of Collaborative Innovation”  
Scholarly journal paper, manuscript under preparation (Anja Tekic & Kelvin Willoughby).

“Problems and Prospects for Patent-Eligible Subject Matter in European and United States Patent Law”  
Scholarly journal paper, manuscript under preparation (Kelvin Willoughby).

“Four Heterodox Ideas about technology and economic development.”  
Scholarly journal paper, manuscript under preparation (Kelvin Willoughby).

“Networking: The key to strong performance in technology incubators.”  
Scholarly journal paper, manuscript under preparation. (Kelvin Willoughby & Edgar C. Harrell)

“A comparison of technological competence centers in the United States and Germany”  
(scholarly journal paper, Kelvin Willoughby, Bernd Grohs & Monika Wieberger)