

## Curriculum Vitae

Dr. rer. pol. Dipl.-Ing. oec. **Frank Tietze**, M.Sc.

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## Research interests

- Product Service Systems (PSS), Service Innovations, Servitization, Industry Dynamics, Ownership, User Innovations, Entrepreneurship, Sustainability
- Intellectual Property (IP) Management, External Acquisition and Exploitation Strategies, Licensing, Markets for Technology, Transaction Cost Theory, Intermediaries, Auction Design, Technology Based Firms

## Academic affiliations

**University of Cambridge** (UK), Institute for Manufacturing, Visiting researcher and Pembroke College associate member (07/2013 – 11/2013)

**Kiel University** (Germany), Institute for Innovation Research, Assistant professor (Habilitation, TV-L 14) (Since 03/2012)

**Hamburg University of Technology - TUHH** (Germany), Institute for Technology and Innovation Management, Senior research fellow (TV-L 13) (04/2011 – 01/2012)

**European Institute for Technology and Innovation Management (EITIM)** – Board member and Secretary general, Co-founder of the European Network for Young Researchers (EITIM Doc) (Since 10/2007)

**Chalmers University of Technology - Chalmers** (Sweden), Innovation and IP research group, Research fellow (Since 12/2010)

**Tohoku University** (Japan), Department of Management Science and Technology, Visiting fellow (09-10/2006)

**Hamburg University of Technology** (Germany), Institute for Technology and Innovation Management, Researcher and doctoral candidate (BAT 2a) (09/2005 – 03/2011)

**Chalmers University of Technology** (Sweden), Department for Industrial Management and Economics, Researcher (BAT 2a equivalent) (09/2004-11/2005)

## Academic education

### Postgraduate doctoral studies

Hamburg University of Technology (Germany)

Degree: Dr. rer. pol. (German PhD equivalent in Economics and Social Sciences, “with distinction”, top 5% of annual TUHH doctoral graduates)

### University studies

Chalmers University of Technology (Sweden)

Degree: M.Sc. (Master of Science in Engineering, “with distinction”, top 5% of class)

International master program “Management of Production”

### University studies

Hamburg University of Technology, University Hamburg, University of Applied Sciences Hamburg (Germany)

Degree: Dipl.-Ing. oec (Top 10% of class; master degree equivalent)

Joint degree program “Industrial Engineering and Management” (Hochschulübergreifender Studiengang Wirtschaftsingenieurwesen)

## Academic project experience

“Excavating the Role of NPEs in the Innovation Process” in cooperation with the Adam Smith Business School, University of Glasgow funded by the Carnegie Trust for the Universities of Scotland. Project partner (since 01/2014).

“KOPS - Koordination von Opferbetreuung und psychologischer Soforthilfe”, funded by the German Federal Ministry of Labour and Social Affairs (BMAS). Deputy project leader (Since 07/12)

“Firms’ transition towards green product-service-system innovators” in cooperation with TUHH and Leuphana University Lüneburg. Project leader (Since 09/2010)

“Melting Economics Law and Technology” (MELT), funded by Vinnova (Swedish Governmental Agency for Innovation Systems). Project coordinator: Prof. Dr. Ove Granstrand (Göteborg, Sweden). International project partner (Since 2009)

“Development of a European joint Ph.D. program in technology and innovation management” of the EITIM Institutes for the Erasmus Mundus II program. Funded by DAAD (German Academic Exchange Service). Project leader (08 - 12/2008)

“Realizing potential! – Strengthening the external technology exploitation competence of Hamburg based SMEs” funded by the EU Regional Development Fund (EFRE) and the Hamburg Ministry for Economics, Transportation and Innovation. Project leader (05/2007 – 06/2008)

“The role of Chief Technology Officers in Innovation Management” funded by EITIM - An international project in France, Switzerland, Turkey, Germany and Japan. Project manager and researcher (01/2006 - 03/2007)

“Economic effects of patenting and innovation for growth and welfare”, Swedish Ministry of Industry, Trade and Communication (Näringsdepartementet), Project leader: Prof. Dr. Ove Granstrand (CTH, Göteborg, Sweden). Project manager and researcher (10/2004 - 09/2005)

### **Entrepreneurial, industry and service experience**

Kiel University, Kiel. EXIST project team member for establishing an entrepreneurial university organization and culture (05/2012 – 11/2012)

ARKTIK GmbH, Hamburg. Green Innovation Consultant (since 2012)

Northern Institute of Technology Management, Hamburg. Coach within the entrepreneurship track (01/2011 - 12/2011)

ARKTIK GmbH, Hamburg. Co-founder with responsibility for technology development and emission rights trading. Executive management board member (04/2008 - 11/2009).

TüV Rheinland de Mexico, Mexico City. Internship, assistant to the CEO (02 - 06/2002)

Mont Blanc Simplo GmbH, Hamburg. Internship (02 - 04/2000)

Axel Springer Verlag AG, Hamburg. Internship (08 - 11/2001)

AHWI GBR, Hamburg. Co-founder of commercial alumni book (2000)

### **Teaching experience** (\* indicates guest lecture)

*Appropriating Innovation – Managing Intellectual Property*. One week seminar on patent analytics. Master student lecture. Aarhus University (03/2014) \*

*Innovation Management*. Master student lecture. TUHH, Hamburg (01/2014) \*

*Technology Intelligence*. Executive education. University of Cambridge (10/2013) \*

*Kiel School of Sustainability*. Master student courses. Kiel University (Since 10/2013)

*Patent analytics*. Master student seminar. Kiel University (Since 04/2013)

*Scenario analysis for technology based services*. Master student seminar. Kiel University (Since 10/2012)

*Technology Management*. Bachelor student lecture. Kiel University (Since 10/2012)

*Strategic Management and Economics of Intellectual Property*. Master student lecture. Chalmers (Since 09/2011) \*

*Management und Unternehmensführung*. Master student lecture. TUHH (10/2005 – 04/2011) \*

*Strategic Technology Management*. Master student lecture. TUHH (10/2010) \*

*Introduction to Micro Economics*. Master student lecture on auction design. TUHH (05/2009) \*

*Intellectual Property Management*. Master student lecture. Tohoku University, Japan (10/2006) \*

*Master of Business Administration*. Tutor for international students. Northern Institute of Technology Management (10/2006 - 10/2007)

*Economics and Management of Technology*. Master student lecture. Teaching assistant. Chalmers (10/2004 - 05/2005) \*

*Mathematics for business economics*. Tutor. University of Hamburg (10/2003 - 03/2004)

*Mathematics for industrial engineering and management*. Tutor. Hamburg University of Applied Sciences (04/2000 - 07/2001)

### **Supervisory experience**

2 co-supervised PhD students, 30+ master theses (incl. Diplomarbeiten), 10+ bachelor theses, PhD student supervisor at R&D Management conference (2010)

### **Academic postgraduate skill enhancement training**

- Case Study Methodology: Applications and Caveats*, Kiel University, Germany (01/2014)
- Supervising Graduate Students*, University of Cambridge, UK (20/2013)
- Strategic Roadmapping*, University of Cambridge, UK (10/2013)
- TIM Junior Faculty Consortium*, Academy of Management Conference, USA (08/2013)
- Volkswagen Foundation Winter School "Limits to Growth Revisited"*, Germany (11/2012)
- Parmenidos EIDOS Software Training*, Germany (11/2012)
- Premium program didactics for teaching in higher education*, Kiel University, Germany (05/2012)
- 4th EITIM Doc conference*, Technical University Berlin, Germany (10/2010)
- Competition and Innovation Summer School (CISS)*, co-organized by the Centre for European Economic Research (Mannheim) and K.U.Leuven (Belgium), Turkey (05/2010)
- EPSRC 17<sup>th</sup> Annual Research Methodology Workshop*, Cambridge, UK (03/2010)
- 3rd EITIM Doc conference*, University of Twente, The Netherlands (01/2010)
- Advanced statistical methods for economics and business*, TUHH, Germany (10/2009 - 02/2010)
- 2nd EITIM Doc conference*, Chalmers, Sweden (05/2009)
- 1st EITIM Doc conference*, University of Cambridge, UK (11/2008)
- BOSCH Rexroth doctoral colloquium*, Lohr am Main, Germany (05/2007)
- LUIS doctoral seminar*, TU Bergakademie Freiberg, Germany (06/2007)
- LUIS doctoral seminar*, University of Bremen, Germany (06/2006)
- Teaching and learning in higher education*, Ph.D. course, Chalmers, Sweden (04/2005)
- Philosophy of learning*, Ph.D. course, Chalmers, Sweden (03/2005)

### **Personal scholarships and grants**

- Volkswagen Foundation, Hanover, Germany (11/2012)
- Hans Sauer Stiftung, Munich, Germany (01/2011)
- Awapatent Foundation for the Promotion of Scientific Research in the Area of Intellectual Property Rights, Malmö, Sweden (12/2010; 11/2007)
- Ernst Geber Jubileumsfonds, Göteborg, Sweden (12/2004)
- Chalmers Stiftelsen, Göteborg, Sweden (05/2003)
- Dietze Stipendium, Hamburg, Germany (09/2002 - 05/2003)
- DAAD Travel grant, Bonn, Germany (02/2002)

### **Fundraising experience**

- DAAD - German Academic Exchange Service: Preparatory grant for EU applications, travel and conference grants
- DFG – German Science Foundation: International Graduate School, research grants (Sachbeihilfe)
- European Science Foundation (ESF): Exploratory workshops
- European Union: FP7 Marie Curie Initial Training Networks (ITN), Erasmus Mundus II for joint doctoral programs

German federal ministries (e.g., BMBF, BMWI, BMAS)

**Foundations:** (e.g. Daimler und Benz Stiftung, EKSH, Hans Sauer Stiftung, Volkswagen Stiftung, Research and Science Foundation Hamburg).

### **Review activities**

**Journals:** California Management Review (CMR), European Management Journal (EMJ), Health Policy, Industrial and Corporate Change (ICC), International Journal of Technology Management (IJTM), Research Policy (RP), Scientometrics, Technology Forecasting and Social Change (TFSC), Zeitschrift für Management (ZfM)

**Conferences:** DRUID Conference, European Academy of Management (EURAM), International Conference on Management of Innovation & Technology (ICMIT)

**Funding agencies:** Economic & Social Research Council (ESRC), Expert for Horizon 2020 (EX2014D192589)

### **Memberships in professional organizations**

AoM - Academy of Management

CUS - The Cambridge Union Society, University of Cambridge

DHV - German Association of University Professors and Lecturers (Deutscher Hochschulverband)

EITIM - European Institute for Technology and Innovation Management

EITIM Doc - the Network for PhD students, postdocs and alumni

GfB - Society for Management in Kiel (Gesellschaft für Betriebswirtschaft zu Kiel e.V.)

SPIN - Stella Polaris Innovation Network (Aarhus University, Kiel University, University Hamburg, University of Southern Denmark)

VHB - German association of business administration researchers (Verband der Hochschullehrer der Betriebswirtschaft) - TIE commission (Technology, Innovation and Entrepreneurship)

### **IT skills**

Data collection: Evasys, Limesurvey, Surveymonkeys

Databases: Derwent, Espacenet, Freepatentsonline, ISI Web of Knowledge, PATSTAT, Scopus, Thomson Reuters Innovation

Data analysis/modelling: AMOS, LISREL, MaxQDA, SPSS, STATA, UCINET, VENSIM

Office software: ADOBE (Acrobat, Indesign, Lightroom, Photoshop), Citavi, Endnote, Evernote, Mindmanager, MS Office (incl. MS Project), Open Office, Parmenidos EIDOS

Learning/ teaching/ admin: HisQis, Open OLAT, StudIP, Turnitin

### **Languages**

German: native language

Spanish: basic

English: professional

Swedish: basic

### **Private Interests**

Sport (sailing, rowing, running and squash), photography, contemporary art and industrial design

## Publications

### Books

Tietze, F. (2012) *Technology Market Transactions – Auctions, Intermediaries and Innovation*, Edward Elgar, Cheltenham

Lütjen, H., F. Tietze and T. Nuske (forthcoming). *Innovationskooperationen von Stadtwerken - Eine empirische Untersuchung von Treibern und Barrieren*. Hamburg: Hansebuch.

### Peer reviewed journal publications

Tietze, F., T. Schiederig and C. Herstatt (2013). *Firms' transition to green product service system innovators: cases from the mobility sector*. International Journal of Technology Management, 63(1/2), 51-69.

Schiederig, T., F. Tietze and C. Herstatt. (2012). *Green Innovation in Technology and Innovation Management - An Exploratory Literature Review*. R&D Management 42(2): 180-192.

Probert, D. and F. Tietze (2009). *Open Innovation and the CTO*. Creativity and Innovation Management 18(4): 335-337.

Tietze, F., E. Ervilia and C. Herstatt (2009). *Exploring the Relation of Patent Ownership and Market Success – Cases from the LCD Flat Panel Display Industry*. International Journal of Technology Intelligence and Planning 5(1): 90-103.

Herstatt, C., F. Tietze, D. Probert and A. Nagahira (2007). *The Chief Technology Officer (CTO) in Theory and Practice: A literature review and results from field research in Japan*. International Journal for Innovation and Technology Management 4(3): 323-350.

### Under review

Schultz, C., F. Tietze, R. Lorenz and K.-H. Chai (to be submitted). *Organizational design for service development - An empirical survey of servitizing firms in the German manufacturing industry*. Journal of Product Innovation Management (Impact Factor: 1.572).

Göldner, M., C. Herstatt and F. Tietze. *The emergence of care robotics – A patent and publication analysis*. Technological Forecasting and Social Change (Impact Factor: 2.106).

Ortiz-Gallardo, V. G., F. Tietze, D. Probert and R. Phaal. *Technology acquisition through collaboration: Practical insights for technology suppliers*. International Journal of Technology Intelligence and Planning.

Tietze, F. and E. G. Hansen. *To own or to use? How product service systems facilitate eco-innovation behavior*. Industrial and Corporate Change (Impact factor: 1.331).

Tietze, F., T. Pieper and C. Herstatt (second review round). *To own or not to own: How ownership impacts user innovation – An empirical study*. Technovation (Impact Factor: 3.177)

### Book chapters

Schultz, C. and F. Tietze (forthcoming). *Produkt Service Systeme als Gegenstand der betriebswirtschaftlichen Innovationsforschung*. In C. Schultz & K. Hölzle (Eds.), Motoren der Innovation - Zukunftsperspektiven der Innovationsforschung. Heidelberg: Springer.

Granstrand, O. and F. Tietze (2011). *Patent enforcement for economic success - The case of Losec and Astra*. In O. Granstrand & M. Holgersson (Eds.), Innovation and Intellectual Property Cases (91-96). Göteborg: Chalmers Reproservice.

### Peer reviewed conference publications

Schultz, C., F. Tietze, R. Lorenz and K.-H. Chai (2014). *Organizational design for service innovation development - An empirical analysis of servitizing firms in the German manufacturing industry*. 21st International Product Development Management Conference. Limerick, Ireland.

Dekkers, R. and F. Tietze (2014). *Excavating the Role of NPEs in the Innovation Process: Did We Start a Mission Possible?* IEEE International Conference on Management of Innovation & Technology. Singapore.

Tietze, F. and C. Schultz (2013). *Cognitive fit between partners and success of uni-industry cooperations*. 20th International Product Development Management Conference, Paris, France.

Tietze, F. and E. G. Hansen (2013). *To own or to use? How product service systems facilitate eco-innovation behavior*. Academy of Management, Orlando, USA.

Pieper, T., F. Tietze and C. Herstatt (2012). *To Own or Not to Own: Does Ownership effect User Innovation? - An Empirical Study in the Rowing Sport Market*. 10th International Open and User Innovation Workshop. Harvard Business School, Boston, Massachusetts, USA.

Tietze, F., T. Schiederig and C. Herstatt (2011). *Firms' transition towards green product-service-system innovators*. R&D Management Conference. Norrköping, Sweden.

Schiederig, T., F. Tietze and C. Herstatt (2011). *Managing Sustainable Innovation - A Literature Review*. ISPIM 2011 - "Sustainability in Innovation: Innovation Management Challenges". Hamburg, Germany. *Shortlisted for the ISPIM Best Student Paper award*.

Schweisfurth, T., F. Tietze and C. Herstatt (2011). *Exploring the Co-Evolution of Design and Technology*. 18th International Product Development Management Conference. Delft, The Netherlands.

Tietze, F. and C. Herstatt (2010). *Technology Market Intermediaries and Innovation*. DRUID Summer Conference. Imperial College London, UK.

Tietze, F., P. Lorenzen and C. Herstatt (2007). *The Role of the Chief Technology Officer - Different Perspectives*. 14th International Product Development Management Conference. Porto, Portugal.

Tietze, F., O. Granstrand and C. Herstatt (2006). *Towards an Advanced Intellectual Property Management System – Events and Stages during the Development*. Evidence from the Biotech Sector. Portland International Conference for Management of Engineering and Technology (PICMET). Istanbul, Turkey.

### Practitioner Journals and newspaper articles (Editorial Review)

Lütjen, H., F. Tietze and T. Nuske (forthcoming). *Innovationskooperationen mit steigender Relevanz für Stadtwerke*. Zeitschrift für Kommunalwirtschaft.

Tietze, F. (2014). *Innovations schmiede* Cambridge, unizeit (1), 9.

Nissen, T. and F. Tietze (2013). *Teilen und tauschen statt kaufen*. Schleswig-Holsteiner Zeitungsverlag - Wirtschaft in Schleswig-Holstein und Hamburg (5.2.), 7

Tietze, F. and E. G. Hansen (2013). *To Own or to Use: How Product Service Systems Impact Firms' Innovation Behaviour*. The European Financial Review (August / September), 53-56.

Pieper, T. and F. Tietze (2012). *Innovativität gefragt*. Rudersport (3), 49-53.

### Published working papers

Göldner, M., C. Herstatt, F. Tietze and S. Rehder (2012). *The Emergence of Care Robotics – A publication and patent analysis*. TIM Working Paper No.68. Hamburg University of Technology.

Schiederig, T., F. Tietze and C. Herstatt (2011). *What is Green Innovation? – A quantitative literature review*. TIM Working Paper No.63. Hamburg, Hamburg University of Technology.

Tietze, F., T. Schiederig and C. Herstatt (2011). *Firms' transition towards green product service system innovators*. TIM Working Paper No.62. Hamburg, Hamburg University of Technology.

Tietze, F. (2010). *A Typology for Technology Market Intermediaries*. TIM Working Paper No.60. Hamburg University of Technology.

Tietze, F. and C. Herstatt (2009). *Intermediaries and Innovation - Why they emerge and how they Facilitate IP Transactions on the Markets for Technology*. TIM Working Paper Series No.59. Hamburg University of Technology.

Tietze, F. (2008). *Technology Market Intermediaries to Facilitate External Technology Exploitation - The Case of IP Auctions*. TIM Working Paper Series No.55. Hamburg University of Technology.

Ervilia, E., F. Tietze and C. Herstatt. (2007). *Exploring the Relation of Patent Ownership and Market Success – Cases from the LCD Flat Panel Display Industry*. TIM Working Paper Series No.47. Hamburg University of Technology.

Herstatt, C., F. Tietze, A. Nagahira and D. Probert (2006). *The Chief Technology Officer (CTO) in Theory and Practice - A Literature Review and Results from Field Research in Japan*. TIM Working Paper Series No.41. Hamburg University of Technology.

Tietze, F., O. Granstrand and C. Herstatt (2006). *Towards Advanced Intellectual Property Management – Events and Stages during the Development. Evidence from the Biotech Sector*. TIM Working Paper Series No.35. Hamburg University of Technology.

### **Seminar papers and invited lectures**

*How patent analytics can support technology foresight*. University of Southern Denmark, Sønderborg (05/2014)

*How product service systems impact firm innovation behavior*. Sustain Value Project – FP7 Final Meeting. RWTH, Aachen, Germany (03/2014)

*To own or to use? How product service systems facilitate eco-innovation behavior*. 2nd SPIN meeting (Stella Polaris Innovation Network). Kiel University, Germany (11/2013)

*Patent analytics for technology intelligence*. Technology Intelligence - Monitoring science and technology developments. University of Cambridge, Cambridge, UK (10/2013)

*To own or not to own - A property rights perspective on user innovation*. University of Cambridge, Cambridge, UK (10/2013)

*Patentauktionen als neues Technologietransaktions-Modell aus der Wissenschaft*. Zukunft des Technologietransfers - Vom University Industry Research Center bis Open Source Innovation. Deutsche Hochschule für Verwaltungswissenschaften, Speyer, Germany (09/2011)

*Intermediaries for Innovation - How they Impact Technology Market Transactions*. Exchanging Knowledge: Complementary Perspectives on Markets for Patents. Brussels, FPS Economy, S.M.E.s, Self-employed and Energy, Belgium (05/2011)

*Determinants of the Market Value of Auctioned Patents*. Competition and Innovation Summer School (CISS). Turunç/Marmaris, Turkey (05/2010)

*The Case of ARKTIK - A System Innovation for Sustainable Mobility from Germany*. United Nations Forum on Climate Change Mitigation, Fuel Efficiency and Sustainable Urban Transport. Seoul, South Korea (03/2010)

*Open Innovation and Intermediaries - How Auctions (can) open up the Market for Patent Trade*. 17th Annual EPSRC Research Methodology Workshop, University of Cambridge, Institute for Manufacturing, Cambridge, UK (03/2010)

*EITIM Doc - A Grassroote Network for Young Researchers*. Graduate Seminar on Education in Innovation & Entrepreneurship Research, University of Twente, Enschede, The Netherlands (01/2010)

*Developing a European PhD network - Exchanging ideas across Europe*. 1st EITIMdoc Conference, The European Institute for Technology and Innovation Management (EITIM), University of Cambridge, UK (11/2008)

*Ein Serviceportal zur externen Patent- und Technologieverwertung*. Abschlussvortrag zum EU Projekt Regionale Innovationsstrategien (RIS) Hamburg, Germany (06/2008)



*An Introduction to Patents Auctions as New Model for External Technology Exploitation.* Vetenskapliga Stiftelsens Stipendiemiddag, Stockholm, Sweden (01/2008)

*New Models to Facilitate Intellectual Property Monetization - The Case of Auctions.* LUIS. Freiberg, Germany (06/2007)

*Intellectual Property Management - How New Models Facilitate the External Technology Exploitation Process.* BOSCH Rexroth Doktoranden Kolloquium, Lohr am Main, Germany (03/2007)

*Optionen, Strategien und Dienstleistungen für eine erfolgreiche Technologieverwertung.* Technologien erfolgreich vermarkten, Handelskammer, Hamburg, Germany (03/2007)

*The EITIM CTO Survey - Results from Japan and Germany.* 3rd Senior Management Forum of the European Institute for Technology and Innovation Management (EITIM), Nicé, France (01/2007)

*Intellectual Property Management oder wie viel Patent Management braucht ein KMU?* LUIS. Bremen, Germany (06/2006)

### **Reports and theses**

Abdu, N., Ako, R., Backhaus, J., et al. (2013). *White paper of the winter school limits to growth revisited.* F. Pütter & A. Kremers (Eds.). Visselhövede, Hanover, Germany.

Tietze, F. (2011). *Managing technology market transactions can auctions facilitate innovation?* Institute for Technology and Innovation Management, Hamburg University of Technology. Ph.D.

Tietze, F. and A. R. Barreto (2007). *Intellectual Property Monetization: The Market and its Business Models.* Hamburg University of Technology.

Riechers, J. and Tietze, F. (2007). *Der Markt für innovative Dienstleistungen im Bereich Intellectual Property Management.* Hamburg University of Technology.

Tietze, F., C. Herstatt and S. Buse. (2007). *Externe Technologieverwertung: Maßnahmen zur Stärkung der Innovationskraft Hamburger KMU.* Projekt Regionale Innovationsstrategien (RIS) Hamburg. Hamburg University of Technology.

Tietze, F. (2004). *Development of Intellectual Property Management: Cases from German and Swedish Biotechnology Companies.* Göteborg, CTH.: xi, 126.