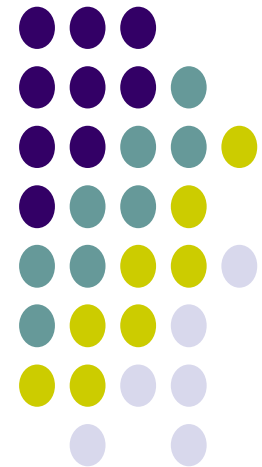


# **E-Commerce Research**

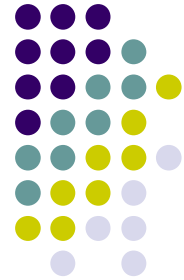
## **A "Personal and Narrow" View**

**Patrick Y.K. Chau**  
**Faculty of Business and Economics**  
**The University of Hong Kong**

**Presented on 30 May 2009 at**  
**The Eighth Wuhan International Conference on E-Business**  
**Wuhan, China**



# A Bit about Myself



- | Full Professor in Information Systems in the Faculty of Business & Economics of the University of Hong Kong
- | Doing research and have published in IT adoption and E-commerce/business in the past 15 years
- | Have served and am serving on editorial boards of major IS journals including *MISQ*, *JAIS*, *EJIS*, *DS*, *I&M*, *Data Base*, *JGIM*, *PAJAIS*, *CJIS*.
- | In the E-Commerce area, currently
  - | Co-Editor of *ECRA*
  - | Asia-Pacific Regional Editor of *IJEB*
  - | AE of *JEER*
  - | Editorial board members of *IJEC* and *ISeB*

# What is E-Commerce/Business?

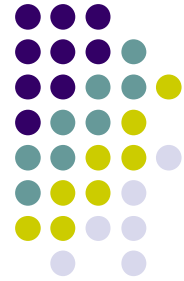


In *International Journal of Electronic Commerce*,

it includes topics:

- | The marketplace and organizational effects of e-commerce
- | Business and organizational transformation with e-commerce
- | Business value in e-commerce
- | The Web-Internet combined as the infrastructure for electronic commerce
- | Internet business models
- | Supply chain management and collaborative commerce
- | E-tailing and multi-channel selling
- | Economics of electronic commerce
- | E-commerce in business globalization
- | E-marketplaces
- | Marketing on the Web
- | M-commerce and pervasive computing
- | Digital product management and property rights
- | Security and privacy of transactions and information
- | Social dynamics of communications on the Internet
- | E-commerce payment systems
- | Advanced electronic data interchange (EDI)

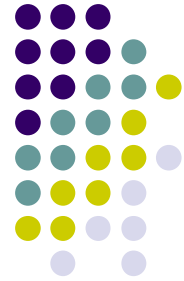
# What is E-Commerce/Business?



In Electronic Commerce Research, it includes topics

- | Dissemination of services through the Internet;
- | Intelligent agents technologies and their impact;
- | The global impact of electronic commerce;
- | The economics of electronic commerce;
- | Fraud reduction on the Internet;
- | Mobile electronic commerce;
- | Virtual electronic commerce systems;
- | Application of computer and communication technologies to electronic commerce;
- | Electronic market mechanisms and their impact;
- | Auctioning over the Internet;
- | Business models of Internet based companies;
- | Service creation and provisioning;
- | The job market created by the Internet and electronic commerce;
- | Security, privacy, authorization and authentication of users and transactions on the Internet;
- | Electronic data interchange over the Internet;
- | Electronic payment systems and electronic funds transfer;
- | Supply chain management through the Internet;
- | Marketing on the Internet;
- | The impact of electronic commerce on organizational structures and processes;
- | User adaptive advertisement;

- | Standards in electronic commerce and their analysis;
- | Metrics, measurement and prediction of user activity;
- | On-line stock markets and financial trading;
- | User devices for accessing the Internet and conducting electronic transactions;
- | Efficient search techniques and engines on the WWW;
- | Web based languages (e.g., HTML, XML, VRML, Java);
- | Multimedia storage and distribution;
- | Internet;
- | Collaborative learning, gaming and work;
- | Presentation page design techniques and tools;
- | Virtual reality on the net and 3D visualization;
- | Browsers and user interfaces;
- | Web site management techniques and tools;
- | Managing middleware to support electronic commerce;
- | Web based education, and training;
- | Electronic journals and publishing on the Internet;
- | Legal issues, taxation and property rights;
- | Modeling and design of networks to support Internet applications;
- | Modeling, design and sizing of web site servers;
- | Reliability of intensive on-line applications;
- | Pervasive devices and pervasive computing in electronic commerce;
- | Workflow for electronic commerce applications;
- | Coordination technologies for electronic commerce;
- | Personalization and mass customization technologies;
- | Marketing and customer relationship management in electronic commerce;
- | Service creation and provisioning.



# What is E-Commerce/Business?



In Electronic Commerce Research and Applications,

it includes topics

- | Agent-based commerce; electronic auctions; eBusiness models; B2B EC; eConsumers' behaviour; customer relationship management and data/web mining; direct marketing; digital economy; eGovernment; electronic payment systems; eService industries; exchanges and eMarketplaces; extranet and intranet; international agreements for global eTrading; enterprise integration between EC and ERP; collaborative commerce; knowledge management systems; process re-engineering with EC; eProcurement management systems; protocols and standards; eTransformation of industry; security and trust; smart card applications for EC; supply chain management; mobile-commerce; Intra- and inter-organizational workflow management systems; XML/EDI; public policy and legal aspects of EC.

# What is E-Commerce/Business?

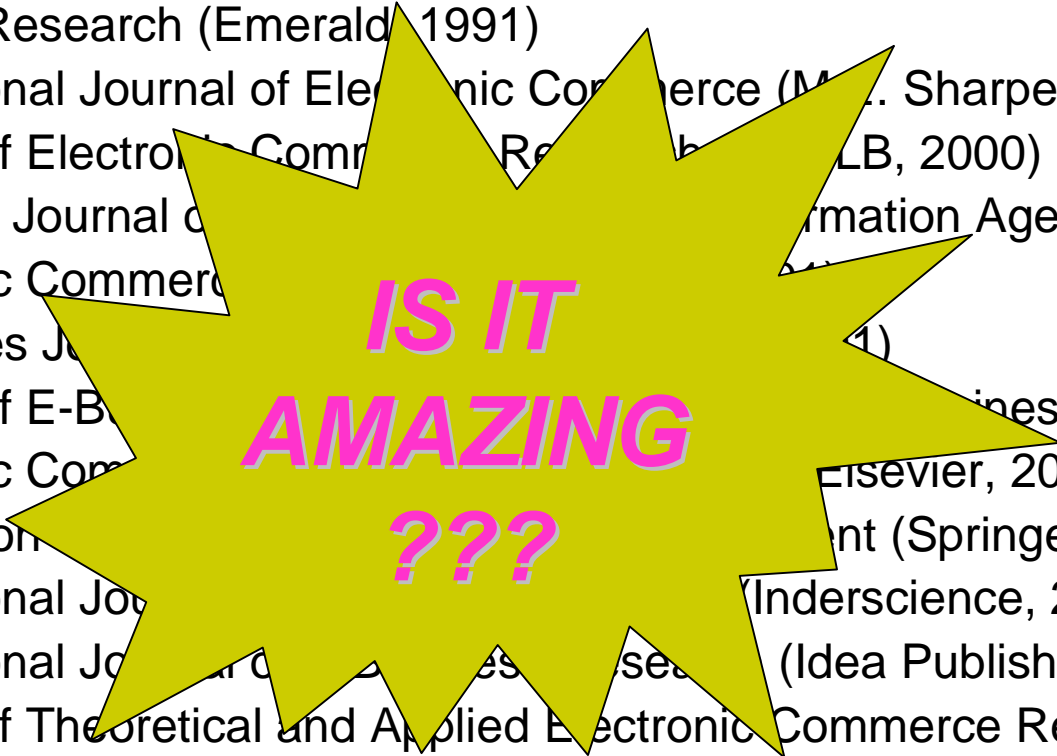


- | Business and Technology
- | MIS, MS/OR/DS, Psychology, Marketing, Management & Strategy, Economics, Computer Science, even Computer Engineering



# Journals of E-Commerce/Business

- | Electronic Markets (Springer, 1991)
  - | Internet Research (Emerald, 1991)
  - | International Journal of Electronic Commerce (M. J. Sharpe, 1996)
  - | Journal of Electronic Commerce Research (Idea Publishing, 2000)
  - | Quarterly Journal of Information Systems (Information Age, 2000)
  - | Electronic Commerce Research (Idea Publishing, 2001)
  - | e-Services Journal (Idea Publishing, 2001)
  - | Journal of E-Business (Idea Publishing, 2001)
  - | Electronic Commerce Research (Elsevier, 2002)
  - | Information Systems Research (Springer, 2003)
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  - | International Journal of Electronic Business Research (Idea Publishing, 2005)
  - | Journal of Theoretical and Applied Electronic Commerce Research (Universidad de Talca, Chile, 2006)
  - | International Journal of e-Business Management (RMIT Publishing, 2007)
- 
- | Journal of Organizational Computing and Electronic Commerce (Taylor & Francis, 1991)
  - | Decision Support Systems and Electronic Commerce (Elsevier, 1985)





# Research Published in *ECRA*

- | *ECRA* - an academic journal published by Elsevier and dedicated to research in creating the knowledge, technology, theory, and applications for the development of electronic commerce, at the intersection of technological potential and business aims.
- | Founded in 2002 with Andrew Whinston (University of Texas, Austin), Jae Kyu Lee (Korea Advanced Institute of Science and Technology), Jay Nunamaker (University of Arizona), Soumitra Dutta (INSEAD) as founding Co-Editors
- | Current Co-editors include Robert J. Kauffman (Arizona State University), Patrick Y.K. Chau (University of Hong Kong), Terry R. Payne (University of Liverpool) and J. Christopher Westland (University of Illinois, Chicago)

# Research Published in *ECRA*



Topic Area	2002	2003	2004	2005	2006	2007	2008	2009	Total
E-Commerce Adoption and management	1	8	5	3	4	7	5	2	33
Artificial Intelligence, Expert Systems and Knowledge Management	0	0	1	0	1	2	0	0	4
Business Strategy and Business Models	3	1	2	4	3	5	3	1	21
Business Processes, Workflow Management and Collaborative Solutions	0	1	3	3	0	1	1	0	9
Web Technologies, including Web Services and Semantic Web	3	4	2	0	6	6	9	0	30
Security and Privacy, including Electronic Payments	1	0	2	1	0	4	5	0	13
B2B and Supply Chain Management, eMarketplace	1	4	7	4	4	4	0	3	24
Mobile Business/Commerce	1	0	0	1	4	0	5	0	11
e-Government	1	0	0	2	0	4	0	0	7
e-Business Legal and Policy Issues	0	0	0	0	0	0	0	0	0
Auction, Negotiation, Agent-based Solutions	4	5	4	8	3	6	2	0	32
Internet Marketing & Strategic Value/Pricing in E-Commerce	2	2	0	0	0	0	2	0	6
Personalization and Web Design	0	1	1	2	1	3	2	2	10
Business Modeling/Application Development	4	1	0	1	2	3	0	0	11
<b>Total</b>	<b>21</b>	<b>27</b>	<b>27</b>	<b>29</b>	<b>28</b>	<b>45</b>	<b>34</b>	<b>8</b>	<b>211</b>

# Top Topic Areas



Topic Area	2002	2003	2004	2005	2006	2007	2008	2009	Total
E-Commerce Adoption and management	1	8	5	3	4	7	5	2	33
Artificial Intelligence, Expert Systems and Knowledge Management	0	0	1	0	1	2	0	0	4
Business Strategy and Business Models	3	1	2	4	3	5	3	1	21
Business Processes, Workflow Management and Collaborative Solutions	0	1	3	3	0	1	1	0	9
Web Technologies, including Web Services and Semantic Web	3	4	2	0	6	6	9	0	30
Security and Privacy, including Electronic Payments	1	0	2	1	0	4	5	0	13
B2B and Supply Chain Management, eMarketplace	1	4	7	4	4	4	0	3	24
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Auction, Negotiation, Agent-based Solutions	4	5	4	8	3	6	2	0	32
Internet Marketing & Strategic Value/Pricing in E-Commerce	2	2	0	0	0	0	2	0	6
Personalization and Web Design	0	1	1	2	1	3	2	2	10
Business Modeling/Application Development	4	1	0	1	2	3	0	0	11
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# Top Topic Areas by Year



Topic Area	2002	2003	2004	2005	2006	2007	2008	2009	Total
E-Commerce Adoption and management	1	8	5	3	4	7	5	2	33
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Security and Privacy, including Electronic Payments	1	0	2	1	0	4	5	0	13
B2B and Supply Chain Management, eMarketplace	1	4	7	4	4	4	0	3	24
Mobile Business/Commerce	1	0	0	1	4	0	5	0	11
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# Research Methods



Research Method	2002	2003	2004	2005	2006	2007	2008	2009	Total
Survey	3	5	4	1	5	6	3	0	27
Case/Qualitative	2	2	3	3	3	2	0	0	15
Experiment	2	3	1	3	4	11	3	4	31
Simulation	0	3	0	5	1	1	1	0	11
Problem Solving/Modeling	3	7	2	2	3	5	7	4	33
Conceptual Framework/Model Description/Discussion	4	4	9	6	0	11	10	1	45
Secondary Data	1	0	0	4	0	2	1	0	8
System Modeling and Prototyping	7	3	8	8	11	7	4	0	48
<b>Total</b>	<b>22</b>	<b>27</b>	<b>27</b>	<b>32</b>	<b>27</b>	<b>45</b>	<b>29</b>	<b>9</b>	<b>218</b>

# Top Research Methods



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# Top Research Methods by Year



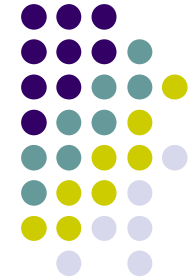
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# Contributors to these Publications



Contributor	2002	2003	2004	2005	2006	2007	2008	2009	Total
Asia	13	19	18	10	15	29	9	5	118
Europe	6	6	4	11	5	5	12	0	49
North America	6	7	9	8	16	16	15	3	80
South America	0	0	0	1	0	0	0	0	1
Middle East/Africa	1	0	3	0	2	2	0	0	8
<b>Total</b>	<b>26</b>	<b>32</b>	<b>34</b>	<b>30</b>	<b>38</b>	<b>52</b>	<b>36</b>	<b>8</b>	<b>256</b>

# Contributors to these Publications



Contributor	2002	2003	2004	2005	2006	2007	2008	2009	Total
Asia	13	19	18	10	15	29	9	5	118
Europe	6	6	4	11	5	5	12	0	49
North America	6	7	9	8	16	16	15	3	80
South America	0	0	0	1	0	0	0	0	1
Middle East/Africa	1	0	3	0	2	2	0	0	8
<b>Total</b>	<b>26</b>	<b>32</b>	<b>34</b>	<b>30</b>	<b>38</b>	<b>52</b>	<b>36</b>	<b>8</b>	<b>256</b>

# Some Observations

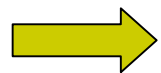


- | Research Topics
  - | Publications do cover issues at individual and organizational levels, of business/management and technology, and in B2C, B2B, C2C and a bit of G2B/C
  - | One missing area is "EC legal and policy issues", a more macro-level issue
- | Research Methods
  - | System Modeling & Prototyping and Conceptual Framework/Model Description/Discussion are dominant
  - | Survey, Experiment and Problem Solving/Modeling are also popular
  - | Case-based, qualitative studies are less used
- | Contributors
  - | Most from Asia, Americas catching up, followed by Europe
  - | Leading to a more "international journal"



# What's Next?

- | EC is definitely an extremely fast growing area in both research and practice
- | It is "international" and "multi-discipline" by its nature
- | It does require and attract experts in many disciplines all over the world to contribute and advance the knowledge and understanding of this "international" topic



More collaboration in terms of discipline knowledge, research method, researchers across countries, etc.

# Journals of E-Commerce/Business



- | Electronic Markets (Springer, 1991)
- | Internet Research (Emerald, 1991)
- | International Journal of Electronic Commerce (M.E. Sharpe, 1996)
- | Journal of Electronic Commerce Research (CSULB, 2000)
- | Quarterly Journal of Electronic Commerce (Information Age, 2000)
- | Electronic Commerce Research (Springer, 2001)
- | e-Services Journal (John Hopkins University, 2001)
- | Journal of E-Business (International Journal of E-Business, 2001)
- | Electronic Commerce Research and Practices (Elsevier, 2002)
- | Information Systems and E-Business Management (Springer, 2003)
- | International Journal of Electronic Business (Inderscience, 2003)
- | International Journal of E-Business Research (Idea Publishing, 2005)
- | Journal of Theoretical and Applied Electronic Commerce Research (Universidad de Talca, Chile, 2006)
- | International Journal of e-Business Management (RMIT Publishing, 2007)

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- | Journal of Organizational Computing and Electronic Commerce (Taylor & Francis, 1991)
- | Decision Support Systems and Electronic Commerce (Elsevier, 1985)

**Plus Journals in many other areas such as MIS, management, marketing, psychology, computer science, MS/OR/DS, ... ..**



Thank you!

Comments and Questions?