

# Nicolas PRAT

Professeur associé

Département: Systèmes d'Information, Data

Analytics et Opérations

ESSEC Business School

3 avenue Bernard Hirsch

95021 Cergy-Pontoise

France

Email: prat@essec.edu

Numéro de téléphone: +33 (0)1 34 43 32 69

Pays d'origine: France

## INTERETS DE RECHERCHE

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Management des systèmes d'information, Intelligence économique, analyse de données et

## FORMATION

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- |      |  |
|------|--|
| 2012 | Habilitation à diriger des recherches, Université Paris Dauphine-PSL, France   |
| 1999 | Doctorat d'Informatique, Université Paris Dauphine-PSL, France   |
| 1991 | Mastère Spécialisé en Conception et Gestion des Systèmes d'Information et de Décision, ESSEC Business School, France |
| 1990 | MSc en Management, ESSEC Business School, France   |

## EXPERIENCE PROFESSIONNELLE

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### Positions académiques principales

- |                |   |
|----------------|---|
| 2006 - Présent | Professeur associé, ESSEC Business School, France   |
| 1999 - 2006    | Professeur assistant, ESSEC Business School, France |

### Autres affiliations académiques

- |                |  |
|----------------|--|
| 2025 - 2026    | Responsable de la filière Digital transformation and digital business Track, ESSEC Business School, France   |
| 2020 - 2022    | Directeur Académique du MSc Transformation Digitale des Sociétés et des Organisations, ESSEC Business School, France   |
| 2017 - 2019    | Responsable académique du parcours systèmes d'information, Programme Management et Gestion des Organisations (formation permanente), ESSEC Business School, France |
| 2013 - 2017    | Directeur académique du Programme de management spécialisé Management des systèmes d'information (formation permanente), ESSEC Business School, France             |
| 2012 - Présent | Responsable de la filière Systèmes d'Information, ESSEC Business School, France  |
| 2007 - 2010    | Responsable du département Systèmes d'information et de décision, ESSEC Business School, France  |
| 2005 - 2013    | Professeur responsable à l'ESSEC du Master Recherche SID (Systèmes d'Information et de Décision), en co-habilitation avec l'Université de Paris 1 et le            |

CNAM, ESSEC Business School, France

- 1995 - 1999 Chargé de cours, ESSEC Business School, France
- 2015 - 2015 Chercheur invité, MIT Sloan School of Management, États-Unis
- 2015 - 2015 Chercheur invité, University of Alicante, Espagne
- 2014 - 2014 Chercheur invité, University of Alicante, Espagne
- 2007 - 2007 Chercheur invité, MIT Sloan School of Management, États-Unis
- 1999 - 1999 Chargé de cours, École Supérieure des Affaires (ESA), France

## BOURSES, PRIX ET DISTINCTIONS

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### Prix et Distinctions

- 2013 Qualification à la fonction de Professeur des Universités, Section 27 (Informatique)

## PUBLICATIONS

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### Articles

- AKOKA, J., WATTIAU, I., PRAT, N. et STOREY, V.C. (2025). Data and knowledge engineering: Insights from forty years of publication. *Data and Knowledge Engineering*, 160(102492).
- KRISHNAN, R., LALOR, J.P., PRAT, N. et ABBASI, A. (2025). From Policy to Practice: Research Directions for Trustworthy and Responsible Artificial Intelligence “By Design”. *IEEE Intelligent Systems*, 40(5), pp. 45-51.
- BAUDET, C., PRAT, N., BARLETTE, Y. et DUTOT, V. (2025). Disciplinary tensions: the predicted demise of information systems as a discipline in its own right ? *Systèmes d'Information et Management*, Volume 30(2), pp. 15-25.
- BAUDET, C., PRAT, N., BARLETTE, Y. et DUTOT, V. (2025). Tensions disciplinaires : la fin annoncée des systèmes d'information comme discipline à part entière ? *Systèmes d'Information et Management*, Volume 30(2), pp. 3-14.
- SANGUPAMBA MWILU, O., PRAT, N. et WATTIAU, I. (2024). A Taxonomy Development Method to Define the Vocabulary for Rule-Based Guidance in Complex Emerging Technologies. *Business and Information Systems Engineering*, 66, pp. 161-180.
- AKOKA, J., WATTIAU, I., PRAT, N. et STOREY, V.C. (2024). Unraveling the foundations and the evolution of conceptual modeling—Intellectual structure, current themes, and trajectories. *Data & Knowledge Engineering*, 154, pp. 102351.
- AKOKA, J., WATTIAU, I., PRAT, N. et STOREY, V.C. (2023). Knowledge contributions in design science research: Paths of knowledge types. *Decision Support Systems*, 166, pp. 113898.
- PRAT, N. (2019). Augmented analytics. *Business and Information Systems Engineering*, 61(3), pp. 375-380.
- SANGUPAMBA MWILU, O., WATTIAU, I. et PRAT, N. (2016). Design Science Research Contribution to Business Intelligence in the Cloud — a Systematic Literature Review. *Future Generation Computer Systems*, 63, pp. 108-122.

PRAT, N., WATTIAU, I. et AKOKA, J. (2015). A Taxonomy of Evaluation Methods for Information Systems Artifacts. *Journal of Management Information Systems*, 32(3), pp. 229-267.

PRAT, N., AKOKA, J. et WATTIAU, I. (2012). An MDA Approach to Knowledge Engineering. *Expert Systems with Applications*, 39(12), pp. 10420-10437.

PRAT, N. (2012). Teaching Information Systems with Cases: An Exploratory Study. *Journal of Computer Information Systems*, 52(3), pp. 71-81.

PRAT, N., WATTIAU, I. et AKOKA, J. (2011). Combining Objects with Rules to Represent Aggregation Knowledge in Data Warehouse and OLAP Systems. *Data and Knowledge Engineering*, 70(8), pp. 732-752.

PRAT, N., AKOKA, J. et COMYN-WATTIAU, I. (2006). A UML-based Data Warehouse Design Method. *Decision Support Systems*, 42(3), pp. 1449-1473.

AKOKA, J. et PRAT, N. (1997). Modélisation logique des données dans les systèmes multidimensionnels d'aide à la décision: la méthode MAP. *Journal of Decision Systems*, 6(2), pp. 95-115.

### Ouvrages et édition d'ouvrages

COMYN-WATTIAU, I., DU MOUZA, C. et PRAT, N. [Eds] (2016). *Ingénierie et management des systèmes d'information - Mélanges en l'honneur de Jacky Akoka*. Cépaduès Éditions, 349 pages.

### Chapitres d'ouvrage

PRAT, N. (2016). Modeling and Preparing Data in Self-Service Business Intelligence. Dans: COMYN-WATTIAU I., DU MOUZA C., PRAT N. eds. *Ingénierie et management des systèmes d'information - Mélanges en l'honneur de Jacky Akoka*. 1st ed. Cépaduès Éditions, pp. 5-18.

PRAT, N. (2014). Management des systèmes d'information. Dans: DUFOUR B. (ed.). *MBA. L'essentiel du management par les meilleurs professeurs*. 3 ed. Eyrolles, pp. 321 – 341.

PRAT, N. (2011). A Hierarchical Model for Knowledge Management. Dans: SCHWARTZ D. (ed.). *Encyclopedia of Knowledge Management*. 2 ed. Idea Group Reference, pp. 376-388.

PRAT, N. (2006). A Hierarchical Model for Knowledge Management. Dans: SCHWARTZ D. (ed.). *Encyclopedia of Knowledge Management*. 1st ed. Idea Group Reference, pp. 211-220.

ZAMFIROIU, M. et PRAT, N. (2001). Traçabilité du processus de conception des systèmes d'information. Dans: CAUVET C., ROSENTHAL-SABROUX C. eds. *Ingénierie des systèmes d'information*. 1st ed. Hermès Sciences, Lavoisier, pp. 245-276.

PRAT, N. (2000). STEP PC: A Generic Tool for Design Knowledge Capture and Reuse. Dans: ROY R. (ed.). *Industrial Knowledge Management: A Micro-level Approach*. 1st ed. Springer, pp. 317-334.

### Actes d'une conférence

PRAT, N., LALOR, J.P. et ABBASI, A. (2025). GALEA – Leveraging Generative Agents in Artifact Evaluation. Dans: *Local Solutions for Global Challenges (DESRIST 2025)*. Cham: Springer Nature Switzerland, pp. 83-98.

PRAT, N. et OLOGEANU-TADDEI, R. (2024). An Ontology of Environmental Sustainability for Design Science Research Artifacts. Dans: *Proceedings of SIGGreen Pre-ICIS Workshop, 45th International Conference on Information Systems (ICIS)*. Bangkok: Association for Information Systems (AIS).

AKOKA, J., WATTIAU, I., PRAT, N. et STOREY, V.C. (2023). The journey of conceptual modeling: Paths from the past to present with trajectories for the future. Dans: *CEUR Workshop Proceedings (CEUR-WS.org)*. CEUR-WS.org, pp. 1-21.

PRAT, N. (2023). The Impact of Generative AI on Business Intelligence. Dans: *International Conference on Information Systems (ICIS 2023) Rising like a Phoenix: Emerging from the Pandemic and Reshaping Human Endeavors with Digital Technologies*. Hyderabad: Association for Information Systems (AIS).

PRAT, N., AKOKA, J., WATTIAU, I. et STOREY, V.C. (2022). A Granular View of Knowledge Development in Design Science Research. Dans: *The Transdisciplinary Reach of Design Science Research - 17th International Conference on Design Science Research in Information Systems and Technology (DESRIST 2022)*. Springer, pp. 363-375.

PRAT, N. (2021). What Are They Talking about? Relation Extraction from News to Identify Research Directions in Emerging Technologies. Dans: *54th Hawaii International Conference on System Sciences (HICSS-54)*. Online: IEEE Computer Society, pp. 5449-5458.

AKOKA, J., WATTIAU, I., DU MOUZA, C. et PRAT, N. (2021). Mapping Multidimensional Schemas to Property Graph Models. Dans: *Advances in Conceptual Modeling - ER 2021 Workshop Proceedings - Conceptual Modeling for NoSQL Data Stores (CoMoNoS)*. St John's: Springer, pp. 3-14.

AKOKA, J., COMYN-WATTIAU, I., DU MOUZA, C. et PRAT, N. (2019). Design science research for the humanities – The case of prosopography. Dans: *14th International Conference on Design Science Research in Information Systems and Technology (DESRIST 2019)*. Worcester, MA: Springer International Publishing, pp. 239-253.

HEVNER, A.R., PRAT, N., COMYN-WATTIAU, I. et AKOKA, J. (2018). A Pragmatic Approach for Identifying and Managing Design Science Research Goals and Evaluation Criteria. Dans: *: AIS SIGPRAG 6th Pre-ICIS Workshop "Practice-based Design and Innovation of Digital Artifacts"*. San Francisco: Association for Information Systems (AIS), pp. 1-15.

PRAT, N. (2018). Blockchain Analytics: A Descriptive Review. Dans: *Proceedings of the AIM Pre-ICIS 2018 "Convergence des TI"*. San Francisco: Association Information et Management (AIM), pp. 1-10.

AKOKA, J., COMYN-WATTIAU, I., PRAT, N. et STOREY, V.C. (2017). Evaluating Knowledge Types in Design Science Research: An Integrated Framework. Dans: *Designing the Digital Transformation. 12th International Conference on Design Science Research in Information Systems and Technology (DESRIST 2017) Proceedings*. Karlsruhe: Springer International Publishing, pp. 201-217.

AKOKA, J., COMYN-WATTIAU, I. et PRAT, N. (2017). A four V's design approach of NoSQL graph databases. Dans: *Advances in Conceptual Modeling - Proceedings of ER 2017 Workshops, 6th International Workshop on Modeling and Management of Big Data (MoBiD 2017)*. Valencia: Springer, pp. 58-68.

AKOKA, J., COMYN-WATTIAU, I. et PRAT, N. (2016). The Structure of DSR Knowledge as Reflected by DESRIST: A Citation Analysis. Dans: *11th International Conference on Design Science Research in Information Systems & Technology (DESRIST 2016)*. St. John: Springer, pp. 177-185.

SANGUPAMBA MWILU, O., PRAT, N. et COMYN-WATTIAU, I. (2015). Taxonomy Development for Complex Emerging Technologies - The Case of Business Intelligence and Analytics on the Cloud. Dans: *19th Pacific Asia Conference on Information Systems (PACIS 2015) Proceedings*. Singapore: Association for Information Systems (AIS), pp. 1-16.

- PRAT, N., COMYN-WATTIAU, I. et AKOKA, J. (2014). Artifact evaluation in information systems design-science research - a holistic view. Dans: *18th Pacific Asia Conference on Information Systems (PACIS 2014)*. Chengdu: Southwestern University of Finance and Economics (SWUFE), pp. 1-17.
- SANGUPAMBA MWILU, O., PRAT, N. et COMYN-WATTIAU, I. (2014). Business Intelligence and Big Data in the Cloud: Opportunities for Design-Science Researchers. Dans: *Advances in Conceptual Modeling - Proceedings of ER 2014 Workshops, 2nd International Workshop on Modeling and Management of Big Data (MoBiD 2014)*. Atlanta: Springer, pp. 75-84.
- PRAT, N. (2013). Goal Formalisation and Classification for Requirements Engineering, Fifteen Years Later. Dans: *Proceedings of 7th IEEE International Conference on Research Challenges in Information Science (RCIS)*. Paris: IEEE Xplore, pp. 1-12.
- PRAT, N., MEGDICHE, I. et AKOKA, J. (2012). Multidimensional Models Meet the Semantic Web: Defining and Reasoning on OWL-DL Ontologies for OLAP. Dans: *15th International Workshop on Data Warehousing and OLAP (DOLAP 2012)*. Maui, Hawaii: Association for Computing Machinery (ACM), pp. 17-24.
- PRAT, N., AKOKA, J. et COMYN-WATTIAU, I. (2012). Transforming Multidimensional Models into OWL-DL Ontologies. Dans: *6th International Conference on Research Challenges in Information Science (RCIS 2012)*. Valencia: Institute of Electrical and Electronics Engineers (IEEE), pp. 1-12.
- PRAT, N., AKOKA, J. et COMYN-WATTIAU, I. (2011). Mapping CommonKADS Knowledge Models into PRR. Dans: *Proceedings of 23rd International Conference on Software Engineering and Knowledge Engineering (SEKE 2011)*. Miami: Knowledge Systems Institute Graduate School, pp. 143-148.
- PRAT, N. (2010). Evaluating the impact of different case-based teaching approaches on students' implication and learning - an empirical study in an IS/IT management course. Dans: *15ème Colloque de l'AIM (AIM 2010)*. La Rochelle: Association Information et Management (AIM), pp. 1-11.
- PRAT, N., COMYN-WATTIAU, I. et AKOKA, J. (2010). Representation of Aggregation Knowledge in OLAP Systems. Dans: *18th European Conference on Information Systems (ECIS 2010)*. Pretoria: University of Pretoria, pp. 1-12.
- PRAT, N. et MADNICK, S. (2008). Measuring Data Believability: A Provenance Approach. Dans: *Proceedings of the 41st Hawaii International Conference on System Sciences (HICSS-41)*. Waikoloa: Institute of Electrical and Electronics Engineers (IEEE), pp. 1-10.
- PRAT, N. et MADNICK, S. (2007). Evaluating and Aggregating Data Believability across Quality Sub-dimensions and Data Lineage. Dans: *Proceedings of the 17th International Workshop on Information Technologies and Systems (WITS 2007)*. Montreal: Financial Management Association (FMA), pp. 170-176.
- THIELE, O., KNAPP, H., SCHADER, M. et PRAT, N. (2007). MOBILEAUDIT - A Tool for Contextual Knowledge Management. Dans: *Proceedings of the Winsys 2007 Conference: International Conference on Wireless Information Networks and Systems*. Barcelona: Institute for Systems and Technologies of Information, Control and Communication (INSTICC), pp. 232-237.
- THIELE, O., KNAPP, H., SCHADER, M. et PRAT, N. (2006). A Context-aware Architecture for Mobile Knowledge Management. Dans: *Proceedings of the International Conference on Wireless Information Networks and Systems (WINSYS 2006)*. Setúbal: Institute for Systems and Technologies of Information, Control and Communication (INSTICC).

- PRAT, N. (2006). A Goal-based Approach to Semantic Web Services. Dans: *Proceedings of the 5th French Affiliated AIM Pre-ICIS Workshop: A Management Perspective on Web Services*. Milwaukee: UWM (University of Wisconsin at Milwaukee), pp. 26-32.
- RATSIMANOHATRA, A., PRAT, N. et SCHADER, M. (2006). A Topic Maps-based Architecture for Mobile knowledge Management. Dans: *Proceedings of the IADIS International Conference WWW/Internet 2006*. Murcia: IADIS, pp. 266-271.
- PRAT, N. et ZACKLAD, M. (2006). Analyse des dépendances entre fragments documentaires pour le management des communautés d'action médiatisées. Dans: *11ème Colloque de l'AIM (AIM 2006)*. Luxembourg: Association Information et Management (AIM), pp. 1-17.
- PRAT, N. et ZACKLAD, M. (2006). Analysing Dependencies between Documentary Fragments for the Management of Mediated Communities of Action. Dans: *Proceedings of the 11th International Conference of the Association Information and Management (AIM): Information Systems and Collaboration: State of the Art and Perspectives*. GI-Edition, pp. 386-401.
- DEMIGHA, S. et PRAT, N. (2004). A Cased-based Training System in Radiology-senology. Dans: *International Conference on Information and Communication Technologies: From Theory to Applications. ICTTA'04 Proceedings*. Damascus: Institute of Electrical and Electronics Engineers (IEEE), pp. 1-6.
- SI-SAID CHERFI, S. et PRAT, N. (2003). Multidimensional Schema Quality: Assessing and Balancing Analyzability and Simplicity. Dans: *International Workshop on Conceptual Modeling Quality (IWCMQ 2003) in Conjunction with the 22nd International Conference on Conceptual Modeling (ER 2003): Conceptual Modeling for Novel Application Domains*. Chicago: Springer, pp. 140-151.
- PRAT, N. et SI-SAID CHERFI, S. (2003). Multidimensional Schemas Quality Assessment. Dans: *Information Systems for a Connected Society (CAISE'03 Workshops)*. Klagenfurt/Velden: University of Maribor Press (Slovenia), pp. 341-352.
- RAMSAMY-PRAT, P. et PRAT, N. (2002). Contribution of the Theories of Individual Learning to an Integrated Knowledge Management Framework: Application to IT-supported Knowledge Management. Dans: *3rd European Conference on Knowledge Management (ECKM 2002)*. Dublin: MCIL, pp. 563-574.
- PRAT, N. et AKOKA, J. (2002). From UML to ROLAP Multidimensional Databases Using a Pivot Model. Dans: *18èmes Journées Bases de Données Avancées (BDA 2002)*. Evry: INT, pp. 171-195.
- PRAT, N. (2002). Management des connaissances : un cadre intégrateur pour combiner les approches systèmes d'information, management et intelligence artificielle. Dans: *7ème Colloque de l'AIM (AIM 2002)*. Hammamet: Association Tunisienne des Sciences de Gestion (ATSG), pp. 1-10.
- PRAT, N. (2001). Automating Knowledge Indexing and Retrieval in Soft Domains. Dans: *Second European Conference on Knowledge Management (ECKM 2001) Proceedings*. MCIL, pp. 475-486.
- AKOKA, J., COMYN-WATTIAU, I. et PRAT, N. (2001). Dimension Hierarchies Design from UML Generalizations and Aggregations. Dans: *20th International Conference on Conceptual Modeling (ER 2001): Conceptual Modeling-ER 2001*. Berlin: Springer, pp. 442-455.
- PRAT, N. (2000). Applying Case-based Reasoning in a Design Environment: Issues and Lessons Learned. Dans: *Machine Learning in Design Workshop (MLinD 2000), 6th International Conference on Artificial Intelligence in Design (AID 2000)*. Worcester Polytechnic Institute, pp. 33-41.
- PRAT, N. (1999). Aide au processus de BPR : Une approche fondée sur le raisonnement par cas. Dans: *4ème Colloque de l'AIM (AIM 1999)*. Cergy Pontoise: ESSEC Business School, pp. 211-227.

PRAT, N. (1997). Goal formalisation and classification for requirements engineering. Dans: *Proc. of the 3rd International Workshop on Requirements Engineering : Foundations of Software Quality (REFSQ'97)*. Barcelona: Presses universitaires Namur.

AKOKA, J., COMYN-WATTIAU, I. et PRAT, N. (1993). INFAUDITOR : An Expert System for Information Systems Auditing. Dans: *Artificial Intelligence Technology Applications and Management (ICC 1993)*. McGraw-Hill, pp. 402-409.

### Conférences

AKOKA, J., WATTIAU, I., PRAT, N. et STOREY, V.C. (2024). La modélisation conceptuelle - Passé, présent et futur. Dans: 42ème Edition du Congrès INFORSID 2024. Nancy: INFormatique des ORganisations et Systèmes d'Information et de Décision. Nancy.

### Documents de travail

PRAT, N., COMYN-WATTIAU, I. et AKOKA, J. (2009). *Combining Objects with Rules to Represent Aggregation Knowledge in Data Warehouse and OLAP Systems*. DR-09014, ESSEC Business School.

AKOKA, J., COMYN-WATTIAU, I. et PRAT, N. (2001). *From UML to ROLAP Multidimensional Databases Using a Pivot Model*. DR-01021, ESSEC Business School.

PRAT, N. (1996). *Using machine learning techniques to improve information systems development methods*.

### Presse

PRAT, N. (2024). Generative BI – the new revolution in business intelligence. *ESSEC Knowledge*.

PRAT, N. (2018). Fonctionnement, transactions, enjeux: tout ce qu'il faut savoir sur la blockchain, vidéo ESSEC-Challenges. *Challenges*.

PRAT, N. (2018). Intelligence artificielle : 3 raisons de vous y intéresser. *Courrier Cadres*.

PRAT, N. (2018). Aprovechar la revolución de la IA en la analítica de datos. *Mundo Empresarial*.

## AUTRES ACTIVITES DE RECHERCHE

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### Membre d'un comité de lecture

Depuis 2022    Systèmes d'Information et Management

Depuis 2013    Journal of Database Management

### Organisation d'une conférence

2008            Local arrangements chair, 18th Workshop on Information Technologies and Systems (WITS 2008), Paris, France

### Supervision de thèses / HDR

2005            S. Demigha (Université Paris 1 Panthéon-Sorbonne), Co-directeur de thèse

### Autres activités de recherche

2005            Membre de comités de programme - International Workshop on Quality of Information Systems (QoIS2005) in conjunction with the 24th International Conference on Conceptual Modeling (ER2005), Klagenfurt,, Autriche

2004            3è Colloque Pre-ICIS de l'AIM (Association Information et Management), Washington D.C, États-Unis

- 2004 Membre de comités de programme, 9è colloque de l'AIM, INT, Evry,, France
- 2003 Membre du comité de programme : Decision Systems Engineering Workshop (DSE'03) in conjunction with the 15th Conference on Advanced Information Systems Engineering (CAiSE'03),Klagenfurt/Velden, Autriche
- 2002 Membre du comité de programme, 1er Colloque Pre-ICIS de l'AIM, Barcelone, Espagne

## ACTIVITES PROFESSIONNELLES

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### Consulting

- 2003 Expert auprès du Réseau National de recherche et d'innovation en Technologies Logicielles (RNTL), créé par les Ministères de l'Industrie et de la Recherche.