1. Record Nr. UNISA996490365403316

Titolo	Business process management : blockchain, robotic process automation, and Central and Eastern Europe forum : BPM 2022 blockchain, RPA, and CEE forum, Munster, Germany, September 11-16, 2022, proceedings / / edited by Andrea Marrella [and eight others]
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2022] ©2022
ISBN	3-031-16168-8
Descrizione fisica	1 online resource (352 pages)
Collana	Lecture Notes in Business Information Processing ; ; v.459
Disciplina	658.4038
Soggetti	Business - Data processing - Management Management information systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Intro -- Preface -- Organization -- Contents -- Blockchain Forum -- Preface -- Blockchain Forum -- Organization -- Program Chairs -- Program Committee -- Blockchain for Business Process Enactment: A Taxonomy and Systematic Literature Review -- 1 Introduction -- 1.1 Blockchain-Based Business Process Enactment -- 1.2 Related Work -- 2 Methodology -- 2.1 Taxonomy Development -- 2.2 Systematic Literature Review -- 3 A Taxonomy of Blockchain-Based Enactment -- 3.1 Overview -- 3.2 Dimensions and Classification Results -- 4 Discussion: Challenges and Future Research Directions -- 4.1 Interoperability -- 4.2 Traceability and Correctness -- 4.3 Flexibility and Scalability -- 5 Conclusion and Outlook -- References -- Pupa: Smart Contracts for BPMN with Time-Dependent Events and Inclusive Gateways -- 1 Introduction -- 2 Background and Related Works -- 2.1 Background on Smart Contracts -- 2.2 Background on BPMN -- 2.3 Background on Timer Events -- 2.4 Background on Inclusive Gateways -- 2.5 Related Works on Process-Oriented Smart Contract Solution -- 2.6 Related Works on Timer Events -- 2.7 Related Works on Inclusive Gateways -- 3 Details of the Proposed Solution -- 3.1 Handling Time-Dependent Events -- 3.2 Supporting Inclusive Gateways -- 4 Use Case Study -- 5 Result and Evaluation -- 5.1 Compiling and Deploying New

Smart Contracts -- 5.2 Gas and Performance Evaluation -- 6 Conclusion -- References -- A Systematic Local Fork Management Framework for Blockchain Sandbox Environments -- 1 Introduction -- 2 Preliminaries -- 3 Related Work -- 4 Proposed Framework -- 4.1 Scope -- 4.2 High Level Overview -- 4.3 Components -- 4.4 Features -- 5 Use Cases -- 6 Implementation -- 7 Discussion, Limitations and Future Work -- 8 Conclusion -- References -- Fine-Grained Data Access Control for Collaborative Process Execution on Blockchain -- 1 Introduction.
2 Running Example and Problem Illustration -- 3 Background -- 4 The CAKE Approach -- 5 Implementation and Evaluation -- 6 Related Work -- 7 Conclusion and Future Remarks -- References -- Challenges and Opportunities of Blockchain for Auditable Processes in the Healthcare Sector -- 1 Introduction -- 2 Background and Related Work -- 2.1 Blockchain in Business Process Management -- 2.2 Applications of Blockchain Technology for FL in Healthcare -- 3 Use Case: Auditable Consent Management for Federated Machine Learning in Healthcare -- 3.1 Use Case Description, Roles and Workflow -- 3.2 Requirement Analysis -- 3.3 Threat Model -- 4 System Design -- 4.1 Governance Framework, DPKI and Identities -- 4.2 Verifiable Consent Management Process -- 4.3 Federated ML Execution -- 4.4 Implementation -- 5 Insights, Applications, and Future Research Challenges -- References -- Measuring the Effects of Confidants on Privacy in Smart Contracts -- 1 Introduction -- 2 Related Work -- 3 Process Meta Model -- 3.1 Example Process -- 3.2 Privity Spheres -- 3.3 Modeling Additional Actors for Decisions -- 4 Measures for Simple Processes -- 4.1 Measuring the Impact on the Static Sphere -- 4.2 Measuring the Impact on the Weak-Dynamic Sphere -- 4.3 Measuring the Impact on the Strong-Dynamic Sphere -- 5 Measures for General Processes -- 5.1 Measuring the Impact on Static- and Weak-Dynamic Spheres -- 5.2 Measuring the Impact on the Strong-Dynamic Sphere -- 5.3 Example Measure Calculation -- 6 Conclusion and Future Work -- References -- Threshold Signature for Privacy-Preserving Blockchain -- 1 Introduction -- 1.1 Contribution and Paper Structure -- 2 Cryptographic Preliminaries -- 2.1 Schnorr Signature -- 2.2 Shamir Secret Sharing Scheme -- 2.3 Paillier Cryptosystem -- 3 Proposed (n,t)-Threshold Scheme -- 3.1 Setup Algorithm -- 3.2 Signing Algorithm -- 3.3 Verifying Algorithm.
4 Security Analysis -- 5 Deployment of (n,t)-Threshold Scheme to the Blockchain -- 6 Experimental Results -- 7 Conclusion -- References -- Robotic Process Automation (RPA) Forum -- Preface -- Robotic Process Automation (RPA) Forum -- Organization -- Program Chairs -- Program Committee -- From Natural Language to Workflows: Towards Emergent Intelligence in Robotic Process Automation -- 1 Constructing Flows for Automation -- 1.1 Natural Language to Flows -- 1.2 Run Time Versus Design Time Considerations -- 2 Emergent Intelligence -- 2.1 Units of Automation -- 2.2 Automated Composition is Key -- 2.3 Current Deficiencies -- 3 Explainability -- 3.1 Transparency of Emergent Intelligence -- 3.2 Imperative Consequences of Declarative Specification -- 3.3 Natural Language is Noisy -- 4 Model Acquisition -- 4.1 Learning from Instructions -- 4.2 Learning from Observing -- 5 Conclusion: Bigger Picture, Bigger RPAs -- References -- Towards an Integrated Platform for Business Process Management Systems and Robotic Process Automation -- 1 Introduction -- 2 Background -- 2.1 Business Process Management Systems -- 2.2 Robotic Process Automation -- 3 Related Work -- 4 Research Methodology -- 5 Towards an Integrated BPMS-RPA Platform -- 5.1 Requirements Engineering -- 5.2 Conceptual Design -- 6 Evaluation and

Demonstration -- 6.1 Follow-up Interviews -- 6.2 Prototypical Implementation -- 7 Discussion and Conclusion -- 7.1 Theoretical and Practical Implications -- 7.2 Limitations and Recommendations for Further Research -- References -- Rolling Back to Manual Work: An Exploratory Research on Robotic Process Re-Manualization -- 1 Introduction -- 2 Research Background -- 3 Research Design -- 4 Results -- 4.1 Cause 1: Overenthusiasm for RPA -- 4.2 Cause 2: Low Awareness and Fear -- 4.3 Cause 3: Legal and Offering Changes -- 4.4 Cause 4: Robot Failure.
4.5 Implications of Re-Manualization -- 5 Discussion and Limitations -- 6 Conclusions and Future Work -- References -- Steering the Robots: An Investigation of IT Governance Models for Lightweight IT and Robotic Process Automation -- 1 Introduction -- 2 Background -- 2.1 IT Governance -- 2.2 RPA as an Example of Lightweight IT -- 2.3 Implications for IT Governance -- 3 Method -- 4 Findings -- 5 Discussion -- 6 Conclusion -- References -- Identifying the Socio-Human Inputs and Implications in Robotic Process Automation (RPA): A Systematic Mapping Study -- 1 Introduction -- 2 Background -- 3 Systematic Mapping Study Method -- 3.1 Planning -- 3.2 Conducting -- 3.3 Reporting -- 4 Discussion -- 5 Conclusion -- References -- A Human-in-the-Loop Approach to Support the Segments Compliance Analysis -- 1 Introduction -- 2 Background -- 2.1 Running Example -- 2.2 Segmentation in RPA -- 3 Segments Compliance Analysis -- 4 Evaluation -- 4.1 Evaluating the Effectiveness of SCAN -- 4.2 Assessing the Robustness of SCAN -- 4.3 Quantifying the Usability of the UI of SCAN -- 5 Conclusion -- References -- Recommending Next Best Skill in Conversational Robotic Process Automation -- 1 Introduction -- 2 Definitions and Use Cases -- 3 Next Best Skill Recommendation -- 3.1 Problem Formulation and Requirements -- 3.2 Technical Approaches -- 3.3 Main Challenges -- 4 Illustration of a System Architecture -- 5 Summary -- References -- Process Discovery Analysis for Generating RPA Flowcharts -- 1 Introduction -- 2 RPA, Process Mining and Related Work -- 2.1 Robotic Process Automation (RPA) -- 2.2 Process Mining -- 2.3 Related Work -- 3 Existing Process Discovery Methods for RPA -- 4 Prototypical Approach and Architecture -- 4.1 Design and Implementation of the Prototype -- 5 Evaluation of the Prototype -- 5.1 An Use Case in the Prototype.
5.2 Strengths and Improvement Potentials -- 6 Conclusion -- References -- Can You Teach Robotic Process Automation Bots New Tricks? -- 1 Introduction -- 1.1 Running Example -- 2 Background: Intelligence and Learning -- 3 RPA State-of-the-Art -- 3.1 Recorders -- 3.2 Conversational RPAs -- 4 The Vision -- 5 Challenges and Opportunities -- 5.1 Metacognition -- 5.2 Generalizability -- 5.3 Catastrophic Forgetting -- 5.4 Citizen Developers -- 5.5 Automation Lifecycle -- 5.6 Interpretability -- 5.7 Interactive and Informative Experience -- 5.8 Learning New Skills -- 5.9 Guardrails -- 6 Conclusions -- References -- API as Method for Improving Robotic Process Automation -- 1 Introduction -- 2 Process Automation -- 3 Related Work -- 3.1 Improvement of RPA -- 3.2 API in RPA -- 4 Case Examples -- 5 Experimental Design -- 6 Results -- 7 Discussion -- 8 Conclusion -- Appendix -- References -- Central and Eastern Europe (CEE) Forum -- Preface -- Central and Eastern Europe (CEE) Forum -- Organization -- Program Chairs -- Program Committee -- Business Process Management in CEE Countries: A Literature-Based Research Landscape -- 1 Introduction -- 2 Background -- 3 Methodology and Research Process -- 4 Results from the Meta-perspective -- 4.1 Review by CEE Countries, Authors and Their Contributions -- 4.2 Review Due to Phenomenon: Foundations, Engineering, Management --

5 Results from the Content-Based Perspective -- 5.1 Content Related to Empirical Research in CEE Countries -- 5.2 Content in View of BPM Frameworks -- 5.3 Content in View of Sector/Industry -- 6 Conclusions, Limitations and the Future Research -- References -- Process and Project Oriented Organization: The Essence and Maturity Measurement -- 1 Introduction -- 2 Theoretical Background - At the Level of Process and Project Management Permeability -- 3 Methods and Models.
3.1 Study Scope and Characteristics of the Organizations Included in the Empirical Investigation.