



Joint Conference GDN & ICDSST 2024 | Programme

Human-Centric Decision and Negotiation Support for Societal Transitions

<https://gdnicdsst2024.fe.up.pt>



24th International Conference on Group Decision and Negotiation & 10th International Conference on Decision Support System Technology

Faculty of Engineering of the University of Porto, Porto, Portugal | 2 - 5 June 2024, Porto, Portugal



Time	Sunday 02/06	Monday 03/06	Tuesday 04/06	Wednesday 05/06	
09:00 - 09:15		Reception	Parallel sessions	Parallel sessions	
09:15 - 10:00		Opening session			
10:00 - 10:30		Plenary session			
10:30 - 11:00			Break	Break	
11:00 - 11:30			Break	Plenary session	Parallel sessions
11:30 - 12:00			Parallel sessions		
12:00 - 12:30				Lunch	Lunch
12:30 - 13:00			Lunch		
13:00 - 13:30				Parallel sessions	Plenary session (round table)
13:30 - 14:00			Poster session		
14:00 - 14:30				Break	Closing session
14:30 - 15:00			Parallel sessions		
15:00 - 15:30		GDN Doctoral consortium		Parallel sessions	
15:30 - 16:00			Break		
16:00 - 16:30	GDN Business meeting GDN Journal EB				
16:30 - 17:00		EWG-DSS Board meeting	Free time		
17:00 - 17:30					
17:30 - 18:00	Welcome reception		Conference dinner		
18:00 - 18:30					
18:30 - 19:00					
19:00 - 19:30					
19:30 - 20:00					

Conference streams

1. Technology as a support tool (ICDSST stream)
2. People as active participants (GDN General stream)
 - 2.1 Conflict Resolution
 - 2.2 Negotiation Support Systems and Studies
 - 2.3 Preference Modeling for Group Decision and Negotiation
 - 2.4 Collaborative Decision Making
 - 2.5 Network Analysis of Decisions in Groups
 - 2.6 Responsible NSS in the age of Generative AI
 - 2.7 Risk evaluation and negotiation strategies

Day 0

Day 0	Department of Civil Engineering (Building G)
15h30	Doctoral Consortium (G421) Chair: Liping Fang Sha Lai, Qingye Han, and Ginger Y. Ke <i>High-Level Development of Agri-Food Logistics from the Perspective of Policy Tool Combinations: Evidence from the Eastern Region of China</i> Juuso Pajasmaa <i>Group decision making in multi-objective optimization</i>
18h00	Welcome reception (Ground floor)

How to get to Building G: <https://maps.app.goo.gl/H2aUemg71zc9GCD46>

Day 1

08h45	Reception		
09h15	Opening session (Ascendi Auditorium – B003) Sérgio Pedro Duarte, Pascale Zaraté (conference chairs) Rui Calçada (FEUP Dean) Fátima Dargam, Adiel Teixeira de Almeida (conference honorary chairs) Shaofeng Liu (EWG-DSS), Liping Fang (GDN) António Lobo, Boris Delibašić, Tomasz Wachowicz (programme chairs)		
10h00	Plenary Chair: Pascale Zaraté (Ascendi Auditorium – B003) Leila Amgoud (French National Centre for Scientific Research and IRIT Toulouse, France)– Argumentation-based Deliberation: Foundations and Challenges		
11h00	Break		
11h30	Session 1 (S1)		
	S1 GDN Best student candidates Chair: Rudolf Vetschera Ascendi Auditorium (B003)	S1 Stream 2.1 Chair: Maísa Mendonça Silva Room B011	S1 Stream 1 Chair: Pavlos Deliàs Room B012
	53 Marlene Meyer and Mareike Schoop <i>Self-Reflection in E-Negotiation Training</i>	15 Raí dos Santos Mota, Maísa Mendonça Silva and Leandro Chaves Rêgo <i>An Analysis of the Predatory Fishing Conflict During the Piracema Period Through the Graph Model</i>	18 Tarsila Rani Soares de Vasconcelos, Lucia Reis Peixoto Roselli and Adiel Teixeira de Almeida <i>Performance of holistic evaluation for multi-criteria decisions comparing selection or elimination of alternatives</i>
	72 Ayato Kitadai, Sinndy Dayana Rico Lugo, Yudai Tsurusaki, Yusuke Fukasawa and Nariaki Nishino <i>Can AI with High Reasoning Ability Replicate Human-like Decision Making in Economic Experiments?</i>	47 Nannan Wu, Ruyi Huang, Yejun Xu and Liping Fang <i>Third-party Conflict Intervention based on a Two-stage Optimization Model within the Inverse Graph Model Framework</i>	23 He Huang and Peter Burgherr <i>MCDCA Calculator: A Streamlined Decision Support System for Multi-Criteria Decision Analysis</i>
	85 Limei Hu, Haiyan Xu, Dequn Zhou and Rui Liu <i>A group-based failure mode and effect analysis approach with D-S evidence theory and social network for medical waste management</i>	45 Deoclécio Paiva de Castro and Leandro C. Rego <i>Uncertain Preferences to deal with the Framing Effect in the Graph Model for Conflict Resolution</i>	19 Pavlos Deliàs, Dimitrios Trygoniaris and Nikolaos Mittas <i>A Tool to Support Propensity Score Weighting for Enhanced Causal Inference in Business Processes</i>
	24 Muhammad Tajammal Khan and Masahide Horita <i>Uncertainty and Information Asymmetry in Underground Works: A Case Study</i>	81 Alecio Silva, Leandro Rêgo and Giannini Vieira <i>Alternative Limited Motion Stability within the Graph Model for Conflict Resolution Involving Multiple Decision-Makers</i>	
13h00	Lunch		

14h00	<p>Poster session</p> <p>8 Renjie Xu, Jiahao Liu, Hang Yang, Xueming Xu, Jiang Jiang and Jichao Li <i>Assessment model and optimization strategies of resilience for Equipment Systems-of-systems</i></p> <p>10 Zhor Chergui, Antonio Jiménez-Martín and María del Carmen Robustillo <i>Hierarchically weighting methods based on ordinal information within MAVT/MAUT</i></p> <p>31 Yuming Huang, Bingfeng Ge, Zeqiang Hou, Zihui Liu, Jiang Jiang and Kewei Yang <i>A Strategic Analysis of Nagorno-Karabakh Conflict Using Graph Model for Conflict Resolution</i></p> <p>38 Yihao Zhang, Renjie Xu, Jiahao Liu, Jiuyao Jiang, Hongqian Wu, Jichao Li and Bingfeng Ge <i>Research on resilience-oriented node important for combat system-of-system under emergency management</i></p> <p>41 María Jesús Rufo and Jacinto Martín <i>Updating Utility Functions in a Bayesian negotiation model</i></p> <p>42 Parmjit Kaur and Valerio Ficcadenti <i>Qualitative and Quantitative Evaluation of Causal Maps created using Group Support Systems</i></p> <p>49 María Teresa Escobar, Juan Aguaron and José María Moreno-Jiménez <i>Performance analysis of the JIC2 procedure for the joint improvement of inconsistency and incompatibility</i></p> <p>51 Francisco Viterbo, Ana Carvalho, Ana Vieira and Monica Oliveira <i>Promoting circular economy concerns in medical devices' procurement through structured collaborative processes</i></p> <p>59 Victoria Muerza, Maite Escobar and José María Moreno-Jiménez <i>Improving decision making processes in Primary Health Centres through the adaptation of business tools</i></p> <p>65 Martin Krieg, Helmut Hlavacs and Alexander Treiblmaier <i>Command and Control Support Systems for military commanders: Achieving leadership superiority through AI</i></p> <p>71 Yuanmao Zeng <i>Aircraft carbon reduction decision-making from the perspective of game theory</i></p> <p>83 Hannah Johnson <i>Tailored Decision Support Simulation</i></p> <p>101 Maria do Rosário Teixeira, Sérgio Pedro Duarte, António Lobo, João Neves, Sara Ferreira and Telma Silva <i>Accident prediction models as tool for road safety management</i></p> <p>107 Stjepan Jurisic and Markus Voeth <i>Where do you come from where do you go – Effects of advice source in negotiation goal setting</i></p> <p>110 Mateus Müller Franco and Máisa Mendonça Silva <i>Structuring the problem of Smart and Sustainable Cities and Public Security using Value-Focused Thinking: a case study with the Brazilian Forensic Police</i></p> <p>115 Mateus Müller Franco and Máisa Mendonça Silva <i>The prioritization of alternatives for Smart, Sustainable and Safe Cities with the application of a voting framework and the support of the Brazilian Forensic Police</i></p> <p>129 Jérémy Traversac, François Galasso, Caroline Thierry and Pascale Zaraté <i>Preference Selection Dashboard for SMEs in Industry 5.0: Integrating Data from Varied Hierarchical Levels and Simulating Diverse Behaviours facing Uncertainty</i></p>		
15h00	Session 2 (S2)		
	<p>S2 GDN Best paper candidates Chair: Rudolf Vetschera Ascendi Auditorium (B003)</p>	<p>S2 Stream 2.2 Chair: Mareike Schoop Room B011</p>	<p>S2 Stream 2.3 Chair: Eduarda Asfora Frej Room B012</p>
	95 Sinndy Dayana Rico Lugo and Nariaki Nishino <i>Biform game analysis of incentive structures for circular food economy</i>	130 Lennart Rukower and Mareike Schoop <i>Potential of Generative Artificial Intelligence in Digital Negotiations</i>	26 Sebastian Lakmayer, Mats Danielson and Love Ekenberg <i>Upper Performance Limits and Distribution Invariance for Surrogate Weights in MCDA</i>
	11 Yigal Gerchak and Eugene Khmelnitsky <i>Allocation of Recurring Fixed Costs According to Partners' Varying Revenues in Professional Services</i>	57 Ulkar Garajali <i>Negotiation Specific User Experience Metrics for Electronic Negotiation Platforms</i>	66 Marzena Filipowicz Chomko and Ewa Roszkowska <i>Linguistic multi-criteria support for evaluation of negotiation offers</i>
	82 Luis Vargas and Marcel Minutolo <i>Full Rank Voting: The Closest to Voting with Intensity of Preferences</i>	131 Muhammed-Fatih Kaya and Mareike Schoop <i>Predictive Detection of Negotiation Progress with Machine Learning</i>	64 Sainan Guo, Rudolf Vetschera and Jian Wu <i>Breaking Through Deadlock: Group Consensus Model Based on Regret Theory</i>
	105 Andrej Bregar, Anas Husseis and Jose Luis Flores <i>Group Decision-Making Process for Cyberattack Mitigation</i>	132 Dominik Schoop and Mareike Schoop <i>Towards a Zero-Trust Architecture for Negotiation Support Systems</i>	3 Eduarda Asfora Frej, Gabriela da Silva, Maria Luiza da Silva and Danielle Morais <i>Negotiation Platform for Supporting Multi-Issue Bilateral Negotiations: the case of an Offshore Wind Energy company and a Fishing community in the Northeast of Brazil</i>
16h30	Break		
17h00	-	GDN Business meeting (B011)	-
18h00	-	GDN Journal EB meeting (B011)	EWG-DSS Board meeting (B012)

Session 3 (S3)			
	S3 Stream 2.5 + Stream 2.6 Chair: Fuad Aleskerov Ascendi Auditorium (B003)	S3 Stream 2.4 Chair: Tung Bui Room B011	S3 Stream 1 Chair: Marko Bohanec Room B012
09h00	54 Madoka Chosokabe, Shohei Koie and Yuji Oyamada <i>Analysis of the Impact of ChatGPT on Group Discussions</i>	125 Edona Elshan, Triparna de Vreede, Dominik Siemon, GJ de Vreede and Phillip Ebel <i>Social Loafing in Human-AI Collaboration</i>	92 Marko Bohanec, Davor Kontić, Bernard Ženko, Martin Žnidaršič, Karina Sirk and Rok Vodopivec <i>Towards Certification of Sustainable Mobility: A Qualitative Multi-Criteria Modelling Approach</i>
	36 Mingxing Zhang, Xiaoxiong Zhang, Bingfeng Ge and Hui Zhang <i>Fair Representation Learning for Enhanced Recommendations: From the Perspective of Users and Items</i>	98 Colin Williams and Liping Fang <i>Multi-Method Approach Combining Predictive Analytics and Qualitative Inputs to Model Decisions of Non-Partisan Councils</i>	61 Vítor Oliveira, Thiago Sobral, José Telhada and Maria Carvalho <i>A Decision Support Tool for Paratransit Systems Planning</i>
	96 Sabine Koeszegi, Atefa Ahmadi, Josef Kastner and Harald Kittler <i>Reflection Machines and Adaptive Algorithmic Decision Support in Clinical Diagnostic Applications</i>	77 Xusen Cheng, Xiaoping Zhang, Triparna de Vreede and GJ de Vreede <i>Understanding expectation disconfirmation and trust in human-AI teams: Polynomial modeling and response surface analysis</i>	63 Sérgio Pedro Duarte, João Pedro Maia, Miguel Lopes and António Lobo <i>Data driven approach to support the design of Road Safety Plans in Portuguese municipalities</i>
	6 Renjie Xu, Jiahao Liu, Hang Yang, Jiuyao Jiang, Jiang Jiang and Jichao Li <i>Research on Capability Resilience of Heterogeneous Information Combat Networks Based on Link Quality</i>	126 Andrea Rivera and Tung Bui <i>Design Considerations for a Crisis Communication Support System: Some Supporting Evidence from the Navy's Red Hill Fuel Leak at Pearl Harbor</i>	120 Carolina Lino Martins, João Batista Sarmiento dos Santos Neto, Lucas da Silva, Eduarda Frej and Adiel Teixeira de Almeida <i>A GIS-based Decision Support System for Natural Gas Distribution Planning</i>
	10h30	Break	
11h00	Plenary session Chair: Liping Fang, Marta Campos Ferreira (Ascendi Auditorium – B003) Daniel Druckman (Macquarie University and University of Queensland, Australia) – A GDN Odyssey Pedro Amorim (University of Porto, Portugal) – Supporting Advanced Analytics Practice with Gen AI		
12h30	Lunch		
Session 4 (S4)			
	S4 Stream 2.7 Chair: Yu Han Ascendi Auditorium (B003)	S4 Stream 2.3 Chair: Tomasz Wachowicz Room B011	S4 Stream 1 Chair: Shaofeng Liu Room B012
14h00	76 Sha Lai, Qingye Han and Ginger Ke <i>Citizen collaboration in urban renewal: a fuzzy-based decision framework</i>	117 João Batista Sarmiento dos Santos-Neto, Carolina Lino Martins, Kássia Tonheiro Rodrigues, Nadya Kalache and Saulo Gomes Moreira <i>Multicriteria Group Decision Model for Land Regularization in Brazil</i>	103 Gabriel Hermínio de Andrade Lima and Ana Paula Cabral Seixas Costa <i>Decision support system for maturity assessment in asset management</i>
	118 Yu Han, Haiyan Xu and Jinping Tong <i>Equilibrium decisions of two delivery service platforms from the perspective of value Co-creation: take "Meituan" and "Eleme" as an example</i>	106 Isabella Lami <i>A new approach for group decision making: a software combining the Strategic Choice Approach and the Analytic Hierarchy Process</i>	37 Zihui Liu, Bingfeng Ge, Yuming Huang, Zeqiang Hou, Wanying Wei and Jichao Li <i>Research on Cost Estimation of Launch Vehicle based on Grey Neural Network</i>
	80 Yeqing Guan and Ying Cao <i>Research on the Evolutionary Game of Credit Risk of New Energy Vehicle Supply Chain Finance</i>	62 Marcelo Rodrigo da Silva and Alexandre Leoneti <i>Analyzing the perceived importance of a multicriteria decision support method in a group decision-making process</i>	102 Lorenzo Venieri, Andrea Masella, Elia Broggio, Andrea Marchese and Matteo Bregonzio <i>Generative Adversarial Networks for Virtual Fluorescent Staining</i>

	84 Rui Liu, Haiyan Xu, Dequn Zhou and Limei Hu <i>Evaluation of NEV market acceptance based on descriptive information and comparative information</i>	124 Lihi Dery and Tomasz Wachowicz <i>Building a cardinal scoring system for alternatives evaluated by various experts within disjoint subsets</i>	39 Guoste Pivoraite, Shaofeng Liu, Saeyeon Roh and Guoqing Zhao <i>Framework for understanding consumer perceptions and attitudes to support decisions on cultured meat: A Theoretical Approach and Future Directions</i>
15h30	Break		
	Session 5 (S5)		
	S5 Stream 2.7 + Stream 2.4 Chair: Ginger Ke Ascendi Auditorium (B003)	S5 Stream 2.1 + Stream 2.2 Chair: José María Moreno-Jiménez Room B011	S5 Stream 1 Chair: Uchitha Jayawickrama Room B012
	75 Yan Qin, Qing Xu, Ginger Ke and Qingye Han <i>A study on risk allocation of public-private partnership to brownfield remediation projects in China</i>	25 Jing Ma, Dongbin Wang, Haimei Li and Zhengbing Guo <i>Developing a Multi-phase Stakeholder Game Framework for Recyclable Resource Management System</i>	4 Guoqing Zhao, Guoyu Zhao, Nasiru Zubairu, Xiaoning Chen, Femi Olan, Denis Dennehy and Paul Jones <i>Understanding supply chain resilience as a complex system: A systematic literature review</i>
16h00 - 17h30	87 Chang-Soo Kim, Saeyeon Roh, Mohamed Haddoud, Adah-Kole Onjewu and Young-Joon Seo <i>An Analysis of Shipper-Shipping Company Relationships for Enhancing Sustainability: Application of Fuzzy-set Qualitative Comparative Analysis</i>	91 Fuad Aleskerov and Anna Semenova <i>Network Analysis of International Conflicts</i>	128 Sidahmed Elandaloussi and Pascale Zaraté <i>Network attacks prediction using set of machine learning models for supporting decision making</i>
	93 Jiangying Qin, Huan Song, Shawei He and Rafael Bitoman <i>Two-stage Selection of International Flights by Passengers in China for Official Business Purpose using Logit Model</i>	14 Rudolf Vetschera and Luís Dias <i>A dynamic model of outcome expectations in bilateral negotiations</i>	17 Sandro Radovanović, Boris Delibašić and Svetlana Vukanović <i>Combining LLM and DIDEX method to predict Internal Migrations in Serbia</i>
	97 Peng Sun, Jiangying Qin, Huixin Yang, Shawei He and Naiming Xie <i>Equilibrium analysis of selecting network structure for airlines in the foresight of two steps</i>	46 Giannini Vieira, France Oliveira and Leandro Rêgo <i>Matrix Representation of Maximinh Stability in the Graph Model for Conflict Resolution for Bilateral Conflicts</i>	
19h30	Conference dinner (includes GDN and ICDST Awards)		

Day 3

	Session 6 (S6)		
	S6 Stream 2.3 Chair: GJ de Vreede Ascendi Auditorium (B003)	S6 Stream 2 Chair: Ayşegül Engin Room B011	S6 Stream 1 Chair: Fátima Dargam Room B012
09h00	28 Chu Yanfeng and Wang Rui <i>Research on E-commerce Dual Channel Supply Chain Pricing Decision under the Context of Live Streaming</i>	114 Rhaydrick Tavares, Sérgio Pedro Duarte, Vera Miguéis and António Lobo <i>A text-mining approach to understand the barriers and requirements for truck platooning deployment</i>	109 Panagiota Digkoglou, Alexis Tsoukiàs, Michel Zam, Fatima Dargam, Jason Papathanasiou, Simone Beutle, Marina Stanojevic, Zoran Wittine, Petar Sorić and Grigoris Chryssikos <i>Unlocking the potential of the low-code approach for a more open and innovative higher education system</i>
	12 Yanlin Li, Yung Po Tsang, Ka Man Lee and Yi Pu Yao <i>A Stratified Fuzzy Group Best Worst Decision-Making Framework</i>	79 Ayşegül Engin <i>The Effect of Overconfidence on the Use of Recommender and Decision Support Systems</i>	60 Marta Campos Ferreira, Maria Veloso and João Tavares <i>A Comprehensive Examination of User Experience in AI-based Symptom Checker Chatbots</i>

	56 José Luis García-Lapresta and Miguel Martínez-Panero <i>Combining the Borda count with approval and disapproval voting</i>	67 Elmira Mohammadhosseini Fadafan and Rudolf Vetschera <i>Buyer's Choice of a Seller Using Smart Contracts</i>	55 Pierre-Emmanuel Arduin and Saliha Ziam <i>If Digital Tools Are the Solution To Knowledge Transfer, What Is the Problem?</i>
	5 Tomasz Wachowicz and Ewa Roszkowska <i>The enhanced TOPSIS with application to evaluation negotiation offers outside feasible negotiation space</i>	123 Marek Szopa, Anna Gorczyca-Goraj and Piotr Frąckiewicz <i>Quantum extensions of classical games and decision optimization</i>	113 Sanaz Azarnoosh, João Carlos Lourenço and Isabel Maria João <i>Selection of technical improvements in product design</i>
10h30	Break		
	Session 7 (S7)		
	S7 Stream 2.3 Chair: Jean Lainé Ascendi Auditorium (B003)	S7 Stream 2 Chair: Liping Fang Room B011	S7 Stream 2.1 Chair: Marc Kilgour Room B012
	94 Dmitry Gimon and Alexandre Leoneti <i>The level of altruism for running social contracts efficiently</i>	27 Georgios Stavrou, Panagiotis Adamidis, Jason Papathanasiou and Konstantinos Tarabanis <i>Enhancing Multi-Criteria Decision Making in Team Formation: A Hybrid Evolutionary Approach with PROMETHEE II</i>	69 Alexandre Leoneti and Takahiro Suzuki <i>A meta-level approach to the general equilibrium selection problem</i>
11h00	50 Gilbert Laffond, Jean Lainé and Remzi Sanver <i>Strategy-proofness with detectable lies</i>	111 Arron Tippett <i>Multi-criteria decision analysis to frame the implementation of ecosystem accounting data in land use planning</i>	133 Steven Brams, Marc Kilgour and Christian Klamler <i>Fairly Allocating Indivisible and Divisible Items to Two Individuals</i>
	68 Daniel Karabekyan and Viacheslav Yakuba <i>Evaluation of the degree of manipulability of positional aggregation procedures in a dynamic voting model</i>	112 Christina Hellevik, Hadi Mohammed and Razak Seidu <i>Decision Support Systems for Local Politicians on Socio-Environmental Issues, Lessons Learnt from a Case Study in Ålesund, Norway</i>	134 Fahimeh Ziaei and Marc Kilgour <i>Allocating Indivisible Items Using Accelerated Fallback Bargaining</i>
		88 Katharina Burger and Leroy White <i>Virtualising Soft OR interventions</i>	
12h30	Lunch		
14h00	Round table “Human-Centric Decision and Negotiation Support for Societal Transitions” Chair: Sérgio Pedro Duarte Ascendi Auditorium (B003) Fátima Dargam (EWG-DSS) Liping Fang (GDN Section) Isabel Paiva de Sousa (Porto Business School)		
15h30	Closing Session Ascendi Auditorium (B003) Pascale Zaraté, Sérgio Pedro Duarte (conference chairs) GDN 2025 - Organization announcement – José María Moreno-Jiménez ICDSST 2025 - Organization announcement – Pavlos Deliàs		

Conference organization

Associations and Organizations



Organization



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