

Contents

Part I: Modeling

1	Affective Modeling for an Intelligent Educational Environment	3
	<i>Yasmín Hernández, L. Enrique Sucar, Gustavo Arroyo-Figueroa</i>	
2	ALEM: A Reference Model for Educational Adaptive Web Applications	25
	<i>Mohammed Tadlaoui, Azeddine Chikh, Karim Bouamrane</i>	
3	Proactive Sequencing Based on a Causal and Fuzzy Student Model	49
	<i>Alejandro Peña-Ayala, Humberto Sossa</i>	
4	Exploiting Learner Models Using Data Mining for E-Learning: A Rule Based Approach	77
	<i>Marianne Holzhüter, Dirk Frosch-Wilke, Ulrike Klein</i>	

Part II: Content

5	A Study of a Learning Style Index to Support an Intelligent and Adaptive Learning Systems	109
	<i>Mohamed Hamada, Kuseke Nishikawa, John Brine</i>	
6	GRAPPLE: Learning Management Systems Meet Adaptive Learning Environments	133
	<i>Paul De Bra, David Smits, Kees van der Sluijs, Alexandra I. Cristea, Jonathan Foss, Christian Glahn, Christina M. Steiner</i>	
7	Performance Evaluation of Decision-Based Content Selection Approaches in Adaptive Educational Hypermedia Systems	161
	<i>Pythagoras Karampiperis, Demetrios G. Sampson</i>	

8	PCMAT – Mathematics Collaborative Educational System	183
	<i>Constantino Martins, Luiz Faria, Marta Fernandes, Paulo Couto, Cristina Bastos, Eurico Carrapatoso</i>	
9	A Framework for Automatic Construction of Reusable Adaptive Courses: The Case of ProPer SAT 2.0	213
	<i>Ioannis Kazanidis, Maya Satratzemi</i>	
10	Interoperable Intelligent Tutoring Systems as SCORM Learning Objects	239
	<i>Gustavo Soares Santos, Joaquim Jorge</i>	

Part III: Virtuality

11	Real Classrooms in Virtual Worlds: Scaffolding Interdisciplinary Collaborative Writing	269
	<i>Reneta D. Lansiquot</i>	
12	A Smart Home Lab as a Pedagogical Tool	293
	<i>Antonio Sanchez, Lisa Burnell</i>	
13	Supporting Hybrid Courses with Closed-Loop Adaptive Training Technology	315
	<i>James E. McCarthy, John L. Wayne, Brian J. Deters</i>	
14	CELTS: A Cognitive Tutoring Agent with Human-Like Learning Capabilities and Emotions	339
	<i>Usef Faghihi, Philippe Fournier-Viger, Roger Nkambou</i>	

Part IV: Applications

15	Incorporation of Agent Prompts as Scaffolding of Reflection in an Intelligent Learning Environment	369
	<i>Longkai Wu, Chee-Kit Looi</i>	
16	Acquisition of Higher Order Knowledge by a Dynamic Modeling Environment Based on the Educational Concept of Self-Regulated Learning	393
	<i>Stefanie A. Hillen</i>	
17	Seamless Web-Mediated Training Courseware Design Model: Innovating Adaptive Educational-Learning Systems	417
	<i>Elsbeth McKay, John Izard</i>	
18	Intuitionistic Fuzzy Logic-Based Approach of Intrinsic Motivation in CSCL Settings during Illusionary Sense of Control	443
	<i>Sofia Hadjileontiadou, Georgia Nikolaidou, Leontios Hadjileontiadis</i>	

19	An Intelligent System for Modeling and Supporting Academic Educational Processes	469
	<i>Setsuo Tsuruta, Rainer Knauf, Shinichi Dohi, Takashi Kawabe, Yoshitaka Sakurai</i>	
20	Intelligent Decision-Making Support within the E-Learning Process	497
	<i>Dorota Dżega, Wiesław Pietruszkiewicz</i>	
	Author Index	523