1. Internet and web engineering

- Social networking and computing
- IP based applications
- Web application development
- Collaborative Web application development
- Design models and methods
- Programming models for Web application development
- Component-based Web Engineering
- Web services-based applications
- Service discovery and choreography
- Infrastructure and models for service delivery over the Web
- Rich Internet Applications
- Web architectures and application frameworks
- Web centric architectures for enterprise computing
- Semantic Web Engineering
- Hypertext models and their application on the Web
- Reuse and integration
- Web services and pattern mining
- Web content management
- Web personalization
- Engineering approaches to Semantic Web applications
- Engineering of Semantic Web services
- Adaptive Web applications
- Web quality and Web metrics
- Web usability and accessibility
- Testing and evaluation of Web systems and applications
- Deployment of Web applications
- Performance modelling, monitoring and evaluation
- Localization and internationalization of Web applications
- Social Web applications
- Mobile Web applications
- Empirical Web Engineering
- Mobile Web application development and Device-independent Web delivery
- Domain-specific approaches for Web-based applications and solutions
- Web-based Workflows and collaborative Web Application
- Penetration Testing

2 Data warehousing and DATA Mining

- Web based knowledge management
- Web and text mining
- Novel data mining algorithms in traditional areas (such as classification, regression, clustering, probabilistic modelling, and association analysis)
- Algorithms for new, structured, data types, such as arising in chemistry, biology, environment, and other scientific domains.
- Developing a unifying theory of data mining.
- Mining sequences and sequential data.
- Mining spatial and temporal datasets.
- Mining textual and unstructured datasets.
- High performance implementations of data mining algorithms.
- Mining high speed data streams.
- Mining sensor data.
- Distributed data mining and mining multi-agent data.
- Mining in networked settings: web, social and computer networks, and online communities.
- Data mining in electronic commerce, such as recommendation, sponsored web search, advertising, and marketing tasks.
- Knowledge discovery from Databases.
- Data pre-processing, data reduction, feature selection, and feature transformation.
- Quality assessment, interestingness analysis, and post-processing.
- Statistical foundations for robust and scalable data mining.
- Handling imbalanced data.
- Automating the mining process and other process related issues.
- Dealing with cost sensitive data and loss models.
- Human-machine interaction and visual data mining.
- Security, privacy, and data integrity.

5 Artificial Intelligence, Fuzzy logic and Machine Learning

- Expert system.
- Automated reasoning.
- Natural language understanding.
- Natural language processing.
- Knowledge acquisition and knowledge processing system.
- Knowledge representation and retrieval.
- Visual language.
- Visual programming.
- Human machine interface design.
- Information retrieval systems and models.
- Visualization of computation processes.
- Advanced application in geographic application system.
- Robotics.
- AI Algorithms.
- Constraint Design.
- Automata Theory.
- Formal Languages.
- Turing Machine.
- Pattern Recognition
- Industrial, financial and medical applications.
- Computational neuroscience.
- Neural network software and applications
- Complex-valued neural networks
- Neuro informatics and bioinformatics
- Learning paradigms and algorithms
- Supervised and unsupervised learning
- Adaptive architectures and mechanisms
- Support Vector Machines and Applications
- Complex artificial neural network based systems and dynamics
- Higher level artificial neural network based intelligent systems
- Bio-inspired and humanoid robotics
- Artificial Emotions and Emotional Intelligence
- Collective & Distributed Intelligent Systems and Dynamics
- Image Processing and Artificial Vision Applications
- Intelligent Artificial Perception and Neural Sensors
- Modular Implementation of Artificial Neural Networks
- Neural based Data Mining and Complex Information Processing
- Neural Multi-agent Intelligent Systems and Applications
- Self-organization and Emergence
- Stability and Instability in Artificial Neural Networks
- Neural Network Hardware Implementation and Applications
- Neural Computation issues in Social Behaviour Emergence
- Genetic algorithm

6. Software Engineering

- Agent based software engineering.
- Embedded software engineering.
- Component based software engineering.
- Distributed software engineering.
- Computer supportive cooperative work.
- Reflection and metadata approaches.
- Software Configuration Management.
- Software domain modelling.
- Software Metrics.
- Software Project Management Techniques.
- Software Quality Assurance.
- Software architectures and design.
- Software Development Methodologies.
- Software Reuse Engineering.
- Software process modelling.
- Software safely and reliability..Unified modelling language.
- Software Testing
- Data Structure and Algorithm Design.

9 Library and information science Models

- Information seeking behaviour
- Data mining and Semantic web
- Digital library conceptual models
- Digital library 2.0
- Digital library education
- Landscape for digital libraries
- Theoretical models of information interaction and organisation
- Information policies
- Human factors in networked information
- Scholarly primitives
- User behaviour analysis and modelling
- Social-technical perspectives of digital information

10 Digital Technologies

- Digital library architectures
- Cloud and grid deployments
- Federation of repositories
- Collaborative and participatory information environments
- Data storage and indexing
- Big data management
- e-learning
- Cultural heritage infrastructures
- Semi structured data
- Semantic web issues in digital libraries
- Ontologies and knowledge organization systems
- Linked Data and its applications

11 Managing of e-Resources

- Knowledge discovery: Tools and Technologies
- Web scale Discovery Systems
- Use of mobile devices in libraries
- NKN and the connectivity to Libraries
- Digital Communication Tools
- Emerging Technology Trends in Libraries
- Managing E-resources & Licensing
- Electronic Resource Management (ERM)
- New Acquisition Models
- Data Curation
- Open Access Resources
- Open data, Innovation and Open Access
- Publishing
- e-content and the future strategies for libraries
- institutional repositories
- Lending of E-books
- Qualitative Methods in Assessing Libraries
- Users and ICT Applications
- Preservation and archiving
- Electronics Resources
- Digital rights Management
- Libraries as publishers

12 Content

- Metadata Schemas
- Interoperability and information integration
- Digital Curation and related workflows
- Preservation, authenticity and provenance
- Web archiving
3 Advanced Computing
- Parallel computing.
- Distributed computing.
- Cloud computing.
- Collaborative computing.
- Grid computing.
- Virtualization.
- Granular computing.
- Mobile Computing.
- Sensors and RFIDs in mobile and ubiquitous computing.
- Green Computing.

4 Communication and Network Security
- 3G, 4G.
- WIMAX, WIFI.
- Video conferencing.
- VOIP, MOSP, IPTV.
- Routing Algorithm.
- WBAN, WPAN, WLAN, WWAN.
- Cryptanalysis.
- Digital Signatures.
- Intrusion Detection.
- Security Management.
- Cryptographic Protocols.
- Access Control & Audit.
- Trust, security and privacy issues in mobile and ubiquitous computing and networking.
- Biometric security, Authentication.
- Deep Packet Inspection.
- Protocol Compiler.
- Intrusion Prevention System.
- Mobile adhoc networks.
- Vehicular Communication Technology.
- Sensor networks.
- Routing protocols.
- Mobile computing, services and Application.

7. Multimedia
- Computer assisted visual arts.
- Digital multimedia and processing.
- Game design and development.
- Virtual reality and visualizing.
- Voice, image and video processing.
- Image processing and image segmentation.
- Computer graphics.
- Animation and simulation.
- 3D reconstruction.
- Application of image and graphics.
- Cartography and geographic information engineering.
- Digital video broadcasting.
- Data Compression.
- Biometrics.

13 Services
- Information retrieval and browsing.
- Multilingual and multimedia information retrieval.
- Personalization in digital libraries.
- Context awareness in information access.
- Semantic aware services.
- Technologies for delivering/accessing digital libraries.
- Visualization of large-scale information environments.
- Evaluation of online information environments.
- Quality metrics.
- Interfaces to digital libraries.
- Data mining/extraction of structure from networking information.
- Scholarly communication.
- Knowledge services, Knowledge creation and Knowledge mining.
- Virtual Reference Services.
- Marketing and promotion of library services.
- Library and information services for Distance Learners.
- Re-engineering library services.

14 Digital Rights Management
- Digital Libraries and IPR.
- Copyright Management.
- Copyright and Digital Archiving.
- Copyright and ILL.