

Preface to the December 2015 issue

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We are glad to present the last issue of 2015, completing Volume 18 of the CLEI Electronic Journal. This issue is comprised by the following regular papers.

The first paper, “Quality of Protection on WDM networks: A Recovery Probability based approach”, by M. D. Rodas-Brítez and D. P. Pinto-Roa, features a proposal of a new quality of protection (QoP) paradigm for Wavelength Division Multiplexing optical networks. The new approach is flexible, allowing the network administrator to define and select a set of protection levels, based on recovery probabilities which measure the degree of conflict among primary lightpaths sharing backup lightpaths. To show the interest of the approach, a Genetic Algorithm is used to design a routing strategy by multi-objective optimization, minimizing the number of blocked requests, the number of services without protection, the total differences between the requested QoP and the assigned QoP, and the network cost.

The second paper, “Towards Scalability for Federated Identity Systems for Cloud-Based Environments”, by A.A. Pereira, J. B. M. Sobral and C. M. Westphall, addresses scalability issues in identity management for cloud computing environments. The authors propose an adapted sticky-session mechanism, as an alternative approach to the more common distributed memory approach, and discuss the implications in terms of computational resources, throughput and overall efficiency.

The following work, “Formal Analysis of Security Models for Mobile Devices, Virtualization Platforms, and Domain Name Systems”, by G. Betarte and C. Luna, tackles security models for security-critical applications in three areas: mobile devices, virtualization platforms, and domain name systems. The authors develop formalizations using the Calculus of Inductive Constructions, to study different usual variants of security models in these platforms and their properties.

The last paper of this issue is “Digi-Clima Grid: image processing and distributed computing for recovering historical climate data”, by authors S. Nesmachnow, G. Usera and F. Brasileiro. This paper reports an experience of implementing semi-automatic techniques for digitalizing and recovering historical climate records applying parallel computing techniques over distributed computing infrastructures, which was applied to Uruguayan historical climate data.

As we complete now the eighteenth year of continued existence of CLEIej, we thank the regional community for its continued support, and we encourage researchers working in computer science and its applications to consider submitting their work to CLEIej, as the the leading electronic, open access journal in Computer Science in Latin America.