I-SMP01 International Poster Session

13:00-13:50 **Chair : Kwon Oh-Kyu (Inha Univ.)**
Room : Terrace(3F) **Co-Chair : Park Poo-Gyeon (POSTECH)**

13:00 – 13:50 **I-SMP-13**

Initialization of the Radial Basis Function Network Using Localization Method

Seong-Joo Kim, Yong-Taek Kim, Hong-Tae Jeon(Chung-Ang Univ.)
Jae-Yong Seo, Hyun-Chan Cho(Korea Univ. of Tech. And Education)

In this paper, we use time-frequency localization analysis method to analize the target function and the area of the target space. When we analize the function with the time and frequency axis simultaneously, the characteristic of the function is shown more precisely and the area is covered by a certain block. After we analize the target function in the time-frequency space, we can decide the activation functions and compose the hidden layer of the RBFN by choosing the radial basis function which can represent the characteristic of the target function. RBFN made by this method, designs the good structure proper to the target problem because we can decide the number of hidden node first.

13:00 – 13:50 **I-SMP-14**

Displacement measurement sensor using astigmatic confocal technology

J. W. Seo, D. K. Kang, J. H. Lee, D. M. Kim, D. G. Gweon (KAIST)

Confocal scanning microscopy (CSM) has been reported as an excellent method using the optical probe in scanning probe microscopy (SPM). Transmission or reflection confocal scanning microscopy (TCSM, RCSM) has been used in the three-dimensional reconstruction of specimen or the non-destructive measurement in vivo. The axial movement of the primary focal point having the information of specimen gives a good measurement performance with the great sensitivity. Application of the confocal theory and astigmatism to displacement measurement sensor uses the aperture as the pinhole or slit after collecting lens relating to confocal response in non-contact measurement; and astigmatic lens using four-segments detector as short-range sensor, long-range one combining the grating and rotary one having the rotary directional grating. The aperture type can play an ...

13:00 – 13:50 **I-SMP-15**

Optimal scheduling of the paper mill process using two-step strategy method

Donghoon Kim, Il Moon (Yonsei Univ.)

This paper presents the two-step strategy method of performing optimal scheduling of paper mill processes using MINLP (Mixed-Integer Non-Linear Programming) considering the trim loss problem in sheet cutting processes. The mathematical model for a sheet cutting process in the form of MINLP is developed in this study, and minimizing total cost is performed considering the cost of raw paper roll, changing cutting patterns, storage of over-product and recycling/burning trim. The paper has been used to deliver and conserve information for a long time, and it is needed to have various sizes and weights...