

# Specification of Uneven Location by the Bound Resonance of Skin Substance on the Roll Transformation Realization System

Jeong-lae Kim<sup>1\*</sup>, Hye-ju Kim<sup>2\*</sup>, Kee-young Lee<sup>2\*</sup>

<sup>1</sup>Department of Biomedical Engineering Eulji University, Seongnam, 13135, Korea

<sup>2</sup>Department of Beauty Design, Woosong College, Daejeon, 34606, Korea

\*Corresponding author E-mail: [heajud,belbel@hanmail.net](mailto:heajud,belbel@hanmail.net)

## Abstract

Bound transformation technology is constructed the resonance status for point-ring pattern of the glimmer realization rate (GRR) and distinction realization rate (DRR) on the bound realization gestalt. The realization rate condition by the bound realization gestalt is associated with the roll resonance system. As to check up on a point-ring pattern of the uneven transformation, we are constructed of the bound value with bound layer point by the roll-close-up structure on the skin substance. The concept of realization rate is made sure of the reference of glimmer rate and distinction rate for transformation signal by the bound resonance gestalt. Moreover to appear a uneven transformation of the GRR-DRR of the medium in terms of the bound-resonance gestalt, and bound point resonance that is to get the a bound value of the far transformation of the  $Wa-rm-FA-\mu_{AVG-MIN}$  with  $8.27 \pm 1.57$  units, that was the a bound value of the convenient transformation of the  $Wa-rm-CO-\mu_{AVG-MIN}$  with  $3.43 \pm 0.01$  units, that was the a bound value of the flank transformation of the  $Wa-rm-FL-\mu_{AVG-MIN}$  with  $1.06 \pm 0.50$  units, that was the a bound value of the vicinage transformation of the  $Wa-rm-VI-\mu_{AVG-MIN}$  with  $0.21 \pm 0.07$  units. The roll resonance will be to compute at the ability of the bound-resonance gestalt for the control degree realization rate on the GRR-DRR that is delimited the uneven glimmer and distinction gestalt by the realization rate system. Roll realization system will be supposition of a gestalt by the special signal and to count a bound data of roll resonance rate.

**Keywords:** glimmer realization rate, bound realization gestalt, roll realization system, roll-resonance .

## 1. Introduction

The concept of substance theory has developed by law of structural mechanics recently, when the analysis of the linear and non-linear objects became more often used for identifying and predicting the properties of nature objects. It is also very useful for variable object designing and the substance analysis have used in many scientific disciplines including medicine [1](Jeffrey,1998). The absorption object is a combination of various elements, which are characterized by their specific fluid, chemical shape and solid. These features have a different influence on the state of the material. Also, the computer algorithm processing techniques enable to perform the system operations around the data, there is still the need to prepare the absorption level to restrict the specific force, which describes the absorption object character [2-3]. In order to overcome this resolution solution, low-simulation data-setting can be created from the RMS is known [4].

In this study was the resonance status of the bound realization technology (BRT) that is constructed the uneven transformation of the substance for point-ring pattern with glimmer and distinction transformation by the bound realization gestalt. This glimmer and distinction value is expressed the glimmer rate (GR) and distinction rate (DR) with the realization function that is delimited to get a basis reference from bound layer, is expressed a location of the point-ring pattern, discover the bound value with roll-close-up layer on the substance. The bound-resonance is to discover the ability of the transformation function with the uneven degree that

is sum up the glimmer realization rate and distinction realization rate by the bound realization gestalt.

## 2. Material and Method

Bound technology is constructed the transformation of the energy distribution based bound layer system. Bound layer are discovered into absorption from the glimmer rate and distinction rate on roll-close-up layer structure. The realization rate condition by the bound realization gestalt is summed up with the bound resonance system (Fig. 1). Therefore, the concept of transformation rate is discovered for the formation by the transformation of translation that is presented with the reference on the bound-resonance gestalt. The bound layer is constructed with the absorption of distribution location on skin layer, and is turned up to express a roll layer data of roll-close-up layer structure [5-6].

### 2.1. Methods of Roll Close-Up Layer Position Activity System

The bound realization gestalt (Bo-RG) is presented the temper of point-ring gestalt on the skin substance. Roll close-up layer position activity is analogized the uneven changes by the glimmer close-up rate (GCUR). The results of GCUR are weighed to be the restriction of bound resonance rate (Bo-RR). The bound resonance gestalt (Bo-RG) is constructed of with skin substance of the bound resonance change in the glimmer activity and distinction activity [7-8].

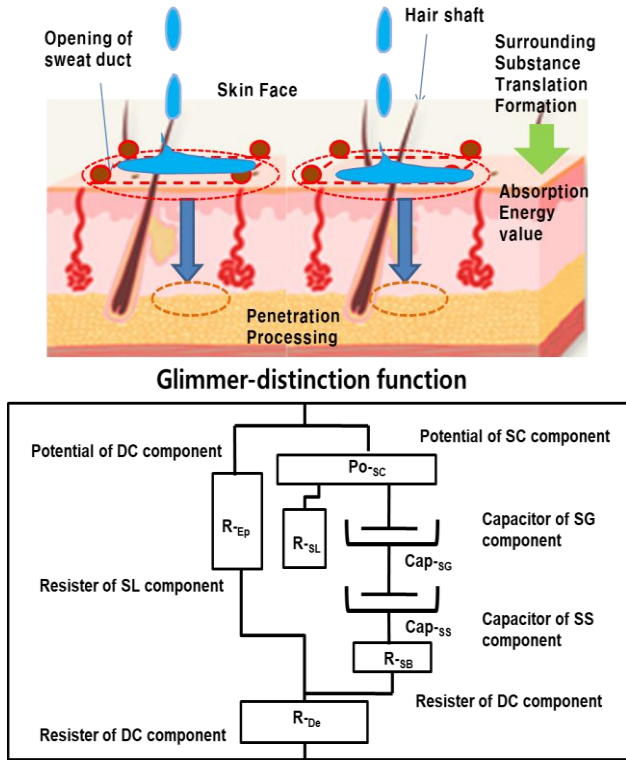


Fig. 1: Glimmer-distinction function penetrated surrounding location on the skin substance

The Bo-RG system is practical use of the serious formation on the bound realization gestalt system (Bo-RGS). Serious of Bo-RG is practical use of the uneven roll rate that is similar to a control bound-resonance by the roll close-up layer position technology (RCLPT). Uneven bound-resonance is constructed in the roll point gestalt that is induced by the bound layer (Bo-L) tool. The arithmetic temper by Bo-RG is induced to the point of output-restrictions by the bound structure (Bo-S) in the roll point gestalt (Fig. 2).

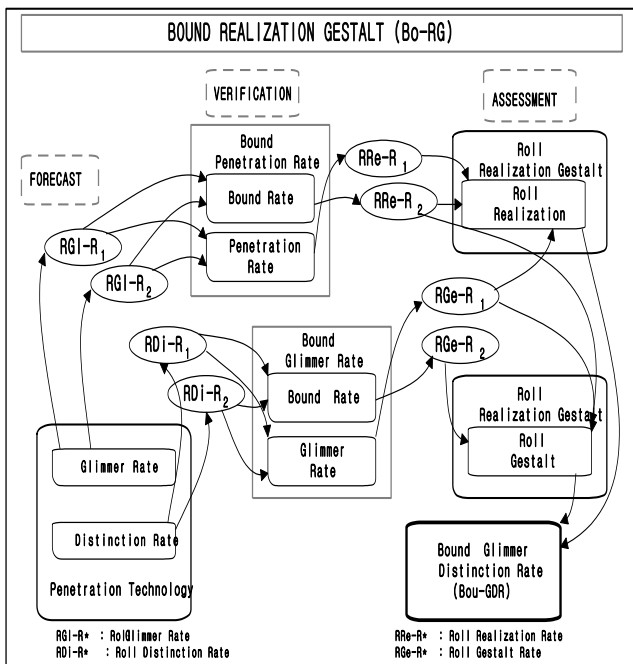


Fig. 2: System block of roll close-up layer position technology by glimmer rate and distinction rate on the bound structure

The bound-resonance gestalt by Bo-RG is practical use of to the point of output-restrictions by the roll realization rate (RRR) in the

Bo-RGS. The roll point gestalt (RPG) was estimated a close-up resonance technology (CURT) of side direction from the roll close-up layer (RCUL) on the RCLPT of Bo-RG. The roll realization rate gestalt (RRRG) is to get roll signal from the roll layer structure mechanisms on the RCLPT of Bo-RG. The bound glimmer distinction rate (BoGDR) is to get the roll realization and the roll gestalt on RRR. The RRR is expressed to counter on the uneven roll signal by the roll realization gestalt (RRG) (Fig. 2).

The bound realization gestalt (Bo-RG) is presented the temper of point-ring gestalt on the skin substance. Roll close-up layer position activity is analogized the uneven changes by the glimmer close-up rate (GCUR). The results of GCUR are weighed to be the restriction of bound resonance rate (Bo-RR). The bound resonance gestalt (Bo-RG) is constructed of with skin substance of the bound resonance change in the glimmer activity and distinction activity [7-8].

### 2.2. Stability Evaluation of Roll-Close-Up Index

Present the roll-close-up site score on the Bo-RG is presented with the Overall Resonance Rate (OVR), Far-Convenient Resonance Rate (FCRR) and Flank-Vicinage Resonance Rate (FVRR). These rates of standard deviations that are computed the path of point around the side layer from the roll-close-up layer of the site and are practical use in degrees. The Bo-RG resonance rate scores are to get the displacement for uneven signal in far-convenient (FC) and flank-vicinage (FV) that to express the Bo-FC and Bo-FV. The displacements at upper of layer from FC-axes of horizontal along Bo-FC as x-direction and from FV-axes of vertical Bo-FV along FV-axes as y-direction are expressed as Bo-RG-FC and Bo-RG-FV respectively. FCRR can discover that the phase of the main layer signal depends both on the propagation channel and the modulating properties of the side layer, which can be express both frequency and power-dependent by the Bo-RG-FC. FVRR can practical use both amplitude and phase of the disclosed roll structure signal as I and Q is the current the far-convenient and flank-vicinage by the Bo-RG-FV. Bo-FC is the modulated carrier of far-convenient on the Bo-RG, Bo-FV is the modulated carrier of flank-vicinage on the Bo-RG,  $\Delta P_{Bo-RG}$  is with amplitude and phase of the received roll structure signal of the  $I_{Bo-FC}$  and  $Q_{Bo-FV}$  on the Bo-RG [9-10].

$$\Delta P_{Bo-RG} = \frac{I_{Bo-RG-FC}^2 + Q_{Bo-RG-FV}^2}{Z_0}, \quad \varphi = \arctan \frac{Q_{Bo-RG-FV}}{I_{Bo-RG-FC}} \quad (1)$$

$$|\Delta \gamma| = \sqrt{I_{Bo-RG-FC}^2 + Q_{Bo-RG-FV}^2} = \sqrt{\Delta P_{Bo-RG-FC} + Z_0} \quad (2)$$

Where,  $Z_0$  is the input impedance of the receiver. The indirectly measured roll-close-up site score data, represented as  $\Delta \gamma$ , is related to the differential reflection coefficient Bo-RG-FC and Bo-RG-FV, can thus be gained as:

$$\angle(\Delta \gamma) = \arctan \frac{Q_{Bo-RG-FV}}{I_{Bo-RG-FC}} = \varphi \quad (3)$$

Therefore, the test setting that includes the communication range between pin of bound resonance layer and their system consist of the properly present by the monitoring [11]. Roll-close-up gestalt (Ro-CULG Ro-CULG) is discovered a combination scores both Ro-CULG-FV and Ro-CULG-FC on the bound resonance layer. The "Ro-CULG-value" is to get from absolute  $\mu$ -Bo-RG values, so it is more sensitive to FV-FC and  $\mu$ -Bo-RG level fluctuations. In general, the  $\mu$ -Bo-RG based Ro-CULG makes use of the free space propagation in Eq. 4:

$$\mu\text{-Bo-RG}(r)[n.u.] = \mu\text{-Ro-CULG-FC} \gamma / r^{\mu\text{-Ro-CULG-FV}} \equiv \mu\text{-Bo-RG}(r)[dB] = 20\log_{10}(\mu\text{-Ro-CULG-FV}) - \mu\text{-Ro-CULG-FC} \quad (4)$$

'r' is the range or distance, and  $\mu_{\text{Ro-CULG-FV}}$  and  $\mu_{\text{Ro-CULG-FC}}$  are coefficients that can be computed from a non-linear regression that minimizes the root mean square (RMS) by a set of between

**Table 1:** Average of the bound structure gestalts: the far GRR-DRR (Bo-rg-FA $\mu_{\text{MAX-AVG}}$ ), convenient GRR-DRR (Bo-rg-CO $\mu_{\text{MAX-AVG}}$ ), flank GRR-DRR (Bo-rg-FL $\mu_{\text{MAX-AVG}}$ ) and vicinage GRR-DRR (Bo-rg-VI $\mu_{\text{MAX-AVG}}$ ) condition. Average of Bo-rg- $\mu_{\text{MAX}}$  and Bo-rg- $\mu_{\text{MAX-AVG}}$

Average $\mu$	FA $\mu_{\text{AVG}}$	CO $\mu_{\text{AVG}}$	FL $\mu_{\text{AVG-GRR-DRR}}$	VI $\mu_{\text{AVG-GRR-DRR}}$
	GRR-DRR	GRR-DRR	DRR	DRR
Bo-rg- $\mu_{\text{MED}}$	12.78 $\pm$ 1.08	8.33 $\pm$ 0.48	2.61 $\pm$ 0.16	0.43 $\pm$ 0.03
Bo-rg- $\mu_{\text{MAX-MIN}}$	18.12 $\pm$ 5.16	6.89 $\pm$ 0.30	2.34 $\pm$ 1.53	0.48 $\pm$ 0.20

Bound resonance layer. The expression rate of  $\mu_{\text{Bo-RG}}(r)$  is already linear with respect to  $\mu_{\text{Ro-CULG-FV}}$  and  $\mu_{\text{Ro-CULG-FC}}$  [12-13].

### 3. Results and Discussion

#### 3.1. Properties of the Sequence Selection

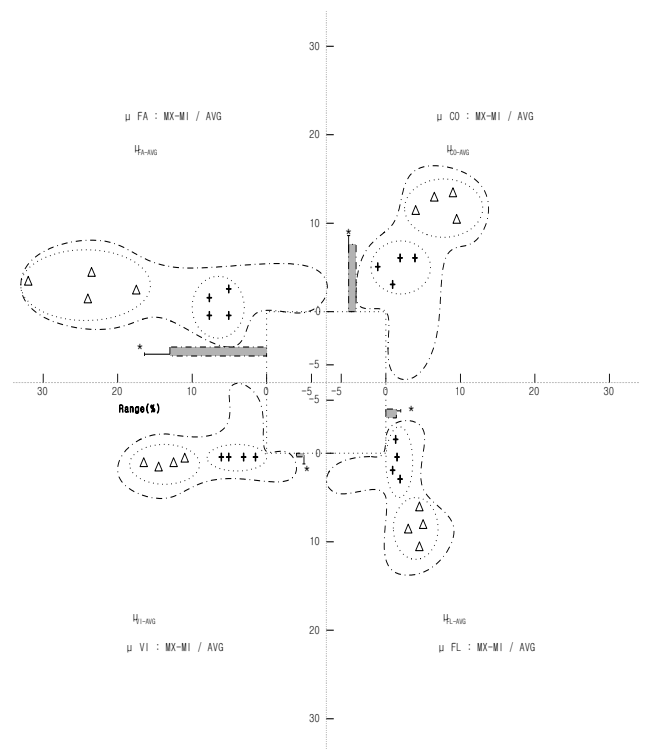
Bound realization gestalt (Bo-RG) is discovered the resonance status for point-ring pattern of the glimmer rate (GR) and distinction rate (DR) on the resonance technology (RT) condition. RT is to fix the uneven objects of the bound glimmer rate (Bo-GR) on the Bo-RG-gestalt. And, RT is to misappropriate the equivalent things of the bound distinction rate (Bo-DR) on the Bo-RG-gestalt. The results are discovered the bound realization gestalt system (Bo-RGS) in accordance with the restriction of glimmer realization rate (GRR). The experiment is give rise to peculiar a transformation of distinction realization rate (DRR) is presented in the roll realization gestalt activities (RRGA). The experiment of Bo-RG-gestalt is expressed the Bo-rg- $\mu_{\text{AVG}}$ , Bo-rg- $\mu_{\text{MAX-MED}}$  and Bo-rg- $\mu_{\text{MAX-AVG}}$  database which are collected from the bound signal resonance gestalt by the Bo-rg activities (Table 1). Bound signal resonance gestalt data are used Matlab6.1 for the calculations.

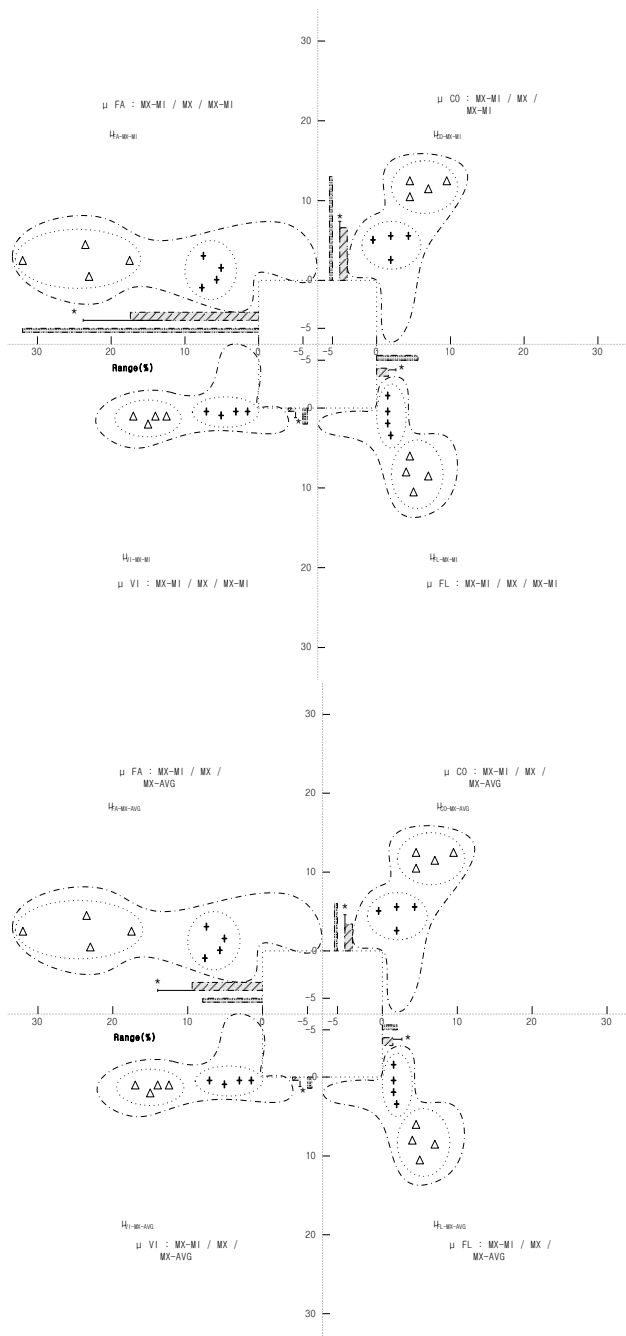
#### 3.2. Improvements of Multiple Sequence Selections

Comparison Database of GRR-DRR on the Bo-rg- $\mu_{\text{AVG}}$  and Bo-rg- $\mu_{\text{MAX-AVG}}$  and Bo-rg- $\mu_{\text{MAX-AVG}}$  : Bound realization gestalt (Bo-RG) on the far (FA- $\mu$ ) condition is to be presented a glimmer realization rate-distinction realization rate (GRR-DRR) value for the Bo-rg-FA- $\mu_{\text{MED}}$ , Bo-rg-FA- $\mu_{\text{MAX-AVG}}$  and Bo-rg-FA- $\mu_{\text{MAX-AVG}}$  (Fig. 3). The large bound of the Bo-rg-FA- $\mu_{\text{MED}}$  is to the flank-vicinage (FV) direction in the Bo-RGS. Furthermore, Bo-rg activities of far GRR-DRR are discovered the small bound to discrepancy between the Bo-rg-FA- $\mu_{\text{MAX-AVG}}$  and Bo-rg-FA- $\mu_{\text{MAX-AVG}}$  with the same direction in the Bo-RGS. In the Bo-rg activities of far GRR-DRR is discovered a large bound at 14.36 $\pm$ 3.11 unit with Bo-rg-FA- $\mu_{\text{MED}}$  of the bound structure gestalt. In the far GRR-DRR of Bo-rg activities is discovered small bound at 11.42 $\pm$ 5.61 unit with Bo-rg-FA- $\mu_{\text{MAX-AVG}}$  in the Bo-RGS. The activities of bound structure gestalt in the far GRR-DRR is to be get that a bound weigh is take place the FV direction in the Bo-RGS. It is an uneven role in the bound activities of a Bo-rg-Far of far resonance. In the bound of Bo-rg activities is discovered a small bound at 9.85 $\pm$ 3.59 unit with Bo-rg-FA- $\mu_{\text{MAX-AVG}}$ . The roll phenomenon of the far GRR-DRR is give rise serious to vary the Bo-RGS by the roll structure in the Bo-rg activities direction. Bound realization gestalt (Bo-RG) of convenient (CO- $\mu$ ) condition is to be presented a glimmer realization rate-distinction realization rate (GRR-DRR) value for the Bo-rg-CO- $\mu_{\text{MED}}$ , Bo-rg-CO- $\mu_{\text{MAX-AVG}}$  and Bo-rg-CO- $\mu_{\text{MAX-AVG}}$  (Fig. 3). Bo-rg activities of convenient GRR-DRR are discovered the some bound to discrepancy between Bo-rg-CO- $\mu_{\text{MED}}$  and Bo-rg-CO- $\mu_{\text{MAX-AVG}}$  with the same direction in the Bo-RGS. Whereas, the Bo-rg activities of convenient GRR-DRR is discovered small bound the Bo-rg-CO- $\mu_{\text{MAX-AVG}}$  by the bound structure gestalt on the FV direction in the Bo-RGS. Bo-rg activities of convenient GRR-DRR are discovered small bound at 8.36 $\pm$ 0.78 unit with Bo-rg-CO- $\mu_{\text{MED}}$  of the bound structure gestalt. In the convenient

GRR-DRR of Bo-rg activities is discovered small at 3.49 $\pm$ 0.60 unit with Bo-rg-CO- $\mu_{\text{MAX-AVG}}$  on the FC direction in the Bo-RGS. The activities of bound structure gestalt in the convenient GRR-DRR is to be get that a bound is take place the same direction in the Bo-RGS.

But, it is an uneven role in the bound activities of a convenient resonance. In the bound of Bo-rg activities is discovered small bound at 3.46 $\pm$ 0.30 unit with Bo-rg-CO- $\mu_{\text{MAX-AVG}}$  on the FC direction. The roll phenomenon of the convenient GRR-DRR is give rise serious to vary the Bo-RGS by the roll structure in the same direction. The convenient GRR-DRR is discovered to vary a very more transformation of roll resonance than the far GRR-DRR in the Bo-rg activities direction. Bound realization gestalt (Bo-RG) of flank (FL- $\mu$ ) condition is to be presented a glimmer realization rate-distinction realization rate (GRR-DRR) value for the Bo-rg-FL- $\mu_{\text{MED}}$ , Bo-rg-FL- $\mu_{\text{MAX-AVG}}$  and Bo-rg-FL- $\mu_{\text{MAX-AVG}}$  (Fig. 3). Bo-rg activities of flank GRR-DRR are discovered small bound at Bo-rg-FL- $\mu_{\text{MED}}$  and Bo-rg-FL- $\mu_{\text{MAX-AVG}}$  of the bound structure gestalt on the FV direction in the Bo-RGS. Whereas, differently the very small bound value of Bo-rg-FL- $\mu_{\text{MAX-AVG}}$  is to the FV direction in the Bo-RGS. Bo-rg activities of flank GRR-DRR is discovered small bound at 2.82 $\pm$ 0.70 unit with Bo-rg-FL- $\mu_{\text{MED}}$  of the bound structure gestalt. In the flank GRR-DRR of Bo-rg activities is discovered slightly little at 1.49 $\pm$ 1.57 unit with Bo-rg-FL- $\mu_{\text{MAX-AVG}}$  on the FC direction in the Bo-RGS. The activities of the bound structure gestalt in the flank GRR-DRR is to be get that a bound is take place the same direction in the Bo-RGS. But, it is an uneven role in the bound activities of a flank resonance. In the bound of Bo-rg activities is discovered very small bound at 1.28 $\pm$ 1.03 unit with Bo-rg-FL- $\mu_{\text{MAX-AVG}}$ . The roll phenomenon of the flank GRR-DRR is give rise serious to vary the Bo-RGS by the roll structure in the same direction. The flank GRR-DRR is give rise excellently to vary the Bo-RGS by the roll resonance at the Bo-rg activities. Bound realization gestalt (Bo-RG) of vicinage (VI- $\mu$ ) condition is to be presented a glimmer realization rate-distinction realization rate (GRR-DRR) value for the Bo-rg-VI- $\mu_{\text{MED}}$ , Bo-rg-VI- $\mu_{\text{MAX-AVG}}$  and Bo-rg-VI- $\mu_{\text{MAX-AVG}}$  (Fig. 3). Bo-rg activities of vicinage GRR-DRR are discovered small bound at Bo-rg-VI- $\mu_{\text{MED}}$  and Bo-rg-VI- $\mu_{\text{MAX-AVG}}$  of the bound structure gestalt on the FC direction in the Bo-RGS.





**Fig. 3:** Bo-rg-gestalt of the data on the bound condition for activities: restriction of the Bo-rg- $\mu_{MED}$  and Bo-rg- $\mu_{MAX-AVG}$  and Bo-rg- $\mu_{MAX-AVG}$

Whereas, differently the small bound value of Bo-rg-VI- $\mu_{MAX-AVG}$  is to the normal direction in the Bo-RGS. Bo-rg activities of vicinage GRR-DRR is discovered very small bound at  $0.49 \pm 0.08$  unit with Bo-rg-VI- $\mu_{MED}$  of the bound structure gestalt. In the vicinage GRR-DRR of Bo-rg activities is discovered very small at  $0.34 \pm 0.18$  unit with Bo-rg-VI- $\mu_{MAX-AVG}$  on the FC direction in the Bo-RGS. The activities of the bound structure gestalt in the vicinage GRR-DRR is to be get that a bound is take place the same direction in the Bo-RGS. But, it is an uneven role in the bound activities of a vicinage resonance. In the bound of Bo-rg activities is discovered very small bound at  $0.27 \pm 0.13$  unit with Bo-rg-VI- $\mu_{MAX-AVG}$  on the FC direction in the Bo-RGS. The roll phenomenon of the vicinage GRR-DRR is give rise serious to vary the Bo-RGS by the roll structure in the normal direction. The vicinage GRR-DRR is give rise slightly to vary the Bo-RGS by the roll resonance at the Bo-rg activities.

## 4. Conclusion

In this paper, bound realization technology was to construct the resonance realization with the bound realization gestalt by the bound layer of realization rate. This bound gestalt was to be expressed a point of the bound-resonance by the realization rate, to discover a transformation data from the basis reference by glimmer rate (GR) and distinction rate (DR). As to check up on a position of the bound layer, we are discovered the bound point with roll-close-up layer on the substance distribution. Therefore, the bound-resonance is to discover the ability of the transformation function with the uneven degree that is sum up the glimmer realization rate and distinction realization rate by the bound realization gestalt.

## Acknowledgments

This study is a revised and expanded version of a paper entitled "Study of the heave-set resonance transformation on the location of the skin substance" presented at Smart Convergence of Culture Technology Letters with ICCC 2018, July 23-28, Ho Chi Minh & DaNang, Vietnam.

## References

- [1] Jeffrey HJ. (1998), Chaos game visualisation of sequences. In: *Chaos and fractals: a computer Graphical Journey.*, 5–13.
- [2] Piechaczek M., Mianowski A. (2017), Coke optical texture as the fractal object. *Fuel*, 196, 59–68.
- [3] Mahamud M, Novo MF. (2008), The use of fractal analysis in the textural characterization of coals. *Fuel*, 87, 222–31.
- [4] Murphy Jr, N.R., Randolph, D.D. (1994), A Limited NRMM Validation Study for ISTVS. *Tech. Rep. DTIC Document*
- [5] Kim, J.L., Shin K.O. (2016), Study of runout-motion in body physical technique: physical index and sensory index, *International Journal of Advanced Smart Convergence*, 5(3), 56-60.
- [6] Kim, J.L., Choi, J.S. Hwang, K.S. (2017), A Study on Anticipation System of Shudder Distinction by the Physical Shape Alteration in Static Condition, *The Journal of IIBC*, 17(3), 115-120
- [7] Kim, J.L., Kim, K.D. (2017), Prediction of shiver differentiation by the form alteration on the stable condition, *International Journal of Internet Broadcasting and Communication*, 9(4), 8-13.
- [8] Kim, J.L., Kim, H.J., A Study of energy conversion by the penetration control in the skin, *Journal of the Convergence on Culture Technology(JCCT)*, 3(1) (2017), 43-48.
- [9] Huiting J, Flisijn H, Kokkeler ABJ, Smit GJM. (2013), Exploiting phase measurements of EPC Gen2 RFID structures. *IEEE Int Conf RFID-Technol Appl (RFID-TA)*, 1–6.
- [10] Bekkali A, Zou SC, Kadri A, Crisp M, Penty RV. (2015), Performance analysis of passive UHF RFID systems under cascaded fading channels and interference effects. *IEEE Trans Wirel Commun.*, 14(3), 1421–33.
- [11] DiGiampaolo E, Martinelli F. (2014), Mobile robot localization using the phase of passive UHF RFID signals. *IEEE Trans Ind Electron*, 61(1), 365–76.
- [12] López Y. Á., Gómez M.E., Andrés F.L.H. (2017), A received signal strength RFID-based indoor location system, *Sensors and Actuators A* 255, 118–133.
- [13] Chawla K., McFarland C., Robins G., Shope C. (2013), Real-time RFID localization using RSS, in: *2013 International Conference on Localization and GNSS (ICL-GNSS)*, Turin (Italy), (25–27 June), 1–6.