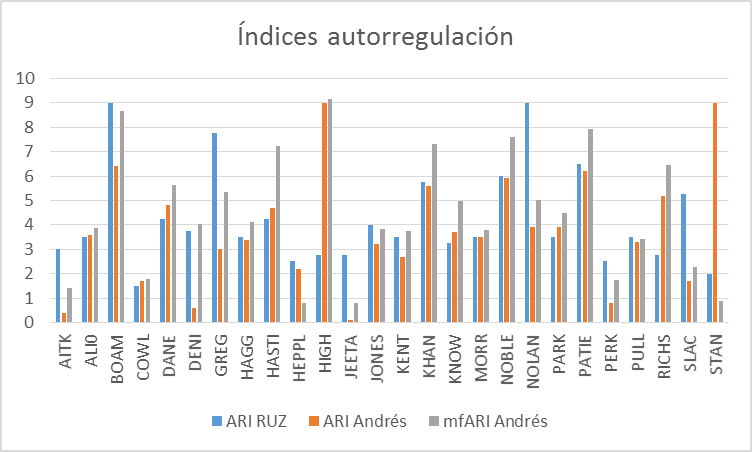
# MODELO MULTIVARIADO NO LINEAL PAM, PIC – VFSC (Tesis RUZ).

## VALIDACIÓN

|  |  |  |
| --- | --- | --- |
| AITK_neg.jpg ALI0_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\AITK3001\Z-pam-pic-AITK3001-1.jpgC:\Users\andres\Desktop\validar\Graficos\ALI00009\Z-pam-pic-ALI00009-1.jpg | |
| BOAM_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\BOAM1000\Z-pam-pic-BOAM1000-1.jpg | |
| COWL_neg.jpg DANE_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\COWL0010\Z-pam-pic-COWL0010-1.jpgC:\Users\andres\Desktop\validar\Graficos\DANE0020\Z-pam-pic-DANE0020-1.jpg | |
| DENI_neg.jpgGREG_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\DENI1000\Z-pam-pic-DENI1000-1.jpgC:\Users\andres\Desktop\validar\Graficos\GREG2000\Z-pam-pic-GREG2000-1.jpg |
| HAGG_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\HAGG1000\Z-pam-pic-HAGG1000-1.jpg | |
| HAST_neg.jpgHEPP_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\HASTI016\Z-pam-pic-HASTI016-1.jpgC:\Users\andres\Desktop\validar\Graficos\HEPPL001\Z-pam-pic-HEPPL001-1.jpg | |
| HIGH_neg.jpgJEET_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\HIGH0002\z-pam-picHIGH0002-2-SIN-FILTRO.jpgC:\Users\andres\Desktop\validar\Graficos\JEETA003\Z-pam-pic-JEETA003-1.jpg | |
| JONE_neg.jpgKENT_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\JONES004\Z-pam-pic-JONES004-1.jpgC:\Users\andres\Desktop\validar\Graficos\KENT0007\Z-pam-pic-KENT0007-1.jpg | |
| KHAN_neg.jpgKNOW_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\KHAN2002\Z-pam-pic-KHAN2002-1.jpgC:\Users\andres\Desktop\validar\Graficos\KNOW1001\Z-pam-pic-KNOW1001-1.jpg | |
| MORR_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\MORR1016\Z-pam-pic-MORR1016-1.jpg | |
| NOBL_neg.jpgNOLA_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\NOBLE010\Z-pam-pic-NOBLE010-1.jpgC:\Users\andres\Desktop\validar\Graficos\NOLAN005\Z-pam-pic-NOLAN005-1.jpg | |
| PARK_neg.jpgPATI_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\PARK0006\Z-pam-pic-PARK0006-1.jpgC:\Users\andres\Desktop\validar\Graficos\PATIEN2E\Z-pam-pic-PATIEN2E-1.jpg | |
| PERK_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\PERK1003\Z-pam-pic-PERK1003-1.jpg | |
| PULL_neg.jpgRANS_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\PULL0005\Z-pam-pic-PULL0005-1.jpgC:\Users\andres\Desktop\validar\Graficos\RANS0003\Z-pam-pic-RANS0003-1.jpg | |
| RICH_neg.jpgSLAC_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\RICHS005\Z-pam-pic-RICHS005-1.jpgC:\Users\andres\Desktop\validar\Graficos\SLAC1004-2-SIN-FILTRO.jpg | |
| STAN_neg.jpg | C:\Users\andres\Desktop\validar\Graficos\STAN1002\Z-pam-pic-STAN1002-1.jpg | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Sujeto** | **ARI RUZ** | **ARI Andrés** | **mfARI Andrés** |
| AITK | 3 | 0,40 | 1,42 |
| ALI0 | 3,5 | 3,60 | 3,87 |
| BOAM | 9 | 6,40 | 8,66 |
| COWL | 1,5 | 1,70 | 1,78 |
| DANE | 4,25 | 4,80 | 5,62 |
| DENI | 3,75 | 0,60 | 4,06 |
| GREG | 7,75 | 3,00 | 5,36 |
| HAGG | 3,5 | 3,40 | 4,12 |
| HASTI | 4,25 | 4,70 | 7,22 |
| HEPPL | 2,5 | 2,20 | 0,79 |
| HIGH | 2,75 | 9,00 | 9,15 |
| JEETA | 2,75 | 0,10 | 0,82 |
| JONES | 4 | 3,20 | 3,83 |
| KENT | 3,5 | 2,70 | 3,74 |
| KHAN | 5,75 | 5,60 | 7,33 |
| KNOW | 3,25 | 3,70 | 4,97 |
| MORR | 3,5 | 3,50 | 3,77 |
| NOBLE | 6 | 5,90 | 7,58 |
| NOLAN | 9 | 3,90 | 5,00 |
| PARK | 3,5 | 3,90 | 4,47 |
| PATIE | 6,5 | 6,20 | 7,92 |
| PERK | 2,5 | 0,80 | 1,72 |
| PULL | 3,5 | 3,30 | 3,44 |
| RICHS | 2,75 | 5,20 | 6,46 |
| SLAC | 5,25 | 1,70 | 2,29 |
| STAN | 2 | 2,20 | 0,90 |



*Tabla A.5. Eficiencia detallada por sujeto del modelo Multivariado No Lineal PAM, PIC - VFSC*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Retardos** | | | **Parámetros** | | | **Entrenamiento** | | **Validación** | |
| **Sujeto** | **PAM** | **PIC** | **VFSC** | **C** | ***s*** | ***n*** | **CC** | **ECMNa** | **CC** | **ECMNa** |
| **1** | 4 | 7 | 2 | Inf | 16 | 0,2 | 0,878 | 0,228 | 0,647 | 0,580 |
| **2** | 6 | 7 | 1 | Inf | 16 | 0,5 | 0,968 | 0,063 | 0,807 | 0,349 |
| **3** | 8 | 9 | 3 | 4 | 4 | 0,4 | 0,978 | 0,043 | 0,883 | 0,220 |
|  |  |  |  |  |  |  |  |  |  | 0,608 |
| **4** | 3 | 4 | 1 | Inf | 32 | 0,1 | 0,983 | 0,035 | 0,649 | 0,578 |
| **5** | 8 | 4 | 1 | 256 | 4 | 0,1 | 0,983 | 0,033 | 0,873 | 0,237 |
| **6** | 6 | 4 | 1 | Inf | 32 | 0,8 | 0,960 | 0,077 | 0,564 | 0,681 |
| **7** | 4 | 4 | 2 | Inf | 8 | 0,7 | 0,632 | 0,598 | 0,256 | 0,933 |
|  |  |  |  |  |  |  |  |  |  |  |
| **8** | 3 | 4 | 1 | Inf | 16 | 0,2 | 0,947 | 0,104 | 0,883 | 0,220 |
| **9** | 7 | 5 | 1 | 4 | 1 | 0,9 | 0,960 | 0,078 | 0,505 | 0,744 |
| **10** | 8 | 8 | 2 | Inf | 32 | 0,4 | 0,991 | 0,017 | 0,840 | 0,295 |
| **11** | 3 | 4 | 4 | 128 | 2 | 0,6 | 0,971 | 0,056 | 0,942 | 0,112 |
| **12** | 3 | 5 | 1 | 512 | 2 | 0,3 | 0,983 | 0,034 | 0,735 | 0,459 |
| **13** | 8 | 4 | 3 | Inf | 16 | 0,8 | 0,944 | 0,109 | 0,671 | 0,549 |
| **14** | 8 | 8 | 4 | 32 | 1 | 0,2 | 0,978 | 0,044 | 0,515 | 0,734 |
| **15** | 3 | 7 | 2 | Inf | 32 | 0,1 | 0,970 | 0,059 | 0,718 | 0,484 |
| **16** | 8 | 5 | 2 | 16 | 1 | 0,7 | 0,994 | 0,012 | 0,528 | 0,721 |
|  |  |  |  |  |  |  |  |  |  |  |
| **17** | 8 | 5 | 1 | 8 | 4 | 0,9 | 0,955 | 0,088 | 0,822 | 0,323 |
| **18** | 3 | 9 | 1 | 8 | 2 | 0,9 | 0,929 | 0,137 | 0,767 | 0,411 |
| **19** | 8 | 6 | 1 | 128 | 2 | 0,2 | 0,972 | 0,055 | 0,680 | 0,536 |
| **20** | 7 | 5 | 1 | 128 | 4 | 0,4 | 0,974 | 0,051 | 0,729 | 0,468 |
| **21** | 3 | 5 | 2 | Inf | 8 | 0,2 | 0,993 | 0,015 | 0,737 | 0,456 |
| **22** | 3 | 5 | 2 | Inf | 32 | 0,9 | 0,945 | 0,106 | 0,794 | 0,370 |
|  |  |  |  |  |  |  |  |  |  |  |
| **23** | 8 | 6 | 2 | 512 | 32 | 0,4 | 0,989 | 0,022 | 0,601 | 0,638 |
| **24** | 3 | 6 | 3 | 512 | 2 | 0,2 | 0,9917 | 0,0165 | 0,816 | 0,334 |
| **25** | 3 | 7 | 4 | Inf | 32 | 0,9 | 0,991 | 0,018 | 0,725 | 0,474 |
| **26** | 3 | 4 | 2 | 256 | 2 | 0,1 | 0,822 | 0,322 | 0,608 | 0,629 |
| **27** | 4 | 9 | 4 | Inf | 32 | 0,2 | 0,992 | 0,016 | 0,933 | 0,129 |
|  | **3** | **4** | **1** | **201,1 ± 211,1** | **14,0 ± 12,8** | **0,4 ± 0,3** | **0,951 ± 0,07** | **0,090 ± 0,12** | **0,709 ± 0,15** | **0,477 ± 0,19** |
|  | **Moda** | | | **Media ± Desviación Estándar** | | | | | | |

## VALIDACIÓN Y ENTRENAMIENTO

### SUJETO 1

|  |  |
| --- | --- |
| Modelo original Ruz multivariado  AITK_neg.jpg | Modelo generado  C:\Users\andres\Desktop\prueba ruz\validar\Graficos\Graficos\selección\Z-normalAITK3001-2.jpg |

### Sujeto 2

|  |  |
| --- | --- |
| Modelo original Ruz multivariado  ALI0_neg.jpg | Modelo generado  C:\Users\andres\Desktop\prueba ruz\validar\Graficos\Graficos\selección\Z-normalALI00009-46.jpg |

### Sujeto 3

|  |  |  |  |
| --- | --- | --- | --- |
| Modelo original Ruz multivariado  BOAM_neg.jpg | Modelo generado  C:\Users\andres\Desktop\prueba ruz\validar\Graficos\Graficos\selección\Z-normalBOAM1000-26.jpg |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sujeto** | **ARI RUZ** | **ARI Andrés** | **mfARI Andrés** | **ARI entrenado** | **mfARI entrenado** |
| AITK | 3 | 0,40 | 1,42 | 1.9 | 2.12 |
| ALI0 | 3,5 | 3,60 | 3,87 | 2.9 | 2.85 |
| BOAM | 9 | 6,40 | 8,66 | 6.4 | 8.66 |