



Greater El Paso
Section
The Global Voice of Quality™

Amigo Quality

Volume 36 Number 12

Welcome to the September 2016 issue of the Newsletter, your local provider of information and learning opportunities related to quality professionals.

Nominate members to serve as an officer of Section 1401 next year click on this link

[your member number is available on the bottom of your monthly section newsletter]

https://utep.qualtrics.com/SE/?SID=SV_cu12P8VLAaEke4B

Membership Meeting

LOCATION:

Coca Cola Plant.

11001 Gateway Blvd. West

SCHEDULED TIME: 6:30 pm – 8:15 pm Program begins at 6:30 pm

DATE: Wednesday, September 21, 2016

Program: 6:30pm – An Introductory
view of Multivariate Statistical
Quality Control – Production

Speaker: Alfonso Enriquez

Bio: Alfonso Enriquez is an independent consultant currently working in the implementation of a 2D vision system in an automotive parts supplier plant. He has a MSc in Operations Research from the London School of Economics and he is certified as an ASQ Engineer and ASQ Auditor. He has years of experience in Quality in the Automotive and Steel Industry.

Leadership Committee Planning meeting

SCHEDULED TIME: 8:15 p.m.

DATE: Wednesday, September 21, 2016

LOCATION: Coca Cola, 11001 Gateway Blvd. West

MEETINGS ARE FREE FOR MEMBERS AND NON-MEMBERS ALIKE

THE CHAIR SPEAKS

Eli Gilbert

September Satisfaction!!!

It's Labor Days of love here at Amigo Quality 1401 El Paso, but we will not labor over the fact of how much we love Quality in our labor. We have some great volunteers that put some work (need I say labor) in this monthly newsletter, please check it. Hector updates on moves Toyota has made in our Automotive Section. Kim drives into automotive gridlock here in El Paso in this month's Education Section. Alfonso has graciously volunteered to give of some insight on the history behind the tools of Multivariate Statistical Quality Control in the Management Systems section. Fortunately for us, Alfonso will also be our Key Note Speaker for this month's Quality Meeting, in which he will expound on his knowledge Multivariate Statistical Quality Control, for your pleasure. You will not want to miss this. ASQ, Greater El Paso Section, is here to support your professional development, ALL are welcome and encourage to attend. Hey, you could even bring a friend. Steve has updated members' re-certification information, don't let your valuable certification fall delinquent. With all this great information, ASQ online also has an abundance of resources to better serve quality professionals just like you. Everyone has the opportunity to consult this resource and it's also free for members, so don't hesitate to take a look. www.asq.org

Sincerely yours,

Eli Gilbert

Elijah M. Gilbert
Chair, ASQ EL PASO 1401

FLASH! FLASH! FLASH! WE ARE BACK! Join us for this month's Quality Meeting!

NOTE: Time is here to submit nominations for next year's Key Leadership Roles Election.

AUTOMOTIVE SECTION

HECTOR LUGO

Thanks to all the members with their input and the “winner” is the following: Toyota Motor Corp. is increasing U.S. input in the development of global platforms for midsize cars and trucks after learning with the Prius engineers in Japan sometimes missed key American market trends.

The last vehicle getting a full redesign at the Toyota Technical Center in Ann Arbor, Mich., was the 2013 Avalon sedan. Toyota now wants to speed full redesigns to one a year out of the U.S., said Jeff Makarewicz, senior vice president for quality and safety engineering at Toyota Motor Engineering and Manufacturing North America, its local R&D and production arm. Before that, redesigns had been on a two-year cycle.

The enhancement of Toyota’s North American R&D base moves it closer to being the carmaker’s first truly self-sufficient product development center outside Japan.

Toyota is consolidating most regional development functions in Ann Arbor as part of its realignment around a new North America headquarters built in Plano, Texas. Recent improvements include a \$126 million investment in new powertrain operations and the addition of 250 procurement and supplier engineering jobs.

See you at the meeting!

EDUCATION SECTION

KIM PRIES

Dare I even write about the QUALITY of driving in El Paso? I was part of traffic during a recent accident on Transmountain Drive. Drivers had to pinch down to a single lane. Nobody could figure out the standard Northern European behavior called “alternate merging.” Hence, traffic ceased to move due to the immature and untrained behavior of selfish and incompetent drivers!

What has happened to the quality of driving training? I am an old guy now and remember learning how to use manual transmission, an automatic transmission, cars with and without power assist (brakes, steering, etc).

The next question is: what has happened to the ability to read? Drivers see a sign that says “left lane ends” and they speed up so they can inject themselves into the flow of more sober drivers.

Then, we have the “quality” of our streets, where either the water company or the streets people cannot craft a road where the cast iron covers are flush with the street! My students ask if I ride roller coasters and I say “what for, I drive down Resler every morning!”

I don’t think these comments expand “quality” beyond appropriate scope. Craftsmanship in driving or road maintenance is yet another lost art...

Check it out!

MANAGEMENT SYSTEMS

ALFONSO ENRIQUEZ

When we move from ANOVA to MANOVA (from a single dependent variable to a multiple dependent variable analysis of variance) We encounter the Pillai’s statistic.

I did a Gage R&R study using a 2D vision System with two operators, two repetitions, 10 parts, and seven dependent variables, the seven dependent variables are dimensions of a plastic extruded part, the data look like this:

| | p1 | p2 | p3 | p7 | p4 | p5 | p6 |
|------|--------|--------|--------|--------|--------|--------|--------|
| [1,] | 0.8811 | 0.3783 | 0.0505 | 0.0700 | 0.1260 | 0.2837 | 0.2036 |
| [2,] | 0.8804 | 0.3781 | 0.0506 | 0.0708 | 0.1259 | 0.2837 | 0.2036 |
| ... | | | | | | | |

I ran the MANOVA function in R for this data using the command:

```
manova(bird~Part*Operator)
```

(I called the data set bird) and the resulting table looks like this:

| | Df | Pillai | approx F | num Df | den Df | Pr(>F) |
|---------------|----|--------|----------|--------|--------|---------------|
| Part | 9 | 5.1514 | 6.1927 | 63 | 140 | < 2.2e-16 *** |
| Operator | 1 | 0.6986 | 4.6365 | 7 | 14 | 0.007134 ** |
| Part:Operator | 9 | 2.5670 | 1.2868 | 63 | 140 | 0.111789 |
| Residuals | 20 | | | | | |

Notice that the name of Pillai in the third column, I always want to know more about the history behind the tools, Wikipedia is an starting point to learn more about Pillai¹: he was an statistician from India, who worked in multivariate statistical analysis.

the Pillai's trace formula is: $V = \sum (\lambda / (1 + \lambda))$, you can see how the statistics is calculated in a paper from Hasee², after the Pillai's trace is calculated this is then used to find an approximation to the F distribution, from which the p value is found.

¹K. C. Sreedharan Pillai. (2016, August 13). In *Wikipedia, The Free Encyclopedia*. Retrieved 13:34, August 28, 2016, from [https://en.wikipedia.org/w/index.php?title=K. C. Sreedharan Pillai](https://en.wikipedia.org/w/index.php?title=K._C._Sreedharan_Pillai)
[HYPERLINK "https://en.wikipedia.org/w/index.php?title=K. C. Sreedharan Pillai&oldid=734343441"](https://en.wikipedia.org/w/index.php?title=K._C._Sreedharan_Pillai&oldid=734343441)
[HYPERLINK "https://en.wikipedia.org/w/index.php?title=K. C. Sreedharan Pillai&oldid=734343441"](https://en.wikipedia.org/w/index.php?title=K._C._Sreedharan_Pillai&oldid=734343441)

²Haasee R.F and Ellis M.V "Multivariate Analysis of Variance" Journal of Counseling Psychology, 1987, vol 34.

RE-CERTIFYING AND ASQ CERTIFICATIONS

STEVEN SCHAFER

Out of a total of 5 member(s) whose certifications expired December 2015, 1 lost their certifications.

Out of a total of 12 member(s) whose certifications expired June 2016, 9 will lose their certifications if they do not re-certify by the end of December 2016, 1 member(s) re-certifications are being processed and 2 member(s) completed their re-certifications.

Out of a total of 6 member(s) whose certifications will expire December 2016, 6 will lose their certifications if they do not re-certify by the end of June 2017, 0 member(s) re-certifications are being processed and 0 member(s) completed their re-certifications.

Members can re-certify early! As long as you have enough points you can re-certify as early as six months before your certification expires. Your Certifications will be extended 3 years beyond the certification expiration date

you currently have for your certification, so you don't lose anything by re-certifying early. Remember, you can only claim points that you have accumulated up to the time you submit and these points need to be collected during your 3 year certification period. Out of a total of 8 member(s) whose certifications will expire June 2017, 8 will lose their certifications if they do not re-certify by the end of December 2017, 0 member(s) re-certifications are being processed and 0 member(s) completed their re-certifications.

If anyone has questions on how to re-certify to extend their ASQ Certifications and/or how to synchronize them if they have more than one, please let me know. Re-certifying by exam costs more and is a lot more difficult than re-certifying through the accumulation of RU points. You can reach me, the Re-Certification Chair, at 915-241-4780 or (501) 615-8170. Please leave a message on the answering machine if no one answers and I will call back you as soon as I can. You can also reach me via the Internet at spikeguate@sbcglobal.net. I am ready to help with any questions you might have about Re-Certifying or about any ASQ Certifications you might have, call me. The Re-Certification Journal is at the following link and will guide you in the re-certification process <http://asq.org/cert/recertification/rucredits/index>

When re-certifying, **always get the most recent Re-certification Journal information.** The lasted Re-Certification Journal is November 2014. For ASQ members the fee for one certification is \$69.00 and for two or more \$89.00; for non-members the fee for one \$109.00 and for two or more \$109.00 each).

Members who **renew their membership early online** will receive a **coupon code: RCRT in which \$69.00 will be deducted off their recert fees.**

Projected Calendar

| Year | Month | Date | Day | Topic – Speaker | Location |
|------|-------|------|-----------|--------------------------|------------------------------|
| 2016 | Sep | 21 | Wednesday | MVSQC – Alfonso Enriquez | Coca Cola Plant. |
| | | | 6:30pm | | 11001 Gateway Blvd. West |
| 2016 | Sep | 21 | Wednesday | LC Meeting | Coca Cola Plant. |
| | | | 8:15 pm | | 11001 Gateway Blvd. West |
| 2016 | Oct | 19 | Wednesday | BIZLINK / FOX COM /NEW | Hilton Garden Inn University |
| | | | 6:30pm | BUSINESS | |
| 2016 | Oct | 19 | Wednesday | LC Meeting | Hilton Garden Inn University |
| | | | 8:15 pm | | |
| 2016 | Nov | 16 | Wednesday | CAREFUSION Tour | TBD |
| | | | 6:30pm | | |

| | | | | | |
|------|-----|-----|-----------|-----------------|-----|
| 2016 | Nov | 16 | Wednesday | LC Meeting | TBD |
| | | | 8:15 pm | | |
| 2016 | Dec | TBD | TBD | CHRISTMAS PARTY | TBD |

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