




Office of the President

MEMORANDUM

TO: Scott Wasserman
FROM: Michael D. Richards 
DATE: August 10, 2012
SUBJECT: Annual Report of Tenure Granted - CSN

Pursuant to the NSHE Board of Regents Code Title 2, Chapter 3, Section 3.3.1 (b2), College of Southern Nevada did not offer any faculty member tenure upon hire for FY 2011-2012.

If you have further questions, please do not hesitate to contact me.



August 6, 2012

MEMORANDUM

TO: Scott G. Wasserman
Chief Executive Officer of the Board of Regents

FROM: Mark A. Curtis, President

SUBJECT: Faculty Tenure Upon Hire

Pursuant to the Board of Regents' handbook, Title 2, Chapter 3, Section 3.3.1 (b2), this memorandum will serve as Great Basin College's annual report confirming that our institution did not offer any academic faculty member tenure upon hire during the fiscal year 2011-2012. Please include this information in your report to the Board of Regents at the September 6-7, 2012 meeting.

MC/mw

cc: Michael McFarlane, Vice President for Academic Affairs
David Freistroffer, Faculty Senate Chair
Sonja Sibert, Chief Business Officer



MEMORANDUM

DATE: July 31, 2012

TO: Scott Wasserman
Chief Executive Officer and Special Counsel, Board of Regents

FROM: Dr. María C. Sheehan *María C. Sheehan*
President, Truckee Meadows Community College

SUBJECT: Annual Report of Tenure upon Hire

In accordance with the reporting required in Title 2, Chapter 3, Section 3.3.1 (b2) of the Board of Regents Handbook, please be advised that Truckee Meadows Community College did not offer tenure upon hire to any employee for FY 2011-2012.

I hope you will feel free to contact me should you have need for further information. Thank you.

MCS:pes

Annual Report of Tenure Granted to Academic Faculty upon Hire

Western Nevada College

WNC faculty are not granted tenure upon hire.
As such, no written report will be presented from WNC.



MEMORANDUM

TO: Scott Wasserman
Chief of Staff to the Board of Regents

FROM: Bart Patterson
President

WP DBA

DATE: July 30, 2012

SUBJECT: Faculty Tenure Upon Hire

Pursuant to the Board of Regents' Handbook, Title 2, Chapter 3, Section 3.3.1(b2), this memorandum will serve as Nevada State College's annual report confirming that our institution did not offer any academic faculty member tenure upon hire during the fiscal year 2011-2012.

cc: Buster Neel, Vice President, Finance & Administration
Nicole Norian, Director, Office of Human Resources

Annual Report of Tenure Granted to Academic Faculty upon Hire

Desert Research Institute

DRI faculty are not granted tenure upon hire.
As such, no written report will be presented from DRI.

Holding Tenure at Other Institutions or Tenure Granted by UNLV to New Hires Based on Exemplary Accomplishments

FOR THE PERIOD OF JULY 2011 – JUNE 2012

In accordance with NSHE Code – Chapter 3, Section 3.3.1 (b2):

The President of the institution, without seeking Board of Regents' approval, may grant tenure upon hire to an academic faculty member who at the time of hire holds tenure at another institution or has an exemplary record that indicates extraordinary achievement in the field. Prior to making such an appointment, the President shall seek a recommendation from the appropriate faculty on whether an academic faculty member should be appointed with tenure. The President of each institution shall submit an annual report to the Board of Regents which shall include the name of any individual to whom tenure upon hire was granted, the department within which the individual was hired, whether the faculty of such department.

NAME	DEPARTMENT/ COLLEGE	FACULTY VOTE
R. Jacob Baker	Electrical and Computer/ Engineering	Positive
Leslie Griffin	William S. Boyd School of Law	Positive
Donald F. Hayes	Civil & Environmental/ Engineering	Positive
Kwang Kim	Mechanical Engineering/ Engineering	Positive
Francine Lipman	William S. Boyd School of Law	Positive
Thom Main	William S. Boyd School of Law	Positive
Brian Schilling	Kinesiology and Nutrition Sciences/ Allied Health Sciences	Positive
Ke-Xun Sun	Electrical & Computer/ Engineering	Positive / List of accomplishments attached

Accomplishments at UNLV

January 2012 --- July 2012

Ke-Xun (Kevin) Sun, Ph.D, P.E.

Department of Electrical and Computer Engineering
Howard Hughes College of Engineering, University of Nevada, Las Vegas
4505 S. Maryland Parkway, Box 454026, Las Vegas, NV 89154-4026

Email: Ke-Xun.Sun@unlv.edu, sunke@nv.doe.gov, Phone 702-774-1486, Fax 702-895-4075; Mobile 408-859-9387

1. Overview

It is a great honor for being appointed as an Impact Hire, and as a tenured professor at Department of Electrical and Computer Engineering, College of Howard Hughes Engineering, University of Nevada Las Vegas. I first want to thank President Smatresk, Dean Venkat, Chair Selvaraj, Chair Stubberud, and all ECE faculties for giving me such a rare opportunity to conduct research, and for supporting me so strongly in all aspects, including providing premium lab space at the newest Science and Engineering Building. Meanwhile, I must also thank strong support from National Security Technologies (NSTec), who allowed me to bring a large pool of expensive equipment to UNLV. I also want to thank my students, who trusted me as a new faculty, and worked diligently in my lab and making progress.

I understand this is a great trust, and I have been trying very hard to bring positive impacts to UNLV. In what follows, I will try to summarize my activities at UNLV, and hope to get your advices.

My activities have been mostly focusing on the following aspects

- *Prepare a new Center of Excellence for Security Science and Engineering (CESSE), and gain NSTec support*
- *Establish collaboration within and outside UNLV faculties, and supporting students*
- *Writing new research proposals*
- *Laboratory setup*
- *Teaching class*
- *Other academic and research activities*

2. Preparing a new Center of Excellence for Security Science and Engineering (CESSE), and gaining NSTec support

A strong UNLV-NSTec collaboration is strategically important for both NSTec and UNLV. We will be able accomplish more research, to access some unique UNLV facilities, and recruit young talent for future NSTec employment. Since late 2010, I have been tasked by NSTec to expand UNLV-NSTec collaboration. In this process I was fortunate to interact with many UNLV faculties and leadership College of Engineering and College of Sciences, especially Dean Rama Venkat, Dean Mohamed Trabia, and Dean Tim Porter. I also discussed with NSTec leadership on how to form the

collaboration. On July 29th, 2011, almost a year ago, UNLV and NSTec Defense Experimentation and Stockpile Stewardship Division (DE&SS) held a collaboration forum. NSTec asked me to present a plan of further collaboration, in which we proposed to establish a Center of Excellence for Security Sciences (CESSE) at UNLV, with NSTec support. This proposal represented extensive interactions at both UNLV and NSTec. This and other presentations made by NSTec DESS leadership formed an action guideline for NSTec to support UNLV collaboration.

I further draft several versions of NSTec Workscope to plan the CESSE funding. One of the most ambitious versions is attached. Not everything task was funded due to NSTec budgetary limitation. However, this led to the 3 funded Task Orders from NSTec to UNLV, under theme of "NSTec-UNLV Collaboration: Center of Excellence Pilot Projects"

Task Order 32, "High speed electronics using novel wide bandgap semiconductor devices"

Task Order 33, "Dynamic Space Charge Effects"

Task Order 40, "Government Furnished Equipment"

Task Orders 32 and 33 are funded at \$50,000 each, total \$100k at UNLV, and actually \$136k at NSTec due to subcontracting overhead. These funds have provided summer support for 3 UNLV professors other than myself, and support for several students, and lab supplies.

With Task Order 40, NSTec moved a large pool of equipment to UNLV. NSTec has invested more than more than \$2,000,000 (\$2M) in purchasing and commissioning of the equipment. This pool of equipment included state of laser and electronics instruments, include widely tunable (190-20,000 nm), femtosecond lasers, high power lasers, a semiconductor parameter analyzer, a 40 GHz spectrum analyzer, and many other instruments. All these will significantly strengthen UNLV research in ultrafast optics and electronics.

Currently, NSTec is in the process of transferring my SDRD funding to UNLV. The total net amount UNLV will receive is ~ \$140k, after overhead deduction at NSTec. A new Task Order, "Radiation Hardened AlGaIn Imager and Electronics Continuation at UNLV," will be issued shortly from NSTec to UNLV shortly.

As such, NSTec has injected ~\$2,240,000 into the CESSE pilot projects. Additionally, extensive resources have been used to support moving costs, management activities and etc. to establish CESSE at UNLV. I have been functioning of all these projects, at both UNLV and NSTec.

In addition, a year end distribution ~\$100k is being requested for large equipment purchase to add capability in GaN/AlGaIn processing at UNLV.

For FY13, NSTec DE&SS has indicated they will support CESSE at the level greater than \$300,000-\$350,000. This cash level may actually double, depending on how other divisions and projects will participate. I have been working with NSTec to increase this level, by bringing in more UNLV-NSTec

collaborative projects. A very hopeful project is to move photocathode and electron optics fabrication facility into UNLV. I have arranged NSTec management visit to UNLV facilities. This move will provide UNLV additional strength in thin film and electron optics research and fabrication, and meanwhile provides regular project funding for its operation at UNLV.

Both UNLV and NSTec need CESSE. The CESSE will be a base for UNLV and NSTec scientists to work on collaborative projects. NSTec has indicated that they want a single tangible entity at UNLV in response to disciplined programmatic duties, and a user facility for NSTec to have access to UNLV research capabilities. The CESSE will host cutting edge academic and security research, train students for science and engineering careers, and help grow the future NSTec workforce in these critical areas. Smaller but successful pilot projects are the first step of establishing the CESSE. All these mean great opportunities for UNLV. I hope that UNLV and NSTec will continue to support the establishment of CESSE. We will work to make it reality as early as we can. The CESSE will continue to grow, and attract large funding.

3. Establishing collaboration within and outside UNLV faculties, and supporting students

UNLV faculties have outstanding research achievements. To be a part of the UNLV community, and to bring positive impact to UNLV, I have been trying to establish collaboration with UNLV faculties since the very beginning of my interaction with UNLV. I am fortunate to receive positive responses from all faculties I have talked with, including faculties at College of Engineering, College of Sciences, and Harry Reid Center. This is a long list, and will be detailed in the proposal session.

The collaboration with outside world is becoming more important in all fields. I have been trying to strengthen my existing collaboration relationships, and find new ones. Our SSAA proposal has gained support from NSTec, LLNL, LANL, and Sandia National labs. Some examples of the new collaborators are the quantum optics groups at NNSA LANL, and NASA Ames, small satellite group at NAS Goddard Space Flight Center, and hyperspectral imaging groups at NSTec Remote Sensing Labs at both Nellis and St. Andrews.

An extremely encouraging sign is that UNLV students have shown strong interests in CESSE research. Currently we are supporting 5 undergraduate students working in my group. These students are now working on laboratory setups, GaN/SiC electronics, ultrafast dynamic space charge effects, computational physics, and parallel computing. We have been operated in research and training mode, and made good progresses.

Due to NSTec fund requires US citizenship, it will take time to recruit US graduate students. However, our undergraduate students all have US citizenship, and several of them wish to continue graduate studies in my group.

In FY13, I plan to support four graduate students in the existing areas, and open projects in new areas such as biomedical optics.

4. New Research Proposals

I have spent much time, especially in first quarter of 2012, on writing new research proposals. Nearly all these proposals are collaboration with other UNLV faculties in several departments (Electrical and Computer Engineering, Mechanical Engineering, and Physics). I have been functioning as the Principle Investigator, and wrote the main portion of the proposals.

Proposals Submitted:

1) "Enabling Sciences and Technologies for Next Generation HEDP Diagnostics"

Submitted to DOE NNSA (National Nuclear Security Administration), SSAA (Stockpile Stewardship Academic Alliance). The proposal outlined High Energy Density Physics Diagnostics research for next 5 years, focused on radiation hard AlGaN technologies, especially AlGaN imager and electronics, ultrafast dynamic space charge effects, and an array of platform technologies. All these will be important to DOE NNSA future mission.

I was the Lead Principal Investigator and wrote the core contents of the proposal. More importantly, I organized 11 UNLV faculties, and 2 industry leaders to participate as co-investigators. I also solicited 9 support letters from UNLV leadership, NSTec DESS leadership, Lawrence Livermore National Lab (LLNL), Los Alamos National Lab (LANL), Sandia National Lab (Sandia), Kyma Technologies, and Sensor Electronics Technologies. As such, all NNSA national laboratories supported our proposal. The proposal highlights UNLV-NSTec collaboration.

The proposal requested \$3M/year for 5 years, total \$15M funding, to support the Center of Excellence for Security Science and Engineering.

The proposal has received favorable technical review, however, it is may not be fully fundable due political and budgetary situations in the current fiscal year. The NNSA indicated that it will instruct NSTec and its other National Labs to give "strong support" for this transitional fiscal year. NNSA will support the proposal if the appropriation in coming fiscal year if the appropriation is good. I have been working with NNSA and NSTec for alternative ways of supporting the proposed research. A ramp-up style schedule is being modified.

The proposal is an important deliverable of CESSE plan. Except for that it is ahead of schedule by 3~5 years. --- In our workscope presented in July 29th, 2011 forum, the application for external funding is perceived in 3~5 years.

The proposal including all appendices counted 255 pages. An abbreviated version of technical narratives is attached.

2) "Gravity and Radiation Environment Aerial Trans-Small Satellite Surveyors (GREATS): CubeSat Constellations for High Precision Gravity and Radiation Measurement"

Submitted to NASA EPSCoR Program. In collaboration with two other UNLV faculties, and NASA Goddard Space Flight Center. I functioned as Principal Investigator.

We propose a small satellite constellation mission for gravity magnitude and gradient measurement, with spectrometer and radiation detectors collocated and co-aligned with the gravity direction. The mission performance is targeted to facilitate high resolution geophysical and radiological survey, benefiting Nevada resource discovery, and Nevada National Security Site for Source Physics Experiments (SPE) diagnostics. The mission will be based on low cost CubeSat and COTS parts as much as possible. The launching service will be using secondary payload opportunities. The lower earth orbit (LEO) will be adopted.

The proposal will mobilize the students in EE497/498 and ME497/498 Senior Design classes. The proposal is under review. The proposal is attached.

- 3) "Space Qualified High Efficiency Diffractive Optical Elements and High Resolution Hyperspectral Imaging Systems from UV to IR"

Submitted to NASA Game Changing Technology program at NASA Langley Research Center. In collaboration with Lawrence Livermore National Lab (LLNL) and NSTec.

We propose to design, fabricate, and test innovative, high-efficiency dielectric gratings in VSIR, SWIR, and MWIR wavelength regions. Develop novel symmetric grating spectrometer configurations to enhance the spectral wavelength resolution down to picometer or even femtometer level, and simultaneously, distinguish in parallel target motion and spectral variation. Develop image analysis algorithms to fully utilize the new capabilities simultaneously. Conduct exploratory research regarding compact spectrometers for Nanosat applications. Conduct exploratory research regarding nanoscale spectrometers for Femtosat applications with recent advances in plasmonics, nano patterning, and nanofabrication technologies

The hyperspectral imaging proposal contains inventions, which are in the process of applying intellectual properties at both NSTec and UNLV.

- 4) "Radiation Hardness Mechanisms for Electronic, Optical, and Mechanical Materials and Devices in Robotic Systems And Next Generation Radiation Hardened Robots"

White paper submitted to Defense Threat Reduction Agency (DTRA). In collaboration with another UNLV faculty and NSTec.

- 5) "Novel Hyperspectral Imaging Method"

White paper submitted to Defense Threat Reduction Agency (DTRA). In collaboration with LLNL and NSTec.

We have evidence to say that the proposed idea is actually now being picked up by the funding agency from our previous presentation at DTRA. NSTec and I myself is working on resolving this issue. NSTec is applying intellectual property for this invention.

- 6) "High Resolution Spectroscopy with Widely Tunable Laser"

White paper submitted to Defense Threat Reduction Agency (DTRA). In collaboration with NSTec.

- 7) "Advanced GaN Sciences and Technologies"
Submitted to Nevada National Security Site (NNSS) Directed Research and Development (SDRD) program. In collaboration with UNLV faculties, NSTec, LLNL, LANL, and Sandia.
We seek 3-year SDRD support to systematically develop advanced GaN sciences and technologies from materials to devices and systems. Highlighted research topics are ultrafast (<1ps) GaN scintillators, high efficiency (>90%) GaN photocathodes, high rate framing cameras, and quantum GaN nanostructures. The outcomes are: (i) new insights into GaN physics, (ii) new capabilities to design and fabricate GaN materials and devices, (iii) high performance GaN detectors, and (iv) cultivation of young talent. The proposal is related to, but beyond our SSAA proposal.
- 8) "Quantum Communication and Imaging for Security Applications"
Submitted to Nevada National Security Site (NNSS) Directed Research and Development (SDRD) program. In collaboration with NSTec, MIT, LLNL, and LANL.

"The quantum superposition principle is among the most profound and debated subjects, confusing physicists since Einstein, but important and enlightening scientific discoveries have recently been made in this field. We propose a 3-year experimental and theoretical research program in quantum optics applications important to NCNS, Global Security, and HEDP. We will develop entangled photon emitters based on optical parametric amplifier (OPA), with a special attempt to develop ultrafast pulsed entangled sources. We will develop a novel multilayer secure communication link, with a special effort on dual optical channels and extending the distance for quantum key distribution. This will lead to further developments in quantum imaging techniques, with special efforts on ghost imaging, imaging quality enhancement, and LIDAR applications."

The proposal is currently being expanded at NSTec and LANL into a larger effort.
- 9) "High Resolution Hyperspectral Imaging with a Novel Symmetric Grating Spectrometer"
Submitted to Nevada National Security Site (NNSS) Directed Research and Development (SDRD) program. In collaboration with NSTec and LLNL
- 10) "Short Wavelength, High Resolution Photon Doppler Velocimetry"
Submitted to Nevada National Security Site (NNSS) Directed Research and Development (SDRD) program. In collaboration with NSTec.
- 11) "FY13 Workslope for Center of Excellence for Security Science and Engineering at UNLV"
Submitted to NSTec Defense Experimentation and Stockpile Stewardship Division.
The proposal contains 10 projects. The funding has approved. The funding level is being discussed.
- 12) "High Resolution Hyperspectral Imaging"
Life Cycle Plan submitted to NA22. In collaboration with NSTec RSL Andrews.

Proposals in preparation:

"High brightness laser target for advanced radiography"

“Optical diagnostics for blood”

“Two photon Lidar”

“Picosecond diagnostics for NIF energy measurement”

5. Laboratory Setup

With the strong support from College of Engineering, we have largely setup a modern lab in ultrafast lasers and optics, and another lab in electronics. Below is a list of major equipment in our labs:

- 1) TOPAS Traveling Wave Optical Parametric Amplifier
 - White light generation and traveling wave amplification
 - Widely tunable from 190 nm to 20,000 nm,
 - Femtosecond pulse width determined by pump pulse
 - Computer controlled automated tuning
- 2) Quantronix Femtosecond Higher Power Laser
 - 795 nm fiber laser seeded chirped pulse amplifier
 - Pulse width: 150-200 fs
 - Energy per pulse: 2.5 mJ
 - Repetition rate: 1 kHz
- 3) Thales Q-Switched Nd:YAG lasers (2 units)
 - Base band wavelength: 1064 nm
 - Built in doubler 532 nm
 - Pulse energy: 3J /pulse max at 1064 nm
 - Repetition rate: 50 Hz max
- 4) Sacher Semiconductor Lasers
 - AlGaIn laser diodes with external cavity resonator
 - Single mode, single frequency operation, external cavity frequency locker
 - Laser head #1: 30 mW at 405 nm
 - Laser head #2: 5 mW 372 nm
- 5) Apollo laser
 - Pulsed Ruby laser
 - Customized optics layout
- 6) THz generation and detection
 - THz generation with femtosecond laser
 - THz detection via interferometric readout
- 7) Electronics instruments
 - Semiconductor parameter analyzer
 - Spectrum analyzer
 - Oscilloscopes
 - Signal generators
 - Lock-in amplifiers

- Logic Analyzer

6. Teaching class

1) EE497/498 “Senior Design” (I) (II)

It is an enjoyable experience to teach class. To make class more relevant to real engineering and research practice, we have arranged four guest lectures into the classroom. We have also taught many practical skills in engineering design and project management. The class seemed to be a success, since several of them wished to work in my lab to pursue graduate school.

2) EE453/ECG653 “Introduction to Nanotechnology”

In preparation of this course for Fall 2012-2013

3) “Engineering Science Seminars”

I am organizing a series of seminar by leading experts in High Energy Density Physics to be given in Fall 2012-2013. Regular attendees will receive 1 graduate credit. The seminar series will also serve as an interaction opportunity for collaborative research.

4) Courses for advanced graduate students

I am preparing a proposal to create four advanced courses for graduate students:

- HEDP Science and Diagnostics
- Quantum Optics
- Space Instrumentation
- Compound Semiconductors

7. Other academic and research activities

- 1) In the process of editing and publishing the second volume of Proceedings of LISA Symposium. I myself will be the co-author of 4 papers in this volume of the proceeding.
- 2) Presented “Radiation Hardened AlGaN Detectors and Imagers” at the 19th High Temperature Plasma Diagnostics Workshop” held at Monterey California. In the process of preparing a paper.
- 3) Co-Author on a new paper “UV LED charge control of an electrically isolated proof mass in a Gravitational Reference Sensor configuration at 255 nm”
- 4) Attended “NASA Quantum Technologies” conference at NASA Ames Center (By invitation only)
- 5) Presented “Establishing a Center of Excellence for Security Science and Engineering at UNLV” at the UNLV-NSTec SDRD Forum held at UNLV, February 2012 NSTec-UNLV SDRD collaboration forum. The presentation concisely summarized the CESSE plan, and it was well received.

- 6) Initiated invitation of NSTec Scientist Paul Guss to be an Associate Graduate Faculty Advisor.
- 7) Invited Brent Davis to give guest lecture on rf design at UNLV
- 8) Invited NSTec DESS, RSL (Remote Sensing Lab), and NCNS (National Center of Nuclear Security) leadership to visit UNLV for capability demonstration and collaboration discussions.
- 9) Patent process at NSTec for “Hyperspectral Imaging Using a Symmetric Grating Spectrometer”

8. Summary

I have been making all efforts to bring positive impacts to UNLV. Thanks to the strong support from UNLV, we have made many progresses in all aspects. Working together with UNLV colleagues, I look forward to making more substantial contribution to UNLV’s path of growing into a world class university.



University of Nevada, Reno

Marc A. Johnson
President

TO: Board of Regents
FROM: Marc A. Johnson, President
DATE: August 1, 2012
SUBJECT: Annual Report of Tenure Granted – University of Nevada, Reno

Please consider this as our institution's report concerning any tenures upon hire granted pursuant to Title 2, Chapter 3, Section 3.3.1(b2). Since our last report, I have granted tenure upon hire to the following individual:

<i>Name</i>	<i>Title/College</i>	<i>Institution</i>
<i>Alan G. Stavitsky</i>	<i>Dean, Reynolds School of Journalism</i>	<i>University of Nevada, Reno</i>

Dr. Stavitsky began his service as dean in March 2012. Prior to joining the university, he was a senior associate dean and a tenured full professor as well as founding director of the George S. Turnbull Portland Center in the School of Journalism and Communication at the University of Oregon, Portland. His strong credentials supported this hire with tenure. He holds degrees in political science, journalism, and communication. In addition, he has worked in television and radio as a news director, news anchor, investigative reporter, talk-show host and producer. Dr. Stavitsky's scholarship is on media policy and the digital transition in journalism, and he has published in numerous academic journals. He has also served as a consultant to local, national and international public broadcasting organizations on issues of media ethics and programming. The tenured faculty of the Reynolds School of Journalism, interim dean of the School, and Executive Vice President & Provost supported this tenure upon hire.

If you have any questions, please do not hesitate to contact me.

amc

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