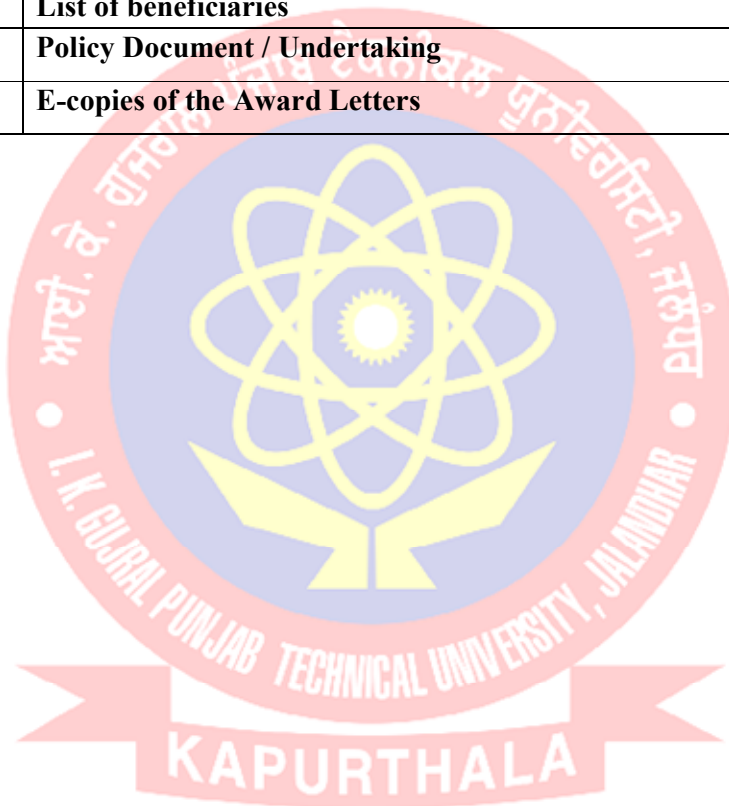


## Department: Physical Sciences

### 3.4.2

### Incentives to Teachers for Awards / Recognitions received at State / National / International level

Sl. No.	Documents Attached
1.	List of beneficiaries
2.	Policy Document / Undertaking
3.	E-copies of the Award Letters



# List of beneficiaries

2.4.4 Average percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government/Govt. recognised

Name of Awardee	Year of Award	PAN	Designation	Name of the award, fellowship, received from Government or Government recognised bodies	Name of the Awarding Agency	Incentives/Type of the incentive given by the HEI in recognition
Amit Sarin	2017	AZTPS9627F	Professor	Outstanding contribution in Reviewing	Journal of Fuel, Elsevier	No
Varinderjit Singh	2019	FAWPS2882F	Assistant Professor	Visiting Faculty at Indiana University, Bloomington, IN, USA	Indiana University, Bloomington, IN, USA	No
Varinderjit Singh	2018	FAWPS2882F	Assistant Professor	Research Paper selected as Editors' Suggestion	Physical Review C American Physical Society	No

Head  
Department of Physical Sciences  
I.K. Gujral Punjab Technical University  
Main Campus

2.4.4 Average percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government/Govt. recognised

3.4.2 The institution provides incentives to teachers who receive state, national and international recognitions/awards (5)

Options:

- A. All of the above
- B. Any 3 of the above
- C. Any 2 of the above
- D. Any 1 of the above
- E. None of the above

**D. Any 1 of the Above**

1. Commendation and monetary incentive at a University function	No
2. Commendation and medal at a University function	No
3. Certificate of honor	No
4. Announcement in the Newsletter / website	Yes

Name of Awardee	Year of Award	PAN	Designation	Name of the award, fellowship, received from Government	Name of the Awarding Agency	Incentives /Type of the
Amit Sarin	2017	AZTPS9627F	Associate Professor	Outstanding contribution in Reviewing	I-Manager's International Conference	No
Varinderjit Singh	2020	FAWPS2882F	Assistant Professor	Visiting Faculty at Indiana University, Bloomington, IN,	Indiana University, Bloomington	No
Varinderjit Singh	2018	FAWPS2882F	Assistant Professor	Research Paper selected as Editors' Suggestion	Physical Review C American	No



# **Policy Document / Undertaking**

## **INTERNAL QUALITY ASSURANCE CELL**

### **I.K. GUJRAL PUNJAB TECHNICAL UNIVERSITY**

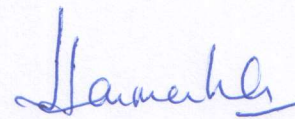
No. IKGPTU/IQAC/074

DATED 18/01/2022

#### **UNDERTAKING**

This is to certify that the drafting of Policy regarding Incentives to teachers who receive state, national and international recognitions/awards is under process and shall be notified after approval of the competent authority of the University.

This has been issued for the purpose of NAAC Applications.



**(Dr. Harmeen Soch)**  
**Director, IQAC**

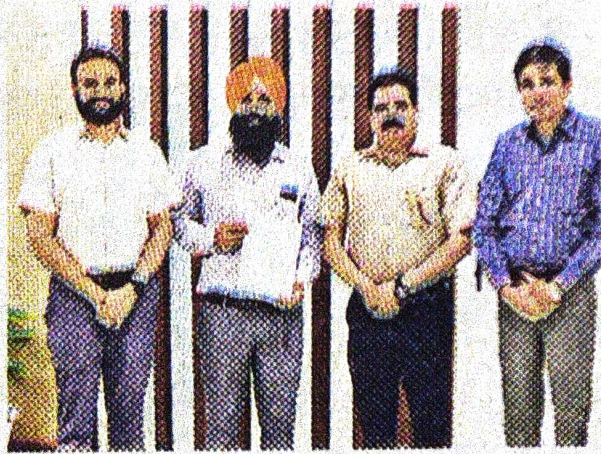


बाबा, प्रो. मनदीप सिंह, प्रो. रमजित सिंह, प्रो. मनजिंदर सूद व प्रो. मनप्रीत कौर और एनएसएस वालंटियर्स मौजूद रहे।

**एचएमवी में योग व मेडिटेशन सेशन...** जालंधर। एचएमवी के लिए योग और मेडिटेशन सेशन करवाया गया। सुनीता धवन और कोआर्डिनेटर जीवन में योग व मेडिटेशन के महत्व के बारे में बताया। मंच का संचालन सिम

## Incentive to the Teachers

# बतौर गेस्ट लेक्चरर इंडियाना यूनिवर्सिटी जाएंगे पीटीयू के सहायक प्रोफेसर वरिंदरजीत सिंह



चांसलर प्रो.(डॉ.) अजय शर्मा ने प्रो. वरिंदरजीत को दी शुभकामनाएं।

आईके गुजराल पंजाब टेक्निकल यूनिवर्सिटी के सहायक प्रोफेसर डॉ. वरिंदरजीत सिंह को अमेरिका बेस्ट यूनिवर्सिटी की तरफ से गेस्ट फैकल्टी के तौर पर कार्य करने का आमंत्रण भेजा गया है। इंडियाना यूनिवर्सिटी, ब्लूमिंगटन में डा. वरिंदरजीत सिंह ने अपने विषय से संबंधित जानकारी प्रदान की थी

जिसके बाद यूनिवर्सिटी की ओर से इन्हें ये मौका दिया गया है। चांसलर प्रो.(डॉ.) अजय कुमार शर्मा ने उनको शुभकामनाएं दी। नवंबर से वे वहां बतौर गेस्ट लेक्चरर जाएंगे। चांसलर प्रो. (डॉ.) अजय कुमार शर्मा ने कहा कि फैकल्टी व स्टूडेंट्स के लिए अंतर्राष्ट्रीय स्तर का एक्सपोजर जरूरी है।



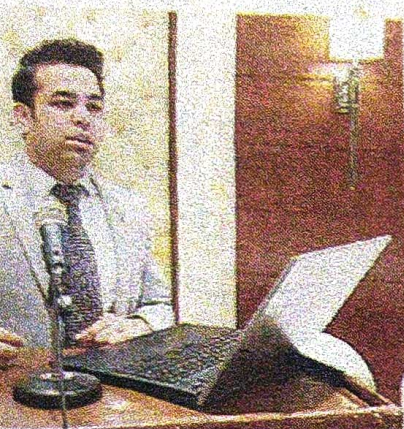
सेंट सोल्जर में इंजीनियरिंग में एडमिशन ले रहे छात्रों को राहत

## 70% से अधिक अंक पाने वाले



कमी की समस्या को लेकर पास आए थे। लोग बार-बार कर रहे हैं लेकिन समस्या का क्या जा रहा। विधायक परगट कि रोजाना दो-तीन सौ लोग लेकर उनके पास पहुंचते हैं। कि लोगों की मांग को देखते

में इन्कम टैक्स व पीटी बार ने इन्वेस्ट पर की चर्चा



ताब पर चर्चा के दौरान संबोधित वक्ता • जागरण

संवाददाता, जालंधर : इन्कम व जीएसटी बार ने इन्वेस्ट पंजाब र मीटिंग की। मीटिंग में पंजाब द्वारा नए उद्योगों को प्रोत्साहित क लिए बनाए मास्टर प्लान पर ई। लुधियाना से आए स्पीकर दित्य गुप्ता ने बताया की सरकार ब्र मे इंडस्ट्री की वर्तमान बदहाली प्रति को देखते हुए और उद्योगों को रोकने के लिए नए उद्योगों के क्रीम लांच की है। नई प्रॉपर्टी लेने वाले स्टांप ड्यूटी, सीएलयू फ्रीस, टैक्स आदि से राहत दी जाएगी। 17.10.2017 के बाद लगने वाली उद्योग और पुराने उद्योग में होने वाली पंशन कवर होगी।

र तरह की तार की होगी डिटिंग

इस तरह विधायक राजपूर बरान कहा कि सेंट्रल हलके में भी कई जगह पानी की कमी है। कई जगह पानी गंदा आ रहा है। निगम का सही काम करने पर फोकस नहीं है। उन्होंने कमिशनर से कहा है कि स्टाफ पर सख्ती करें। कमिशनर ने दोनों विधायकों को विश्वास दिलाया कि वह सभी विभागों में सुधार कर रहे हैं।

Coverage in Dainik Jagran Dated: 4th June 2019

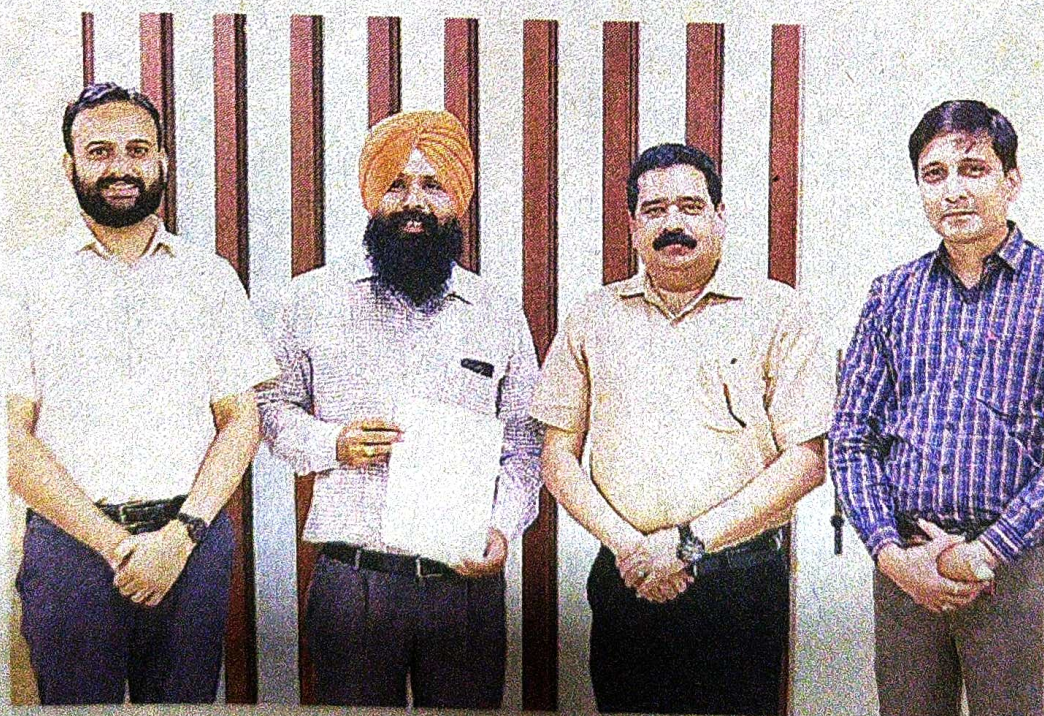
## डॉ. वरिंदरजीत यूनिवर्सिटी की गेस्ट फैकल्टी में करेंगे काम

जागरण संवाददाता, जालंधर : पीटीयू के सहायक प्रोफेसर डॉ. वरिंदरजीत सिंह को अमेरिका की इंडियाना यूनिवर्सिटी ब्लूमिंगटन की तरफ से गेस्ट फैकल्टी के तौर पर काम करने का निमंत्रण मिला है। डॉ. वरिंदरजीत सिंह को इसके साथ-साथ यूनिवर्सिटी की तरफ से वहीं रेगुलर सेवाएं भी देने और शोध की भी पेशकश

प्लांट का तोड़ा गई सावरज लाइन को पंजाब स्मॉल स्केल इंडस्ट्रीज एंड एक्सपोर्ट कारपोरेशन (पीएसआईसी) ने सोमवार को फिर से जुड़वा दिया है। फोकल प्वाइंट की सीवरेज लाइन को तोड़े जाने की वजह से सड़कों पर सीवरेज का पानी इकट्ठा होने लगा था।

इस संबंध में फोकल प्वाइंट

की है। यूनिवर्सिटी की तरफ से यह ऑफर मई महीने के अंतिम सप्ताह दिया है। उन्हें एक साल के लिए नियुक्त किया जा रहा है जिसकी शुरुआत एक नवंबर से होगी। पीटीयू के कुलपति डॉ. अजय कुमार शर्मा ने कहा कि फैकल्टी और स्टूडेंट्स के लिए अंतरराष्ट्रीय स्तर का एक्सपोजर बेहद लाजमी है।



पीटीयू के सहायक प्रोफेसर डॉ. वरिंदरजीत सिंह को अमेरिका की यूनिवर्सिटी में गेस्ट फैकल्टी के तौर पर आमंत्रित करने पर बधाई देते हुए कुलपति डॉ. अजय कुमार शर्मा • जागरण

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# E-copies of the Award Letters



## INDIANA UNIVERSITY

DEPARTMENT OF CHEMISTRY

College of Arts and Sciences  
Bloomington

November 1, 2019

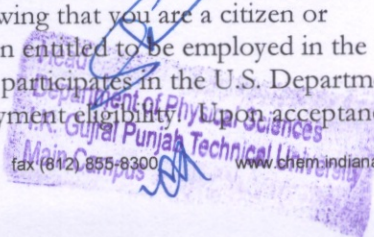
Dr. Varinderjit Singh  
Assistant professor  
Department of Physical Sciences  
IKG Punjab Technical university  
Jalandhar, INDIA

Dear Varinderjit,

I am delighted to extend an invitation to you to join my laboratory as a Visiting Faculty in the Department of Chemistry at Indiana University, Bloomington. This invitation is based upon our continued scientific discussions over the past year by e-mail and skype. I believe that your visit would allow us more effectively pursue our mutual scientific interests. Your visiting appointment would be for an initial 12-month period beginning January 6, 2020 and ending January 5, 2021. If mutually agreeable this offer could be extended for a second year. The minimum annual salary would be \$50,000 plus University employee benefits. The following webpage (<http://www.indiana.edu/~uhrs/benefits/index.html>) will provide you with details regarding IU employee benefits.

In your position as Visiting Faculty, you will participate in the full range of research activities undertaken by the group including analysis of existing experimental data as well as assisting with the planning and execution of experiments as funded by our Department of Energy grant. Your PhD in nuclear physics, training, and former experience in the group qualify you for this position.

The department will sponsor you for J-1 visa status during the period of your appointment. Please note that this offer must also gain final administrative approval and is subject to the University's receipt of verification of your credentials and other information required by law, and on your furnishing the federally required documentation showing that you are a citizen or permanent resident of the United States or an authorized alien entitled to be employed in the U.S. for the period of your appointment. Indiana University participates in the U.S. Department of Homeland Security's E-Verify Program to confirm employment eligibility. Upon acceptance

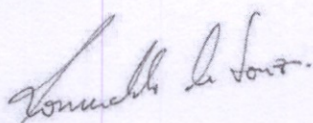





of your offer, you will receive an email containing information on employment eligibility verification and the E-Verify process. This appointment is also conditional on a positive outcome of a background check, a part of the appointment process for all faculty and staff at the University. The background check will be initiated and completed through eLink, the default web based system, once all appointment-related paperwork has been submitted to the Business Office.

Certain benefit plan enrollments must be made within 30 days of your date of hire. These include medical and dental plans, the IU Tax Saver Benefit Plan, and Personal Accident Insurance. Enrollments for these plans received after 30 days from your hire date cannot be processed and Open Enrollment is the next opportunity to enroll with an effective date of the following January 1.

Sincerely,



**Romualdo de Souza**  
*Provost Professor*  
*Professor of Chemistry and Physics*  
*Indiana University*  
*Bloomington, IN 47405*  
*(812)855-3767*  
*<http://nuchem.iucf.indiana.edu>*  
*Email: [deSouza@indiana.edu](mailto:deSouza@indiana.edu)*



Head  
Department of Physical Sciences  
I.K. Gujral Punjab Technical University  
Main Campus



## Probing the fusion of neutron-rich nuclei with re-accelerated radioactive beams


J. Vadas, Varinderjit Singh, B. B. Wiggins, J. Huston, S. Hudan, and R. T. deSouza\*  
*Department of Chemistry, Center for Exploration of Energy and Matter, Indiana University,  
 2401 Milo B. Sampson Lane, Bloomington, Indiana 47408, USA*

Z. Lin and C. J. Horowitz  
*Department of Physics, Center for Exploration of Energy and Matter, Indiana University,  
 2401 Milo B. Sampson Lane, Bloomington, Indiana 47408, USA*

A. Chbihi and D. Ackermann  
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M. Famiano  
*Department of Physics, Western Michigan University, Kalamazoo, Michigan 49008, USA*

K. W. Brown  
*Department of Physics and Astronomy, National Superconducting Cyclotron Laboratory,  
 Michigan State University, East Lansing, Michigan 48824, USA*

 (Received 14 September 2017; revised manuscript received 6 November 2017; published 27 March 2018)

We report the first measurement of the fusion excitation functions for  $^{39,47}\text{K} + ^{28}\text{Si}$  at near-barrier energies. Evaporation residues resulting from the fusion process were identified by direct measurement of their energy and time of flight with high geometric efficiency. At the lowest incident energy, the cross section measured for the neutron-rich  $^{47}\text{K}$ -induced reaction is  $\approx 6$  times larger than that of the  $\beta$ -stable system. This experimental approach, both in measurement and in analysis, demonstrates how to efficiently measure fusion with low-intensity re-accelerated radioactive beams, establishing the framework for future studies.

DOI: 10.1103/PhysRevC.97.031601

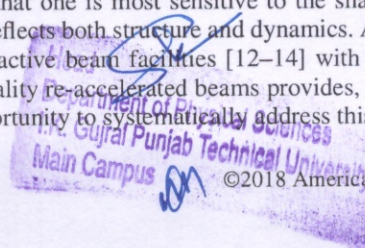
The recent coincident detection of gravitational waves in GW170817 [1] and a  $\gamma$ -ray burst in GRB170817A [2] marks the first observation of a binary neutron star merger [3,4]. The delayed optical emission spectrum that followed indicated the presence of heavy elements in the neutron star ejecta [5]. This result clearly established binary neutron star mergers as an important, potentially primary, site for heavy element nucleosynthesis. Ejecta resulting from the tidal disruption of the neutron stars as they merge reflects both their initial composition as well as the reactions that occur during the merger. Understanding the composition of the neutron stars is thus an important question in understanding heavy element nucleosynthesis.

Insight into the composition of some neutron stars prior to merging may be realized by considering the case of accreting neutron stars [6]. Heavy elements in the outer crust of an accreting neutron star are produced by fusion reactions [7,8]. Some of the resulting heavy nuclei become neutron rich through electron-capture reactions [9]. It has been proposed that fusion of neutron-rich nuclei occurring in the outer crust may be enhanced relative to their  $\beta$ -stable counterparts providing an important heat source that triggers an x-ray superburst [10].

As a nucleus becomes increasingly neutron rich, the extent of the neutron density distribution increases. Consequently, even if the density distributions were frozen through the fusion process the fusion cross section would increase in response to the larger geometric cross section. However, the fusion process is not static but dynamic. The decreased average binding energy of the outermost neutrons with increasing neutron number and the existence of low-energy collective modes act to make neutron-rich nuclei more polarizable. This increased polarizability, which can be viewed as the prelude to neutron transfer, increases the likelihood for fusion to occur. Thus, both static and dynamic factors impact the fusion cross section. By examining the fusion cross section with an increasing neutron number for an isotopic chain and observing an increase beyond the geometric expectation, one might extract the increased role of dynamics. Such general expectations are borne out by microscopic time-dependent Hartree-Fock calculations [11].

To determine how fusion evolves for increasingly neutron-rich nuclei in an isotopic chain, it is advantageous to measure fusion at near-barrier energies. It is in this near and sub-barrier regime that one is most sensitive to the shape of the barrier which reflects both structure and dynamics. A new generation of radioactive beam facilities [12–14] with the capability of high-quality re-accelerated beams provides, for the first time, the opportunity to systematically address this question. These

\*desouza@indiana.edu





Annexure d.4.4 S3.4.2  
Annexure - K



FUEL

# *Certificate of Outstanding Contribution in Reviewing*

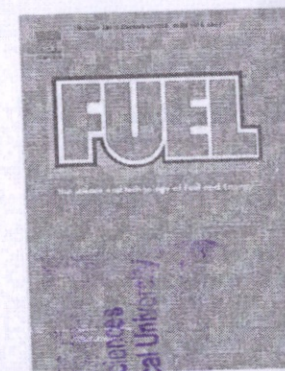
awarded December, 2017 to

**AMIT SARIN**

In recognition of the contributions made to the quality of the journal

**The Editors of FUEL**

Elsevier, Amsterdam, The Netherlands



Head  
Department of Physical Sciences  
J.K. Gujral Punjab Technical University  
Main Campus

