(Accredited with Grade 'A' by NAAC)

Supporting Documents Metric No- 6.3.2

6.3.2 - Total number of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year.

Year	Name of teacher	PAN	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support
2022	Mr. Nitesh Raj	CZPPK2743G	National Conference titled'' Smart India Hackthon''		Rs. 15,735/-
2022	Dr. Shaili Srivastava	AJDPN9834B	International Conference on ''Biotechnology ''at IIT Guwahati		Rs. 14423/-
2023	Ms. Kumud Dhanwantri	BWTPD0718E	International Conference titled "Eco Summit Congress 2023"		Rs. 1,35,450/-
2023	DR. (Prof.) Rajendra Prasad	AAAPP2371F	International Conference titled "Sugar Transporters as new determinants of drug resistance in Candida", Belgium		Rs. 1,53,000/-
2023	Dr. Subhra Das	APDPD2822B	International Conference "Solar world Congress 23, New Delhi		Rs.10,415/-

	. /		AMITY U	NIVERSIT	Y HA	RYANA	//		
	/	1		*			Dated:	17/101.9	2
AU	HI P. A.	129-42		2	_	I MATERIA	INTERN	LATIONAL.	1
NOTE	SHE	ET:FINANCI	AL ASSIS	MART IN	0	Hacktho	M FROM	25-29 Aug	ON
NATIO]	NALCON	FERENCE/V	VORKSHOP/.	angalury L	\mathcal{O}		IH)	203	<u>-</u>
***************************************	A	0 . 1	La l	Jan	a	usoat.	aternational Co	inference /wor	kshop
1,	litesh.	Tadia M	., been invited	for paper/oral/po 2022from/on &	ster pre	to R	be	org	anized
hitled()	Timest	ry of E	ducation.	from/on 🏖	5-99	4 Aug 202	L .		5
100 1211111			المبادرة المتحددة	tance to faculty m	ember/	faculties are en	ntitled, full Reg	astration Hee, D	OU70 OI
1.	As per po	licy guidelines i Idoing and Mea	or maneral assists Is to attend Con	ferences/Seminars	/Works	shops, not mor	e than once a y	ear and Intern	ational
	Conference	ces/Seminars no	ot more than one	e in two years.					
s					nder				
2. T	According S. No.	to the policy 1 Description	request for mar	cial assistance as u Requested Amo	ount	Remarks			
ŀ	(a)	Registration I	Poe ,					a. < 1	_
	(b)	Travel(Both V		Ps. 574	2/-	201.07	Total Exp.	11486/	77
	iO	Lodging	the death day	Rs. 1338			Inclassed.		
1	TOTAL	Any other C	Standed + TShe	Rs. 1338	- 1	- 17113			
1	(/ L - JIV		10.						
	Conferer	nce/Seminar	Place	National/Inter	Date (Fron	n – To)	Financial Provided	Assistance	
	 		-						
			L						N.
4.	l request return.	to kindly sanc	19112 tion Rsv	hich may be paid	on pro	esentation of b	ills/receipts alo	ong with the cl	aim on
5.	Put up fo	or approval plea	se				a	Meah	
		. 1		Sunt 12			Sign	ature with	
		6,17	- 1. alv	0 16/2	2		Nan	ne & Designat	tion
i.	iya <u>mark</u>	s by Hol. S.	<u> </u>	13/1				Nitesh &	
	Remorts	s by Registrar						Ke bearch	Al Owo Cite
	5. No.	Description		Requested Am	ount	Recommen	ded Amount	Remarks	300
	(a)	Registration		P	2	Da din m	- 1-di	-X.	4
	(0)	Travel(Both	Way)	Rs_57421	CISTON .	M 935	557	+ -X-	1
	(c) (d)	Lodging Any other (Stander	RA 13380	1-	TR4 13:	3801-	1-	1
	TOTAL		herasan to 7			RA 157	351-],
	(水 ゴト	o distru	· And de	ential long	12 1	三十.长四是这	2: = (E) mo	head of	J. 50%
	中	Cain	Jane CAC-	De Legis			Registrar.	MAM	
Recon	umendatio	n by PVC	m hi	9/0/2				*	16-
Vice C	hancellor.		/ \ \ \ \ \	7			*		

Vice Chancellor...

Department of Computer Science & Engineering

Annty School of Engineering and Technology

Amity University Haryana, Manesar, Gurgaon - 122 413

email: ssikka@ggn.amity.edu, sunil.sikka@yahoo.com

Phone: +91 9970168797, +91 9729212722

From: vcauh@ggn.amity.edu <vcauh@ggn.amity.edu>

Sent: Friday, September 9, 2022 1:31 AM

To: registrarauh < registrarauh@ggn.amity.edu>

Cc: Dr. Vikas Madhukar <vmadhukar@ggn.amity.edu>; Maj Gen (Dr) JS Dhull <jsdhull@ggn.amity.edu>; Shalini

Bhaskar Bajaj <sbbajaj@ggn.amity.edu>; Ved Prakash Rawat <vprawat@ggn.amity.edu>; Sunil Sikka

<ssikka@ggn.amity.edu>; Nitesh Raj <nraj@ggn.amity.edu>

Subject: Fw: SIH-2022

Dear Dr. Manuja,

Reference trailing mail.

Recommended to upload online for kind perusal of and approval by Hon'ble Chancellor Sir.

With Warm Regards,

PROF. P.B. SHARMA
PhD (Birmingham) FIE, FAeroS, FWAPS
Vice Chancellor
Amity University Gurgaon,

Manesar Pin 122413, India

Website: www.amity.edu/gurgaon Email: vcauh@ggn.amity.edu, pbsharma@ggn.amity.edu

Mob: 9810146096

"Amity University- A Research and Innovation driven University"

Past President, Association of Indian Universities (AIU)

Earlier- Founder Vice Chancellor Delhi Technological University Former Director, Delhi College of Engineering

Former Vice - Chancellor Rajiv Gandhi Technological University Bhopal - 462036, India

Former Professor IIT Delhi



From: Shalini Bhaskar Bajaj <sbbajaj@ggn.amity.edu>

Sent: Thursday, September 8, 2022 1:13 PM

To: vcauh@ggn.amity.edu <vcauh@ggn.amity.edu>

Fw: Selection for participation in Grand Finale - SIH 2022, Bangalore.

Sunil Sikka <ssikka@ggn.amity.edu>

To: Nitesh Raj <nraj@ggn.amity.edu>

0 5 attachments (1 MB)

Gmail - #SIH 2022 Team Promoted# - Your Team has been promoted to "Shortlisted Category" for Smart India Hackathon 2022.pdf; Gmail - #SmartIndiaHackathon 2022 - Team Members and Mentor Nomination Form.pdf; Gmail - #SmartIndiaHackathon2022 - Shell expert session on 13th August 11 AM.pdf; 1FpInh5O123LPQXB6k5DHOzA==.pdf; zT65hkSl2OSHL3JCEHMQAw==.pdf;

Regards,

Dr. Sunil Sikka

Associate Professor

Department of Computer Science & Engineering

Amity School of Engineering and Technology

Amity University Haryana, Manesar, Gurgaon - 122 413

email: ssikka@ggn.amity.edu, sunil.sikka@yahoo.com

Phone: +91 9970168797, +91 9729212722

From: vcauh@ggn.amity.edu <vcauh@ggn.amity.edu>

Sent: Thursday, August 25, 2022 8:18 AM

To: Shalini Bhaskar Bajaj <sbbajaj@ggn.amity.edu>

Cc: Sunil Sikka <ssikka@ggn.amity.edu>

Subject: Fw: Selection for participation in Grand Finale - SIH 2022, Bangalore.

Dear Dr Shalini,

Approved OD and 50% of Air fair as he is TA at AUH.

With Warm Regards,

PROF. P.B. SHARMA
PhD (Birmingham) FIE, FAeroS, FWAPS
Vice Chancellor
Amity University Gurgaon,
Manesar Pin 122413, India
Website: www.amity.edu/gurgaon
Email: vcauh@ggn.amity.edu,
pbsharma@ggn.amity.edu

Mob: 9810146096

"Amity University- A Research and Innovation driven University" Past President, Association of Indian Universities (AIU) Earlier- Founder Vice Chancellor Delhi Technological University Former Director, Delhi College of Engineering

Former Vice - Chancellor Rajiv Gandhi Technological University Fw: SIH-2022

Sunil Sikka <ssikka@ggn.amity.edu>

Wed 9/21/2022 4:35 PM

To: registrarauh@ggn.amity.edu>

Cc: vcauh@ggn.amity.edu <vcauh@ggn.amity.edu>;Shalini Bhaskar Bajaj <sbbajaj@ggn.amity.edu>;Ved Prakash Rawat <vprawat@ggn.amity.edu>;Nitesh Raj <nraj@ggn.amity.edu>

10 attachments (4 MB)

Bili1.pdf; Bili3.pdf; Bili4.pdf; Gmail - #SIH 2022 Team Promoted# - Your Team has been promoted to "Shortlisted Category" for Smart India Hackathon 2022.pdf; Gmail - #SmartIndiaHackathon 2022 - Team Members and Mentor Nomination Form.pdf; Gmail - #SmartIndiaHackathon2022 - Shell expert session on 13th August 11 AM.pdf; Ticket-1.pdf; Ticket-2.pdf; Fw: Selection for participation in Grand Finale - SIH 2022, Bangalore.; Bill2.jpeg;

Dear Sir

Please find here the request for financial approval for SIH-2022 in revised format along with all documents.

This the matter of pride that two teams (Bhartiya Rakshak and Tookivi) from our university participated in the Grand Finale of "Smart India Hackathon -2022 (Senior)". Both the teams were highly appreciated for the work they presented.

 Team Bhartiya Rakshak developed a drone-based Ambulances system to avert the challenges faced on ground during golden hour reaction time. The problem was given by Defence Research and Development Organization (DRDO), Ministry of Defence, Govt. of India.

The team participated in the Hackathon on 25-29 August 2022 at R.V University, Bengaluru, Karnataka

Team Tookivi developed project for height assignment to INSAT 3D/3DR Cloud data and its 3D visualization on Web. The problem statement was given by ISRO.

The team participated in the Hackathon on 25-26 August, 2022 at Gujarat Technological University, Ahmedabad, Gujarat

Following are the members who participated in the team

Team-I: Bhartiya Rakshak

Name	Programme
Sanaya Kalra	M.Tech(DT)
Nemani Kumar Lekkala	M.Tech(DT)
Nikhil Sapre	M.Tech(DT)
Aurodeep Roy	M.Tech(DT)
Rajat Paul	M.Tech(DT)
	Sanaya Kalra Nemani Kumar Lekkala Nikhil Sapre Aurodeep Roy

6 Nitesh Raj M.Tech(DT)

Team -II: Tookivi

S.No.	Name	Programme
1	Ridheesh Amarthya	B.Tech+M.Tech(AIR)
2	Aryan Bhardwaj	B.Tech+M.Tech(AIR)
3	Aryaman Anand	B.Tech+M.Tech(AIR)
4	P Satwik	B.Tech+M.Tech(AIR)
5	Navya	M.Tech(Data Science)
6	Mohammed Baquer	B.Tech+M.Tech(AIR)

Both the teams incurred some expenses for which they are requesting reimbursement. The detail
of expenses are as follows

S.No.	Description	Amount (Rs.)	Remark .
1.	2 Standees for (one for each team) displaying University and Team details	4130	Bills enclosed
2.	T-shirt for each participant	9250	Bills enclosed
3.	Traveling expenses of Mr. Nitesh Raj to participate in SIH Air Fare From Patna to Bengaluru(Rs. 5462/-) Bengaluru to Delhi (Rs. 6024/-)	5742	50% of total expenses. As per the approval of Hon'ble VC Sir. Approval mail enclosed. Tackes enclosed
	Total	19122/-	

• You are requested to kindly approve reimbursement amount of Rs. 19122/- (Details are mentioned in the above table).

Regards,

Dr. Sunil Sikka Associate Professor

Reminder for all IICs colleges to Register for Smart India Hackathon (SIH) 2022

no-reply <admin@aicte-india.org>

Tue 4/5/2022 2:34 PM

To: Ved Prakash Rawat <vprawat@ggn.amity.edu>

Dear Sir/Ma'am,

Greetings from the Ministry of Education's Innovation Cell (MIC) and the All India Council for Technical

The Ministry of Education's Innovation Cell (MIC) in Coordination with All India Council for Technical Education (AICTE) has launched Smart India Hackathon(SIH) 2022 during the National Innovation Week held under Azadi ka Amrit Mahotsav on 11th Jan 2022.

In the last 5 years, SIH has evolved into the world's Largest Open Innovation Model to solve some of the pressing problems we face in our daily lives, thus inculcating a culture of product innovation and problem-solving mindset. Moreover, the Hon'ble Prime Minister of India has applauded the SIH initiative on multiple occasions which has helped kick start the hackathon culture in India. The previous editions of SIH have proven to be extremely beneficial for the students in establishing startups and employment opportunities in various organizations.

Likewise, the previous editions of Smart India Hackathon, this year's edition also focuses on software and hardware approaches to develop innovative solutions against challenges faced by India's governing agencies including Ministries, Departments and PSUs.

However, it has come to our notice that your institute is still not registered for the SIH 2022. The deadline for registration, nomination and idea submission has been extended to April 15,

In addition to this, to ease the process, a repository and telegram group have been created for College SPOCs that contain necessary information and query addresses and can be accessed with below links. Google Drive Shared

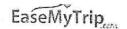
link: https://drive.google.com/drive/folders/1KaCL9G6W7mIZbIVBUXPOBI3gLF2EiDc0

Telegram group Link: https://t.me/+pE DhRnnttE3MGM9

or any queries, feel free to contact our implementation team at the link: https://sih.gov.in/implementationteam

__test

With Best Regards, SIH Team, Ministry of Education's Innovation Cell AICTE HQs, New Delhi. 011-29581336 ||sih@aicte-india.org ||https://sih.gov.in/



Onward Flight

Patna to Bangalore | Tue,23Aug2022

SpiceJet SG- 767 (Operated By: SG)

PAT 16:40

Tue-23Aug2022 Terminal 1

02h 50m Economy BLR 19:30

Tue-23Aug2022 Terminal 1

Baggage Info - Check-in: 15 KG , Cabin: 7 KG | SpiceSaver Fare

Traveller Details

9 8							
	Passenger	Airline PNR	Ticket Number	Travel Insurance	Class Cabin	Status	į
	V29 (44) (41)	f				-	860
3	Mr. Nikesh Kumar	NDDWPW !	NDDWPW///	Not Confirmed	W Economy	C Tes	1



Booking ID -EMT103274059 PAT-RI R

Fare Summary

Thank you for making the payment of 5462 INR. Fare details are mentioned below

Common of the co	
Fare Details	Amount (INR)
E. TFare	00 00e8 F
Taris	₹ 875.00
Discount	₹ (-) 4344.00
Received the Charges	. ≰0.00
K3	₹ 430.00
Total	₹ 5462.00

Pa	tna-Bangalore	Cancellation Charges		
Type	Cancellation Time	Airline		
ADT	96 hours to 4 hours of flight Departure	3600		

Cancellation Charges

EaseMyTrip Fee: 300 per pax per sector

Terms & Conditions

- All passengers, including children and infants, have to present their valid ID proof at the time of check in.
- We recommend you check-in at least 3 hours prior to departure of your domestic flight and 4 hours prior to your international flight Carriage and other facilities provided by the carrier are subject to their Terms and Condition. We are not liable for missing any facility of the carrier.
- To cancel tickels in less than 6 hours prior to departure, please contact the airlines directly. We are not at all responsible for any losses on receiving the request in such cases.
- Recheck your baggage with your respective airline before travelling for hassle-free travel experience.
- Due to the security, reasons and Government regulations, passengers flying on destination like Jammu and Srinegar are not allow to carry any Hand
- Baggage more than specified units is subject to a charge to be paid at the airport during check-in. (Baggage allowance differ for infants)
- Partial cancellation is not allow for Round-trip fares.
- Partial cancellation is not allow for tickets booked under Friends & Family fares.
- The No Show refund* should be collected within 90 days from date of departure. Group Booking Rules will be applicable if passengers are 9 or more in numbers. Company is not responsible for any delay or cancellation of flights from airline's end.
- Kindly contact the airline at least 24 Hours before to reconfirm your flight details giving reference of Airline PNR Number.
- All reservations done through our website are as per the terms and conditions of the concerned airlines. Any modification, cancellation and refund of the airline tickets shall be strictly as per the policy of the concerned airlines and we deny all liability in connection thereof.
- Unaccompanied Child: Children below the age of 12 will not be accepted for carriage unless they are accompanied by a person of at least 18 years of age. Such child/children must be sealed next to the accompanying adult. The accompanying adult is solely responsible for the well-being of the child/children traveling together with him/her. This also includes ensuring that seats are booked to ensure child/children and an accompanying adult are
- To review your baggage allowance, please contact Airline well before your flight.

- All time indicated are the local times (in 24 hrs. format) at the relevant airport.
 Company is not responsible for any delay or cancellation of flights from airline's end
 Carcellation and date change fees are applicable before departure and per passenger basis. In case of amendment, along with the airline and EMT fees, you will also have to pay fare difference, if any
 Kindly ensure that you have the relevant visa, transit visa (if applicable), immigration clearance and travel with a passport, with a velidity of at least 6
 Some airports become the procedure of the particle procedure.
- Some airports have multiple terminals catering to domestic/international flights, please check the departure/arrival terminal of your flight with the airlines before reaching airport.
- Convenience fee is non-refundable in case of ticket cancellation by the user, or flight cancellation by the airline.
- The amount paid for the cancellation protection will not be refunded under this offer at any circumstances.



Onward Flight

Bangalore to Delhi | Wed, 51Aug2022

SpiceJet SG- 536 (Operated By: SG)

BLR 17:30

Wed-31Aug2022 Terminal 1

02h 35m Economy **DEL** 20:05

Wed-31Aug2022 Terminal 1C

Baggage Info - Check-in: 15 KG , Cabin: 7 KG | SpiceSaver Fare

Traveller Details

	Passenger	Airline PNR	Ticket Number	Travel	Class I Cabin	Status
# G 1	s ees a maa haaraan			Insurance	1 2 2 2 1	Jeans
N.	k. Nilesh Kumar	E8F34S	E8F345/1/1	Not Confirmed	WIEconomy	Carolina



Booking ID -EMT103322246 **BLR-DEL**

Fare Summary

Thank you for making the payment of 6024 INR. Fare details are mentioned below

	-
Fare Details	Amount (INR)
Paric Fale	The state of the s
El Crate	₹ 8500.00
Tend	₹ 1046.00
Discont	₹ (-) 3954.00
Product is Charges	₹000
K3	₹ 439,00
Total	₹ 6024.00
The second secon	

Ва	ngalore-Delhi	Cancellation Charges
Туре	Cancellation Time	Airline
ADT	Before 96 hours of flight Departure	3100
ADI	96 hours to 4 hours of flight Departure	3600

Cancellation Charges

EaseMyTrip Fee: 300 per pax per sector

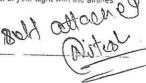
Terms & Conditions

- All passengers, including children and infants, have to present their valid ID proof at the time of check In.
- We recommend you check-in at least 3 hours prior to departure of your domestic flight and 4 hours prior to your international flight
- Carriage and other facilities provided by the carrier are subject to their Terms and Condition. We are not liable for missing any facility of the carrier.
- To cancel lickets in less than 6 hours prior to departure, please contact the airlines directly. We are not at all responsible for any losses on receiving the
- Recheck your baggage with your respective airline before travelling for hassle-free travel experience.
- Due to the security, reasons and Government regulations, passengers flying on destination like Jammu and Srinager are not allow to carry any Hand Baggage.
- Baggage more than specified units is subject to a charge to be paid at the airport during check-in. (Baggage allowance differ for infants)
- Partial cancellation is not allow for Round-trip fares.
- Partial cancellation is not allow for tickets booked under Friends & Family fares.
- The No Show refund* should be collected within 90 days from date of departure. Group Booking Rules will be applicable if passengers are 9 or more in numbers. Company is not responsible for any delay or cancellation of flights from airline's end.
- Kindly contact the airline at least 24 Hours before to reconfirm your flight details giving reference of Airline PNR Number.
 All reservations done through our website are as per the terms and conditions of the concerned airlines. Any modification, cancellation and refund of the airline tickets shall be strictly as per the policy of the concerned airlines and we deny all liability in connection thereof.
- Unaccompanied Child: Children below the age of 12 will not be accepted for carriage unless they are accompanied by a person of at least 18 years of One companied Unite: Online below the age of 12 will not be accepted for carnage diress they are accompanied by a person of the age. Such child/children must be sealed next to the accompanying adult. The accompanying adult is solely responsible for the well-being of the child/children traveling together with him/her. This also includes ensuring that seals are booked to ensure child/children and an accompanying adult are sealed together.
- To review your beggege allowance, please contact Airline well before your flight.
- All time indicated are the local times (in 24 hrs. format) at the relevant airport.
- Company is not responsible for any delay or cancellation of flights from airline's end
 Cancellation and date change fees are applicable before departure and per passenger basis. In case of amendment, along with the airline and EMT fees, you will also have to pay fare difference, if any
- Kindly ensure that you have the relevant visa, transit visa (if applicable), immigration clearance and travel with a passport, with a velidity of at least 6 months as on date of travel. (For international travel)
- receipts as on date of travel. (For international travel)

 Some airports have multiple terminals catering to domestic/international flights, please check the departure/arrival terminal of your flight with the airlines before reaching airport.

 Convenience fee is non-refundable in case of ticket cancellation by the user, or flight cancellation by the airline.

 The amount peid for the cancellation protection will not be refunded under this offer at any circumstances.



Ph.: 9873717196



ENTERPRISES

GENERAL ORDER SUPPLIER

WH-34, 2ND FLOOR, MAYAPURI INDUSTRIAL AREA, PHASE-I, NEW DELHI - 110064.
Email: angadenter87@gmail.com

lnv	oice No.: 424	2				Dated	. 0.3/0	9/2022
(20)	22-23) Eiver (Billed to) Amity University	Cons	ignee (Shipped	to)			
	aryana.	.						

	State Code	1					State C	ode
		GSTI	_					
GST	IN L	1 .00						
GR N	lo Date Veh. No	Tpt.	,			Tax is Payal	ole on Reverse	Charge : (Yes/No)
Sr. No.	DESCRIPTION OF GOODS	HSN Code	Qty	Rate ₹	Taxable Value	IGST %	IGST Amount	Amount With GST
1.	Standee (6ft x 3ft)	7616	01 pc	1500	1500	18	270	1770.00
	2 m 2 v - 45 5 50 500 5			E 14 64 45				
J								
1			l					
	*							
-		1		Total	1500		270	1770.00
-	One thousand seven hundred seve	nty only	7	-		Taxab	le Value	1500.00
inv	oice Value (in words) . One thousand seven hundred seve					IGST	Amount	270.00
					Carta	ge/Labo	ur/Fitting	
B	ANK DETAIL: Bank Name: AXIS BANK LT /c No.: 912020068003324	TIB000	1602				inded off	
B	ranch : Lajwanti Garden, Janakpuri, New De						TOTAL	1770.00
Ce	Certified that the Particulars given above are true and correct					1 35 Harry D		RPRISES
Re	Celved Griedde Ruinber.			risdiction	- For:	HUUH	LIVIN	- KIOLO
or th	& O. E.: 1. Goods once sold will not be taken back. 2. All disputes ally. 3. Our risk & responsibility ceases once the goods leave our ecarrier. 4. Interest @ 24% P.A. shall be charged if bill is not paid acceived, the above mentioned goods in good con	oremises on on present	or nange ation.	d over to		4	PA	
	uslomer's Signature						Authoris	ed Signator

VARSHAAD TEXTILE PRIVATE LIMITED

NO: 326, 3RD FLOOR, TOWER - B, SPAZEDGE, SECTOR - 47, SOHNA ROAD, GURGAON - 122002, HARYANA, INDIA

GST NO: 06AAICV5311Q1ZW

		PROFO	RMA INV	OICE	
PI NO :	· P	PI - 2223000	5	DATE OF ISSUE :	25/08/2022
SWARE TRANSPORTED CONT.	Amity Univers	sity		DATE OF REVISE :	NA
ADDRESS:	Gurgaon				
CONTACT PERSON : _ PHONE NUMBER : _ END BUYER :					
DESCRIPTIO	N	COLOUR	PRICE/PC	QTY IN PCS	VALUE
100% Cotton T shirt Pique Black with Logo		Black	1000.00	5.00	5000.00
TOTAL VALUE					
ADD SGST RATE @ 2.	5%				9
ADD CGST RATE @ 2.5	5%				
ADD IGST RATE @ 5%					250.00
	TOTAL				5250.00
VALUE IN INR (IN WO	ORDS) : Five	Thousand Ti	wo Hundred an	nd Fifty Only	

PAYMENT TERMS: 7 days upon receipt of Goods

SHIPMENT TERMS: Door Delivery SHIPMENT FROM: Gurgaon

SHIPMENT DESTINATION: Gurgaon SHIPMENT MODE: By Courier DELIVERY DATE: 20th August BANK ACCOUNT DETAILS:

NAME OF BENEFICIARY: VARSHAAD TEXTILE PRIVATE LIMITED

BANK NAME : IDFC FIRST BANK

ADDRESS : GURGAON SOHNA ROAD BRANCH, GROUND FLOOR, UNIT NO :110-111, GURGAON - 122101

A/C NUMBER : 10087350686 IFSC CODE : IDFB0020129

REMARKS :

- 1) Bulk inspection Standard will meet US 4 Point System Standard
- 2) Entire Bulk can be accepted as average 30 Points/100 Sq Mtr
- 3)Tolerance of +/- 3 % in Quantity is acceptable in each Colour
- 4) Light Source D 65
- 5) If any Quality issues should be Intimated to us within 7 days of receipt of Goods at your ware House

For and On behalf of

Authorized Signature

PRIVATE LIMITED

VARSHAAD TEXTIL

BUYERS CONFIRMATION SIGN

Authorised Signature

SFORTSTHAT LLP HINO:793 A, Haibatpura, Najafgarh	Invoice No. 3012	Dated 24-Aug-22	
New Delhi, South West Delhi-110043	Delivery Note	Mode/Terms of Payment	
GSTIN/U(N: 07AECFS9721G2ZV State Name: Delhi, Code : 07	Reference No. & Date.	Other References	
Suyer (Bill to)	Buyer's Order No.	Dated	
eam Bhartiya Rakshak	Dispatch Doc No.	Delivery Note Date	
State Name : Delhi, Code : 07	Dispatched through	Destination	
**	Terms of Delivery		
*			

	Description of Goods	HSN/SAC	Quantity	(Incl. of Tax)	Rate	per	Amount
Hack	kathon T-Shirts	6109	8 PCS		476.19	PCS	3,809.52
		CGST SGST					95.24 95.24
	y .						
	ě						
	Commence of the commence of th	Total	8 PCS	<u> </u>	•		₹ 4,000.00

Amount Chargeable (in words)

INR Four Thousand Only

E. & O.E

HSN/SAC	Taxable Value	Central Tax		State Tax		Total
\		Rate	Amount	Rate	Amount	Tax Amount
.09	3,809.52	2.50%	95.24	2.50%	95.24	190.48
Total	3,809.52		95.24	ŀ	95.24	190.48

Tax Amount (in words): INR One Hundred Ninety and Forty Eight paise Only

<u>Declaration</u>

We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct. for SPORTSTHAT LLP

Authorised Signatory

This is a Computer Generated Invoice



THE ENTERNAL

Email - delhiprintingpress.kk@gmail.com

THE ADVERTISING COMPANY

Mad Office : - Delhi Printing Press, Near SBI Bank, Opp. Domino's Above Pizza Hut, Najafgarh, New Delhi - 118843 Branch Office: Main Khaira Mor, Near Shubham Store, Najafgarh, New Delhi-110043

th socied	113			-	Date 32/08/20	93
voice No.	B. B.	Ten	~ R	hasit	wa Raksh	akl
2 (J 1 2 En	3Business N	ame	J. 66	() . history ve v	tate Code <u>O</u>	<i>i</i>
J.1688				= = = = = = = = = = = = = = = = = = =		
ESTIEND	2247787772778788887887887887887887887887887	i e e e e e e e e e e e e e e e e e e e	Total	Rate	AMOUNT	Year and the second
5	DESCRIPTION OF GOODS	HSI:/GAC	Qty.	15010	Rs.	Ps.
	SIZE 3 X6	NORACE SCIENCISCO	ATTES.		2000	MITTER PROPERTY AND PROPERTY AN
1	SIZE 3×6		TA CANADA MATERIAL DATABASINA (MATERIAL PATERIAL		T LIAN TO THE TOTAL AND THE TO	
			And the state of t			
The state of the s		The second secon	i son interest de la company d	TELLACION PACALATION TO THE STATE OF THE STA		
enter de la matthoche de la constitución de la cons		CONTROL OF THE PROPERTY OF THE	NATIONAL CONTRACTOR CO	A CALLES AND A CAL	THE REPORT OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED	
man, se and		Total			2000	
		CGST @	<u> </u>	%	180	
- J	fords Two Thousand Those	SGST @			180	**
Timmy	sids Sixty 6 Wy	igst @			<u>d</u>	

□CASH □CHECK □NEFTLETGS □ONLINE For DELIME PRI

Grand Total

phonePe pastm (e lage

2360

Conjust to Delhi Jurisdiction.

. Goods once sold will not be taken back.

We have no responsibility for any loss & damage during transit.

: 31586869675

: SBIN0001419

Our responsibility ceases on the delivery of goods.

CREEDING PRESS CREEDING SIGN.

Bell afforted

AMITY UNIVERSITY HARYANA

Dated: 22. October, 2023.

NOTE	SHEET:FINANCIAL	ASSISTANCE	ТО	ATTEND	INTERNATIO	NIAI	,
NATIONA	ALCONFERENCE/WORK	SHOP/			FROM	/	ON
	AT				1110111		OIV

I, ...Dr Shaili Srivastava..., been invited for paper/oral/poster presentation in International Conference /workshop titled (2nd International Conference on Advances and Innovations in Biotechnology for sustainable Bioresources and Bioeconomy (AI-BSBB2023)] to be organized by... at AKS University, Satna (MP) 485001 India.).from/on during 22-25 November, 2023 at Satna M.P.

 As per policy guidelines for financial assistance to faculty member/ faculties are entitled, full Registration Fee, 50% of Travel, Lodging and Meals to attend Conferences/Seminars/Workshops, not more than once a year and International Conferences/Seminars not more than once in two years.

2. According to the policy I request for financial assistance as under: -

<u>S. No.</u>	Description	Requested Amount	Remarks
(a)	Registration Fee	Rs 45,00.00/-	Rs 4500.00
(b)	Travel (Both Way)	Rs 2427.00/-	Rs 1214.00
©	Lodging	Rs 6000.0/-	Rs 3000.00
(d)	Any other		-
TOTAL	8	Rs 12,927.00/-	Rs 8714.00/-

3. I am working with Amity University, Haryana since (5 August 2013) and has availed the financial assistance till date, as per details below: -

Conference/Seminar /Workshop	Place	National/Inter national	Date (From - To)	Financial Provided	Assistance
BSBB-2022	IIT, Guwahati	,	7-11 December 2022	Rs 14,000.0/-	

 I request to kindly sanction ... Rs 8714.00/- .. which may be paid on presentation of bills/receipts along with the claim on return.

Put up for approval please

Remarks by HoI.....

Signature with Name & Designation Dr. Shauli Snivastevo. Associate Professor ASEES, AUH

Remarks by Registrar

S. No.	Description	Requested Amount	Recommendate	
(a)	Danist C		Recommended Amount	Remarks
(4)	Registration Fee	Rs 4500.00	Rs. 4500. 00	
(b)	Travel(Both Way)	Rs 2427.00	1.3. 15 00. 00	
()		163 2427.00	ls. 1214.00	
(c)	Lodging	Rs 6000.0		
(d)	Any other		Rs. 3000.00	
. ,	my other			
TOTAL		Rs 12,927.00		
		100 12,727.00	Rs.8714.00	

Registrar. MAN - V

Recommendation by PVC

31/1.12

Vice Chancellor.



Shaili Srivastava <shailisrivastava05@gmail.com>

CONGRATULATIONS - Abstract Acceptance | AI-BSBB 2023 | International Conference

aibsbb 2023 <aibsbb2023@aksuniversity.com> To: Shaili Srivastava <shailisrivastava05@gmail.com> Cc: vivekagnihotri1995@gmail.com

Thu, Oct 19, 2023 at 4:35 PM

Dr. Shaili Srivastava Amity University, Haryana Conference Registration Number: 1D300055

On behalf of the Organizing Team of AI-BSBB 2023 we would like to inform you that your ABSTRACT has been SELECTED in the forthcoming international conference (AI-BSBB 2023). TITLE of ABSTRACT: Impact of chromium and lead on seedling growth and germination in Datura stramonium.

Your Title of Abstract has been considered for SHORT ORAL PRESENTATION.

- We would also like to inform you that please do visit our website on a regular basis for latest updates.
- The detailing of the program schedule/List of selected Abstracts and much more will be shared with you all very

We request you to complete the REGISTRATION PROCESS as early as possible.

Thank You Organizing Team AI-BSBB 2023 AKS University, Satna (MP), 485001, INDIA Conference Website: https://aibsbb2023.aksuniversity.ac.in/

AIBSBB2023_Flyer_Final.pdf 16216K

IRCTC Review Journey

SATNA to ANAND VIHAR TRM | Sun, 26 Nov

REWA ANVT EXP (12427)		
17:30 SATNA	13:10	06:40
Sun, 26 Nov		ANAND VIHAR TRM Mon, 27 Nov
1 Adult AC :	3 Tier (3A) General Boarding at Satna Boarding Date: 26 Nov 2023 17:3	0
Passenger Details		
1 Shaili S Nigam 45 yrs Female India Upper		^
Your ticket will be sent to sh******@rediffmail.com / 98*****65		
	View Cancellation Policy (http://contents.irctc.co	p.in/en/Refundrule2015.pdf)
	=q7Y	

ANVT REWA EXP (12428)	
22:05 ANAND VIHAR TRM Wed, 22 Nov	09:40 satna
1 Adult AC 3 Tier (3A) General Boarding at Anand Vihar Trm Boarding Date: 22 Nov 2023 22:09	Thu, 23 Nov AVAILABLE-0178
Passenger Details	
1 Dr Shaili Nigam 45 yrs Female India Upper	^
Your ticket will be sent to sh******@rediffmail.com / 98*****65	
View Cancellation Policy (http://contents.irctc.co.in/en/	/Refundrule2015.pdf)

Enter Captcha

₹ 1210.75

Continue





registration)

Download

Login



Registration & Sponsorship

Registration

Registration Fee

REGISTER

	Early Registration (30th October 2023)	Late Registration (31st Oct-22th Nov 2023)
BRSI Members/SLS Members		
Delegates	INR 4500*	INR 6000*
Scholars	INR 3500*	INR 4000*
Accompanying person	INR 2000*	INR 2500*
Non BRSI Members/Non SLS Members		
Delegates	INR 5500*	INR 6500*
Scholars	INR 4500*	INR 5000*
Accompanying person	INR 2000*	INR 2500*

	n e e e e e e e e e e e e e e e e e e e	Early Registration (30th October 2023)	Late Registration (31st Oct-22th Nov 2023)	
	Student (AKS University)	INR 3000*	INR 3500*	
	Student (Others)	INR 3500*	INR 4000*	
С	International Delegates	-		
	Delegates	USD 250	USD 300	
	Students/Scholars	USD 150	USD 200	
	International Delegates	USD 100	USD 100	

Fee Details

 Fee includes admission to scientific sessions, breakfast, lunch, dinner, tea, conference kit and cultural program.

Workshop Fee Details

INR 500

Cancellation and Refund

Cancellation		Refund	
TILL 30-Aug-2023		90%	
TILL 05-Sep-2023		50%	
AFTER 15-Sep-2023		No Refund	
	8		

For any further details, please contact:

Vivek Agnihotri

Mob: +91-9302812369







2nd International Conference —

Advances and Innovations in Biotechnology for Sustainable Bioresources and Bioeconomy (AI-BSBB2023)







22-25 November, 2023 Satna, (MP) 485001 INDIA

Important Dates

01 JUNE 2023

Contributory Abstract Submission Opens

25°CT.

Contributory Abstract Submission Ends

20₂₀₂₃

Registration Closes at Normal Rate

22 NOV. 2023

Registration Closes with Late Fee

In Association With













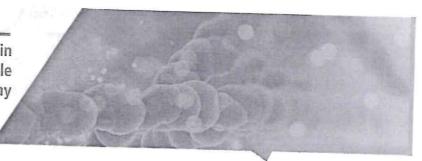


Organizer

Department of Biotechnology AKS University, Satna (MP) - 485001 INDIA



Advances and Innovations in Biotechnology for Sustainable Bioresources and Bioeconomy (AI-BSBB2023)



AI-BSBB2023

AI-BSBB2023, an international conference focusing on recent

developments in the frontier areas of Biotechnology, will bring together scientists, engineers, and other experts from across the world to deliver talks on recent advancements in the fields of Industrial Biotechnology, Medical Biotechnology, Environmental Biotechnology, and Food & Agriculture Biotechnology.

It is planned as a major event to be held in Satna (Madhya Pradesh), India, from November 22-25, 2023, with the participation of a large number of active researchers from across the world.

This conference will provide a common forum for researchers, practitioners, and scientists to present and discuss the most recent innovations, trends, and tactical challenges associated with Biotechnology.

Highlights of the Al-BSBB2023

- Global platform to address the impact of Climate Change and Biotechnology Innovations in its mitigation
- International Scientific interaction on biotechnology advances and Innovations in Green Energy,Resource Recovery, Biobased circular economy, Bioprocessing and Bioprospecting to meet the Sustainable Development Goals.
- Opportunities to interact with internationally renowned scientists.
- 8 thematic scientific sessions, 100+ invited talks, oral & Poster presentations.
- International Platform to present and share your Scientific Developments.
- Awards and Certificates to young researchers in each thematic area (individually).

THEMATIC AREAS

EB - Energy Biosciences

MB - Microbiome

FAB - Food and Agricultural Biotechnology

IMB - Industrial Microbiology and Biotechnology

BCB - Bioinformatics and Computational Biology

MPB - Medical and Pharmaceutical Biotechnology

EBCC - Environment Biotechnology and Climate Change

NT -Nanobiotechnology



AKS UNIVERSITY SATNA

AKS University, Satna 485001 Madhya Pradesh has been established by Government of Madhya Pradesh by an Act No.44 of 2011 of Madhya Pradesh State

Legislative Assembly (Vidhan Sabha) and is recognized by University Grants Commission (UGC), a statutory body of the Government of India under 2(f) of UGC Act. The curriculum, course offering, and the Centers of Excellence at AKS University are all aimed at knowledge creation & skill development. The University is primed to fulfill its mission of developing & arming human resources with modern applied knowledge & competencies, harnessing knowledge for addressing multifarious local, regional & national challenges including creating skilled manpower to support the leapfrogging economic growth of India, enhancing engineering competitiveness through technology-development & technology-induction, enhancing agricultural productivity through Biotechnology & other innovations, environmental conservation through innovative technology & approaches.

About Organizing Department

The University's Department of Biotechnology aims to offer top-quality education with an emphasis on practical learning and research opportunities. Our goal

is to produce highly skilled biotechnocrats and entrepreneurs who can meet the demands of both academia and industry in the challenging fields of Microbiology and Biotechnology.

The Biotech Research Society, India (BRSI)

The aim of the Biotech Research Society of India [BRSI] is to promote R&D in biotechnology, bring interaction between the academic institutes and

biotech industries, interact with the industries and help them resolve their problems as well as make them aware of the new developments in the biotech sector, provide and arrange training in biotechnology, dissemination of biotech knowledge through the organization of lectures, seminars, and symposia on scientific programs and social missions

CONFERENCE CHAIR



Prof. Ashok Pandey CSIR-IITR, Lucknow, India

Prof. Samir Khanal General Secretary - IBA University of Hawaii, Honolulu, USA



INTERNATIONAL CHAIRS

Prof. Mohammad Taherzadeh University of Boras, Boras Sweden

Impact of chromium and lead on seedling growth and germination in Datura stramonium. L

Shaili Srivastava1*, Parveen Kanwar1 and Shalini Purwar2

- 1. Amity School of Earth and Environment Science, Amity University, Gurugram, Haryana, India
- 2. Department of Basic and Social Sciences College of Forestry, Banda University of Agriculture and Technology, Banda, UP

*shailisrivastava05@gmail.com

Abstract

The aim of this study is to conduct a comparative and comprehensive evaluation of the extraction and growth potentiality of *Datura stramonium*. *L* for chromium and lead. The seed germination test was conducted in the presence of lead (Pb) and chromium (Cr) at 10 ppm, 25 ppm, and 50 ppm concentrations. Bioaccumulation of Pb and Cr in plant tissue was analyzed to determine the morphological factors, photosynthetic pigments, peroxidase enzyme activity and the presence of organic compounds in *Datura stramonium*. *L*. The results of the study showed that there is no significant difference between the growth parameters of control and 10 ppm concentration of Pb and Cr. Whereas with an increase in the concentration of heavy metals (Pb and Cr; 25 and 50 ppm), there is a decrease in photosynthetic pigment, bioaccumulation, and translocation factor. Maximum tolerance index (TI) and relative germination rate were observed 92% and 1.0 respectively at 10 ppm Pb and Cr concentration. In FTIR analysis, revealed that the presence of charged functional groups that bind with respective metal ions to decontaminate soil and land. The study revealed that *Datura stramonium*. *L* can easily germinate in Cr and Pb-contaminated soil and can be a suitable candidate as an excluder for Cr and Pb-contaminated soil.

Keywords. *Datura stramonium*. L, FTIR, Seed germination, Bioaccumulation factor, Tolerance index, Peroxidase enzyme activity.

AMITY UNIVERSITY HARYANA

Dated: 15th March 2023

NOTE SHEET: FINANCIAL ASSISTANCE TO ATTEND INTERNATIONAL / NATIONAL CONFERENCE / WORKSHOP / INTERNATIONAL CONFERENCE FROM 13TH - 17TH JUNE AT ECOSUMMIT CONGRESS 2023, IN GOLD COAST, AUSTRALIA

CALLE Prof-I)

I, KUMUD DHANWANTRI, been invited for oral presentation in International Conference titled (EcoSummit Congress 2023) to be organized by ELSEVIER from June 13–17, 2023 in Gold Coast, Australia.

1. As per policy guidelines for financial assistance to faculty member/ faculties are entitled, full Registration Fee, 50% of Travel, Lodging and Meals to attend Conferences/Seminars/Workshops, not more than once a year and International Conferences/Seminars not more than once in two years.

2. According to the policy I request for financial assistance as under:-

S. No.	Description	Requested Amount	Remarks
(a)	Registration Fee	23,450	US\$284.90 [US \$ @ Rs. 82.31]
(b)	Travel(Both Way)	1,50,000	Estimate based on IRCTC
©	Lodging	81,803.55	AU\$289 per room per night for 5 nights [AU \$ @ 56.6]
(d)	Any other (Miscellaneous)	85,000 63.213	Visa fee [Rs. 30000], 8213 (AUD = 54.78) Local conveyance in India & in Australia [Rs. 25000], Food and beverages [Rs. 20000], etc. [10000]
TOTAL		3,40,254	

3. I am working with Amity University, Haryana since (4th July 2013) and has availed the financial assistance till date, as per details below:

Conference/Seminar /Workshop	Place	National/Inter	Date (From – To)	Financial Provided	Assistance
Workshop	TISS, Mumbai	International	21 to 25 October, 2019	Rs. 14915	E e

4. I request to kindly sanction Rs. 3,40,254 which may be paid on presentation of bills/receipts along with the claim on return.

5. Put up for approval please

Remarks by HoI....

Signature with Name & Designation

Aut Part -I

Remarks by Registrar

S. No.	Description	Requested Amount	Recommended Amount	Remarks
(a)	Registration Fee	23450.00		
(p)	Travel(Both Way)	1,50,000.00		
(c)	Lodging	81,803.00	21000.00	
(d)	Any other (UISA, Local	10mi 63213.00		
TOTAL	-20	3.18 464.00		

Recommendation by PVC

Vice Chancellor....

3/4/3053



Elsevier Conferences

Help & FAQs

HOME CONFERENCE PROGRAM LOCATION EXHIBITION & SPONSORSHIP
DEADLINES CONTACT US SIGN UP FOR UPDATES

EcoSummit 2023

Building a sustainable and desirable future: Adapting to a changing land and sea-scape

13-17 June 2023 | Gold Coast, Australia

The 6th International EcoSummit Congress - EcoSummit 2023 - Building a sustainable and desirable future: Adapting to a changing land and sea-scape, will take place at The Gold Coast Convention Centre, Gold Coast, Australia, from 13-17 June 2023.

Abstract submission will remain open for posters.

Submit your abstract here.

Spotlighted research from EcoSummit 2020-2022

When the planned 2020 EcoSummit conference was postponed in 2020, and then further postponed in 2021, we wanted to give delegates an opportunity to showcase their work in a virtual Special Issue. The articles in the virtual Special Issue are hosted on the participating journals Total Environment Research Themes, Trees, Forests and People, Nature-Based Solutions, Environmental and Sustainability Indicators, and Environmental Challenges. They span a diverse range of topics and are all published Open Access to ensure a broad readership.

New opportunities to publish your 2023 EcoSummit papers in selected special issues will be made available on the EcoSummit website.

Submit abstracts

Speakers

Register

Supporting publications

Join the Conversation #EcoSummit2023

Speakers

Plenary speakers include:

Robert Costanza, University College London, UK

Sandrine Dixson-Declève, Club of Rome, Belgium

Brian Fath, Towson University, USA

Bojie Fu, Chinese Academy of Sciences, China

Alan Hastings, University of California, Davis, USA

Emma Johnston, UNSW Sydney, Australia

Hunter Lovins, Natural Capitalism Solutions, USA

Jacqueline McGlade, University College London, UK

Jigmi Y. Thinley, Prime Minister of Bhutan (2008-2013) / World Leadership Alliance - Club de Madrid / Asian Peace and Reconciliation Council

Panelists:

Kate Auty, Professorial Fellow University of Melbourne, Australia

Robert Costanza, University College London, UK

Lorenzo Fioramonti, Chamber of Deputies, Italy

Emily Howells, Southern Cross University, Australia

Xi Ji, Peking University, China

B. Larry Li, University of California, Riverside, USA

Junguo Liu, Southern University of Science and Technology and North China University of Water Resources and Electric Power, China

Jacqueline McGlade, University College London, UK

Morgan Pratchett, ARC Centre of Excellence for Coral Reef Studies, Australia

Jigmi Y. Thinley, Former Prime Minister of Bhutan (2008-2013) / World Leadership Alliance - Club de Madrid / Asian Peace and Reconciliation Council

John Veron, "Godfather of Coral", Corals of the World

Committee

Chairs

Jan-Olaf Meynecke, Griffith University, Australia

Robert Costanza, Institute for Global Prosperity, University College London, UK

B. Larry Li, University of California, Riverside, USA

Scientific Committee

Paul Burton, Griffith University, Australia

Robert Costanza, Institute for Global Prosperity, University College London, UK

Brian Fath, Towson University, USA

Christine Fürst, Martin Luther University Halle-Wittenberg, Germany; Past President, International Association for Landscape Ecology

B. Larry Li, University of California at Riverside, USA

Brendan Mackey, Griffith University, Australia

João Carlos Marques, University of Coimbra, Portugal

Jan-Olaf Meynecke, Griffith University, Australia

William Mitsch, Florida Gulf Coast University, USA

Zhuyun Ouyang, Chinese Academy of Sciences, China; President, Chinese Society of Ecology

Sergei Petrovskii, University of Leicester, UK

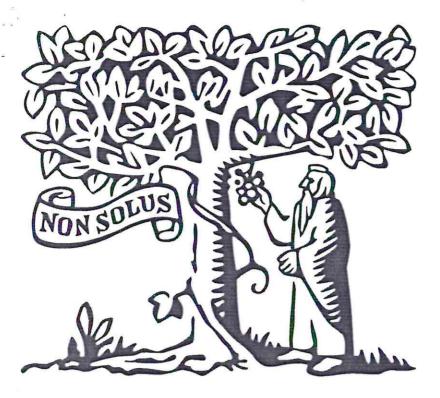
Alexia Stokes, INRA, France

Hao Wang, Chinese Academy of Engineering, China; President, Chinese Society for Sustainability

Organised by







ELSEVIER

Copyright © 2023 Elsevier, except certain content provided by third parties Cookies are used by this site. Cookie Settings

Terms and Conditions - Privacy Policy - Cookie Notice - Sitemap





Conference: 6th International EcoSummit Congress | 13-17 June 2023 | Australia

Theme	Policies and Governance/Science and Policy		
Sub Theme	Environmental Policies And Frameworks		

Spatial Planning within Environmental Policies and Legislation: An Ideology or A Reality?

Kumud Dhanwantri¹, Ashwin Joe², Subhash Yadav³, Meenakshi Dhote³,

¹Amity School of Architecture and Planning, Amity University, Gurugram, Haryana, India; ²Amity School of Architecture and Planning, Amity University, Gurugram, Haryana, India;

Additional CEO, Urban Environment, Gurugram Metropolitan Development Authority, Gurugram, Haryana, India;

*Department of Environmental Planning, School of Planning and Architecture, New Delhi, India;

Draft Abstract

Spatial Planning refers to the rational distribution of land use activities in space. Largely, the government and its functionaries influence past, present, and future distribution of land use activities at an Urban or regional level. The exercise of spatial planning is undertaken to balance the demand for development for attaining socio-economic growth without harming the environment or ecosystem. Hence, spatial planning regulates the conversion of land and its uses. Policy measures and legislative instruments can significantly affect the spatial planning process and conversion of land use. These two have the potential to address environmental issues systematically in the spatial development process. Given that, this paper aims to research the spatial pattern of development and regulatory violations therein (w.r.t. environment). A case study-based approach is taken to examine the implementation of environmental regulations at the local level in the spatial planning of an Indian metropolitan city i.e. Gurugram. The city is situated in the southern part of the state of Haryana and situated at the foothills of the Aravalli ranges. Documented literature and scientific research show that the Aravalli ranges are one of the oldest fold mountain ecosystems in India and the world. Therefore, it becomes imperative to study the spatial arrangement of development concerning environmental sustainability in the region. A cluster sampling approach is adopted to identify different zones within the city for examining the land use changes in accordance with applicable environmental compliance. Specifically, this study compares the land use design of comprehensive plans with subsequent development activity following environmental legislation and policies in place. Intergovernmental cooperation is a crucial role player in the environmentally effective spatial arrangement of land use activities. Some suggestions are provided for environmentally effective spatial planning by establishing a stronger link among regulatory provisions, plan design, and plan implementation.

Conference: 6th International EcoSummit Congress | 13-17 June 2023 | Australia

Theme	Policies and Governance/Science and Policy
Sub Theme	Environmental Policies And Frameworks

Inter-Governmental Functionaries and Functions: An Institutional Framework for Environmental Governance in India

Kumud Dhanwantri¹, K.K. Yadav², Meenakshi Dhote¹, Kushagra Rajendra²,

¹Amity School of Architecture and Planning, Amity University, Gurugram, Haryana, India;

²Department of Town and Country Planning Haryana, Chandigarh, India;

³Department of Environmental Planning, School of Planning and Architecture, New Delhi, India;

⁴Amity School of Earth and Environmental Sciences, Amity University, Gurugram, Haryana, India

Abstract

Analyzing and theorization of environmental governance is a challenging endeavor, especially in a developing country like India. The involvement and dependencies of cross-sectoral departments made the task difficult as well as thought-provoking. The actors involved in the implementation of environmental governance at the local level in India are Town and Country Planning departments, Development Authorities, Block and Panchayat level officials, Forest departments, Agriculture departments, Irrigation and Water Resource departments. These institutions are conceptualized as interdependent units in the governance system. But they are usually not found well-coordinated and integrated into their practices. Given that, this research attempts to present an institutional framework hypothesizing how cross-sectoral institutions and their networking may influence environmental governance at the local level. It will theorize the inter-governmental functionaries, their functions, interests, organizational challenges, and the significance of network contacts within & across sectors for achieving integrated and sustainable resource governance. This research relies upon a rigorous literature review for developing the institutional framework, in-depth interviews with government officials designated at different levels in different departments, and a brainstorming exercise with policy experts to develop a performance index for government functionaries. A case study-based approach is adopted to examine the environmental governance process and its implementation at the local level. The district Gurugram in the state of Haryana has been selected as a sample study to understand the existing environmental governance system at the local level. In the end, it concludes and suggests considering cross-sectoral dynamics, administrative re-organization, and the development of a performance index for approaching successful environmental governance.

Keywords: Environmental Governance, Institutional Framework, Cross-Sectoral Governance, Performance Index, Sustainable Resource Governance





24 Mar 2023

Kumud Dhanwantri Amity University Haryana C-103, Faculty Flats, amity university panchgaon, manesar gurgaon Gurugram India 122413

Date of Birth: 02/01/1986 Passport Number: P9735515

Dear Kumud Dhanwantri

EcoSummit 2023

13-17 June 2023, Gold Coast Convention and Exhibition Centre, Gold Coast, Australia
INVITATION LETTER

The above event is due to take place at Gold Coast Convention and Exhibition Centre, Gold Coast, Australia, on 13-17 June 2023. We would like to extend an invitation for you to attend this important international event.

We would like to invite you to present your accepted abstract (Reference: a) 526, b) 718) entitled: a) Spatial Planning within Environmental Policies and Legislation: An Ideology or A Reality? b) Inter-Governmental Functionaries and Functions: An Institutional Framework for Environmental Governance in India.

We would also like to extend the invitation for your partner, , to attend.

For further conference information please visit the conference website: https://www.ecosummitcongress.com/

Please note: All delegates are responsible for the payment of their own registration fees, accommodation and travel expenses, and delegates will not be funded by the conference organisers. Delegates are also responsible for ensuring that they have adequate travel insurance in place.

If you wish to obtain more information, please do not hesitate to contact the Conference Project Lead, Cinzia Mamberti, on telephone +44 1865 843000 or email c.mamberti@elsevier.com

Yours sincerely,

Nigel Clear

Global Director of Conferences





CONFERENCE

HOME

PROGRAM LOCATION

EXHIBITION & SPONSORSHIP

DEADLINES CONTACT US

Register

Early-bird registration deadline: 31 March 2023

Register here

Early-bird Registration

US\$530 + GST at 10% = US\$583.00

US\$645 + GST at 10% = US\$709.50

US\$295 + GST at 10% = US\$324.50

Standard Registration

Student Registration*

Developing Country Registration**

One-day Registration

Conference Dinner Ticket

US\$270 + GST at 10% = US\$297.00

US\$259 + GST at 10% = US\$284.90

US\$80 + GST at 10% = US\$88.00

*Student rate applies to those registered for a higher degree. This rate does not apply to Postdoctoral researchers.

**Developing countries as listed on the Research4Life website (Group A and Group B)

ELSEVIER LTD

The Boulevard Langford Lane Kidlington Oxford, UK OX5 1GB



PLEASE QUOTE OUR INVOICE No.

CONF 203146

+44 1865 843095

VAT Reg No.

1982084 / ENGLAND

AU 19 367 021 883

Invoice date: Due date: 19/Mar/2023 18/Apr/2023

Email: conferencevisaletter@elsevier.com

Invoice to:

Ms Kumud Dhanwantri

Amity University Haryana C-103 Faculty Flats
Amity University Gurugram 122413 India

Desputch to:

Ms Kumud Dhanwantri

Ms Kumud Dhanwantri Amity University Haryana C-103 Faculty Flats Amity University Gurugram 122413 India

PO Number: -

Your VAT Reg No: -

Transaction: Invoice

Conference: EcoSummit 2023

Booker: Ms Kumud Dhanwantri

lem:		VAT %:	VAT Value:	Net Value:
Developing Country Registration** . Dhanwantri, Kumud (Ms)	1	10.00%	25.90	259.00
		22		ll .
				1
			Î î	
			ν	
병임 내 이번 경험 및 경기 등				
511일 전 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			120	1
		100	1.5	20
			1	

Paid in Full

Net Total: US Dollars

259.00

VAT Total: US Dollars

25.90

Invoice Total: US Dollars

284.90

VAT in AUD:

38.36





Elsevier Conferences

Help & FAQs

FIGHE CONFERENCE PROGRAM LOCATION EXHIBITION & SPONSORSHIP

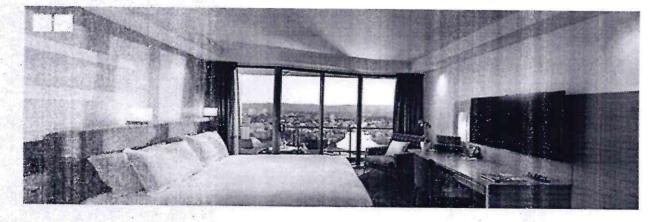
DEADLINES CONTACT US SIGN UP FOR UPDATES

Accommodation

WARNING - SCAM ALERT: Ehotel Services, Exhibitor Housing Services (EHS), Exhibitor Housing Management (EHM) & Business Travel Management (BTM) Read more here!

Accommodation has been reserved for conference delegates at a number of hotels near the Gold Coast Convention and Exhibition Centre. Please refer to the individual listings for room rates, details on how to book and cut-off deadlines. Please note that the Gold Coast is an extremely popular destination and we advise early booking to avoid disappointment.

Sofitel Gold Coast Broadbeach



Sofitel Gold Coast is centrally located in the heart of prestigious Broadbeach, directly opposite the Gold Coast Conference & Exhibition Centre. The hotel offers 296 elegantly appointed guest rooms including 20 luxurious suites. Refined and elegant from the moment you enter, the contemporary theming flows seamlessly throughout the hotel, from the grand atrium lobby to the hotel restaurant and meeting rooms.

Rates:

AU\$289 per room, per night

Rates are valid 3 nights either side of the conference dates and are subject to availability.



 □ Gold Coast (OOL) New Delhi (DEL) 19-03-2023 26-03-2023 1 Traveller(s) ,Econon Modify Q All Fares Best Available Fare Qantas Airways ₹ 152678 Book Price 23:10 07:35 27h 55m 06:00 21:50 44h 20m New Deihi (DEL) Gold Coast (OOL) 2 stop(s) Gold Coast (OOL) New Delhi (DEL) 2 stop(s) Min. Price Max. Price ₹152678 ₹ 276586 06:00 21:50 44h 20m Gold Coast (OOL) New Delhi (DEL) 2 stop(s) Onword Time Preference Partially Refundable Flight Details -Departure: --Qantas Airways ₹ 175349 Book 00:00 to 63:00 to 06:00 to 03:00 06:00 09:00 12:00 04:20 14:15 29h 25m (e) 12:45 16:40 32h 25m New Delhi (DEL) Gold Coast (OOL) 2 stop(s) Gold Coast (OOL) New Delhi (DEL) 1 stop(s) Air 12:00 to 15:00 to 18:00 to 21:00 to Partially Refundable Flight Details -.15.00 18:00 21:00 24:00 Arrival: Etihad Airways ₹ 177014 Book -100-- 100 04:35 07:40 46h 35m 06:00 19:35 42h 05m 00:00 to 03:00 to 09:00 to New Delhi (DEL) Gold Coast (OOL) 2 stop(s) Gold Coast (OOL) New Delhi (DEL) 2 stop(s) 08.00 04:35 08:40 47h 35m 0. die. New Delhi (DEL) Gold Coast (OOL) 2 stop(s) 12:00 to 15:00 to 18:00 to 21:00 to 09:40 15:00 18:00. 21:00 24:00 04:35 48h 35m New Delhi (DEL) Gold Coast (OOL) 2 stop(s) Return Time Preference Partially Refundable Flight Details -Departure: Etihad Airways - 6 k -₹ 177144 Book 09:00 to 03:00 06:00 09:00 12:00 04:35 07:40 46h 35m @ 06:00 19:35 42h 05m New Delhi (DEL) Gold Coast (OOL) 2 stop(s) Gold Coast (OOL) New Delhi (DEL) 2 stop(s) 1 0 04:35 08:40 47h 35m 12:00 to 15:00 to 18:00 to 21:00 to 15:00 18:00 21.00 24:00 New Delhi (DEL) Gold Coast (OOL) 2 stop(s) 04:35 09:40 48h 35m Arrival: New Delhi (DEL) Gold Coast (OOL) 2 stop(s) ... -14 - (0) Partially Refundable Flight Details -00:00 to 03:00 to 09 00 to 03:00 06:00 12:00 Qantas Airways ₹177460 5. Book de 12:00 to 15:00 to 18:00 to 21:00 to 04:20 14:15 29h 25m 06:00 15:00 18:00 21:00 24:00 16:40 39h 10m New Delhi (DEL) Gold Coast (OOL) 2 stop(s) Gold Coast (OOL) New Delhi (DEL) 2 stop(s) 06:00 16:40 39h 10m Stops Gold Coast (OOL) New Delhi (DEL) 2 stop(s) (0 01 02 0 06:00 16:40 39h 10m Gold Coast (OOL) New Delhi (DEL) 2 stop(s) Airlines 0 06:00 16:40 39h 10m Qentes Almreys Gold Coast (OOL) New Delhi (DEL) 2 stop(s) Thirlayste Airlines Berived . Partially Refundable Flight Details -Ethad Alrways Singepore Airlines Joseph Alineays Pty Limited **Qantas Airways** ₹ 177516 Book

29h 25m

06:00

16:40

14:15

39h 10m

Bond



Indian-Non Judicial Stamp Haryana Government



Date: 31/03/2023

Certificate No.

G0312023C918

G0312023C918

Stamp Duty Paid: ₹ 101

GRN No.

100823653

100823653

(Rs. Only)

Penalty:

₹0

(Rs. Zero Only)

Name:

Kumud Dhanwantri

H.No/Floor: C103

City/Village: Manesra

Sector/Ward: 00

District: Gurugram

Landmark: Faculty flats amity university

Phone:

88*****06

Deponent

State: Haryana



Purpose: Bond to be submitted at Amity university harvana

The authenticity of this document can be verified by scanning this QrCode Through smart phone or on the website https://egrashry.nic.in

BOND FOR CONTINUED SERVICE BY KUMUD DHANWANTRI

This Bond is made on 31st March 2023 by Kumud Dhanwantri, W/o Mr.Kuldeep Kumar, R/o C-103, Faculty Flat Amity University Haryana 122413 hereafter Called as the EXECUTOR (which expression shall include her heirs, successors, legal representatives, nominees and the others) of one part.

Amity University Haryana having its office in Gurgaon, Manesar, Panchgaon - 122413, hereinafter called as the Institution (which expression shall include his / her Heirs, successors, legal representatives, nominees and others) of one part.

WHEREAS the EXECUTOR is a Faculty at Amity School of Architecture and Planning, Amity University Haryana.

AND WHEREAS the presentation of paper titled "1. Inter-Governmental Functionaries and Functions: An Institutional Framework for Environmental Governance in India and 2. Spatial Planning within Environmental Policies and Legislation: An Ideology or A Reality?", For which the EXECUTOR is the main author has been accepted for Presentation in EcoSummit 2023 to be held in Gold Coast Australia from 13th June to 17th June 2023.

Now this Bond, witnessed and is hereby agreed between the two parties here to as follows:

THAT the Institution has permitted the EXECUTOR to present the paper in EcoSummit 2023 to be held in Gold Coast Australia from 13th June to 17th June 2023.

THAT the Institution has agreed to give financial support towards Registration Fee and TA / DA to the EXECUTOR amounting to Rs.

THAT the Institution has permitted the Executor to attend the Conference and provide financial support on the condition that the EXECUTOR shall continue to serve Amity University Haryana for a minimum period of two year from the date of the Conference / Seminar.

THAT the EXECUTOR has agreed that in case, he/she leaves this job before expiry of two years, he/she will refund the entire amount of financial assistance provided to him/her.

THAT the EXECUTOR has agreed to all above conditions and as such hereby executes this

BOND. In witness where of the EXECUTOR has signed this BOND in the presence of the following Witness:

1. Dr. Pallavi Sharma

Signature

(EXECUTOR) KUMUD DHANWANTRI

2. Mr. Nitish Kumar

Date: 31st March 2023

Place: Manesar

Established vide Government of Haryana Act No.10 of 2010

Date: 31st March 2023

NO OBJECTION FROM THE CO-AUTHOR(S)

This is to inform that Ms. Kumud Dhanwantri who is going to present the paper(Oral) entitled Inter-Governmental Functionaries and Functions: An Institutional Framework for Environmental Governance in India in the EcoSummit 2023 (name of the Conference) held on 13th June to 17th June 2023 in Gold Coast Australia.

It is declared that no other co-author(s) will be presenting the same paper in the same conference.

Name, Designation and Signature of the Co-author

Dr. Kushagra Rajendra

orne denarment Rajendra
School of Earth and Environmental Sciences
Head of Denarment

Amity University Haryana

Re: Requesting a NOC from the Co-authors

ASHWIN JOE O F <ashwin.f@s.amitv.edu> Sat 4/1/2023 5:30 PM

To: Kumud Dhanwantri <kdhanwantri@ggn.amity.edu>

1 attachments (123 KB) NOC- Ashwin.pdf;

Dear Mam,

I am happy that you are going to present the paper mentioned on behalf of all of the coauthors. I neither have any objection in this nor that you are applying for a travel grant for this purpose. Kindly find my NOC as attached in the email.

My Best Wishes

Ashwin Joe O F Student, M. Planning (U&R) Amity School of Architecture and Planning Amity University Haryana, India

From: Kumud Dhanwantri <kdhanwantri@ggn.amity.edu>

Sent: Sunday, April 2, 2023 6:52 AM

To: ASHWIN JOE O F <ashwin.f@s.amity.edu> Subject: Requesting a NOC from the Co-authors

Dear Ashwin,

I hope you are doing well!

I am writing you in the context of our selected abstract for an oral presentation at EcoSummit 2023 in Australia. I need a NOC from all my Co-authors to apply for a travel grant. As you are one of my Co-author in the paper titled Spatial Planning within Environmental Policies and Legislation: An Ideology or A Reality?, I request you to please provide your consent in the same regard.

Looking forward to your kind cooperation, please.

With Best Wishes,

Kumud Dhanwantri Assistant Professor-II and Coordinator M.Planning Amity School of Architecture and Planning Amity University, Gurgaon, Haryana https://orcid.org/0000-0002-1616-2480

Date: 2nd April 2023

NO OBJECTION FROM THE CO-AUTHOR(S)

This is to inform that Ms. <u>Kumud Dhanwantri</u>, <u>Assistant Professor</u>, <u>Amity University Haryana</u> is my Faculty and Thesis Supervisor for Masters in Planning (U&R). She is going to present a paper (Oral presentation) entitled *Spatial Planning within Environmental Policies and Legislation: An Ideology or A Reality?* in the EcoSummit-2023 to be held on 13th June to 17th June 2023 in Gold Coast, Australia. Though, I am also one of the co-authors of the paper mentioned above but the same is going to be presented by Ms. Kumud Dhanwantri.

Ashwin Joe O F

Student, M. Planning (U&R)

Amity School of Architecture and Planning

Amity University Haryana, India



GURUGRAM METROPOLITAN DEVELOPMENT AUTHORITY Plot No. 03, Sector-44, Gurugram-122003 Haryana, India

Date: 31st March 2023

NO OBJECTION FROM THE CO-AUTHOR(S)

This is to inform that Ms. <u>Kumud Dhanwantri</u> who is going to present the paper (Oral) entitled Inter-Governmental Functionaries and Functions: An Institutional Framework for Environmental Governance in India in the Eco Summit 2023 (name of the Conference) scheduled to be held from 13th June to 17th June 2023 in Gold Coast, Australia.

It is declared that no other co-author(s) will be presenting the same paper in the same conference on the same topic.

[Subhash Chander Yadav IFS] Additional Chief Executive Officer

Urban Environment

Gurugram Metropolitan Development Authority Haryana-India

Name, Designation and Signature of the Co-author

Subhash Yadav IFS Addl. Chief Executive Officer UED, GMDA, Gurugram



योजना तथा वास्तुकला विद्यालय, नई दिल्ली

संसद के अधिनियम के तहत 'राष्ट्रीय महत्व का संस्थान' (मानव संसाधन विकास मंत्रालय, भारत सरकार)

School of Planning and Architecture, New Delhi

An "Institution of National Importance" under an Act of Parliament (Ministry of Human Resource Development, Government of India)

Dr. Meenakshi Dhote Professor and Head, Department of Environmental Planning

Ref.No.F,22/EP/SPA

1st April, 2023

NO OBJECTION FROM THE CO-AUTHOR(S)

This is to inform that Ms. Kumud Dhanwantri who is going to present the papers (Oral) entitled

- 1. Spatial Planning within Environmental Policies and Legislation: An Ideology or A Reality?
- Inter-Governmental Functionaries and Functions: An Institutional Framework for Environmental Governance in India

in the EcoSummit 2023 (name of the Conference) held on 13th June to 17th June 2023 in Gold Coast Australia.

It is declared that no other co-author(s) will be presenting the same paper in the same conference.

Name, Designation and Signature of the Co-author

Dr. Meenakshi Dhote

flecoalitts

विभागाध्यक्ष Head of the Department पर्यावरण योजमा विभाग Dept of Environmental Planning योजमा तथा वास्तुवाला विधावन School of Planning 4-11 अस्तुवाला विधावन

4, ब्लॉक-बी, इन्द्रप्रस्थ एस्टेट, नई दिल्ली-110002 (भारत) वेबसाइट : www.spa.ac.in दूरगाय : 011-23702375, 076 फॅक्स : 011-23702383 4, Block-B, I.P. Estate, New Delhi-110002 (India) Website: www.spa.ac.in Tel.: 011-23702375, 076 Fax: 011-23702383



AMITY UNIVERSITY HARYANA



Dated: 25/04/2023

NOTE SHEET

FINANCIAL ASSISTANCE TO ATTEND INTERNATIONAL / NATIONAL CONFERENCE/WORKSHOP/FROM 13-17, September 2023 / ON Small Meeting on Yeast Transport and Energetics (SMYTE) 2023 Blankenberge, Belgium.

I,Prof.RajendraPrasad been invited speaker for a paper/oral/poster-presentation in International Conference /workshop titled (Sugar Transporters as new determinants of drug resistance in Candida) to be organized by <u>Katholieke Universiteit Leuven</u>, <u>Belgium</u> from 13-17,September 2023/on <u>Small Meeting on Yeast Transport and Energetics (SMYTE) 2023 host city</u>, <u>Blankenberge</u>,Belgium (smyte-2023.org).

- As per policy guidelines for financial assistance to faculty member/ faculties are entitled, full Registration Fee, 50% of Travel, Lodging and Meals to attend Conferences/Seminars/Workshops, not more than once a year and International Conferences/Seminars not more than once in two years.
- 2. According to the policy I request for financial assistance as under:-

S. No.	Description	Requested Amount	Remarks
(a)	Registration Fee	800 EUR	Fee includes boarding and lodging
(b)	Travel(Both Way)	80,000 INR	
O	Lodging	Nil	
(d)	Any other	40 EUR Train Ticket	
	TO	TAL: 1,53,000.00 INR	

 I am working with Amity University, Haryana since 1stMay 2015 and has NEVER availed the financial assistance till date, as per details below: -

Conference/Seminar/Works hop	Place	National/Inter national	Date (From - To)	Financial Provided	Assistance

4. I request to kindly sanction Rs 1,53,000.00 which may be paid on presentation of bills/receipts along with the claim of return.

5. Put up for approval please

Remarks by HoI.....First time request; Recommended......

s by 1101...... rust time request; Recommended.....

Rem	arks by Registrar		pean-54-1,	THE O
S. No.	Description	Requested Amount	Recommended Amount	Remarks
(a)	Registration Fee	800 EUR	800 EUR	Fee includes boarding
(b)	Travel(Both Way)	80,000 INR	80 000 INL	and lodging
(c)	Lodging	Not needed		7
(d)	Any other	40 EUR Train Tie	net 40 EUR Train Tie	wet
TOTAL		1,53,000.00 INR		

. Or ct-mag

Recommendation by PVC

Vice Chancellor.

Strongly recommended

for the Registrar. My hyper

entire amt.

of RS. 1.53 Lac.

Dean-S&T, D

----- Forwarded message -----

From: Patrick Van Dijck <patrick.vandijck@kuleuven.be>

Date: Sun, Mar 12, 2023 at 7:39 PM

Subject: invitation to give a talk at the SMYTE meeting

To: Rajendra Prasad <rp47jnu@gmail.com>

Dear Rajendra

As we have communicated earlier, we will organize the Small Meeting on Yeast Transport and Energetics (SMYTE) in September 2023.

The principle of the meeting will be the same as before. We will have a number of researchers that we invite to give a presentation and the other speakers we will select based on the submitted abstracts.

Upon the recommendation by the local organizing team we would be honored if you would accept our invitation to present a talk at this meeting. If you accept can you let us know asap, so we can add your name on our website (launched soon) as invited speaker. A tentative title will then also help us in shaping the program. In case you accept, can you also send a picture of you and nort paragraph describing your research interest. We can then put that on the website.

Similar to previous SMYTE meetings, the organizers have no budget to support your attendance and we hope that this will not refer you from attending this meeting and giving a talk.

We are looking forward to your reply and to see you at the SMYTE meeting in September (13-17).

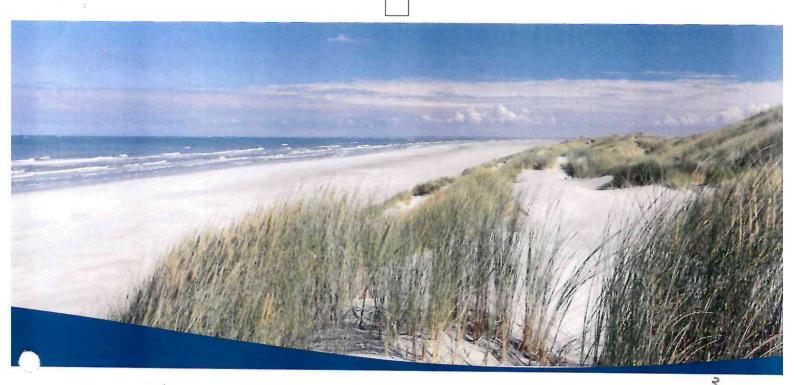
PS: thanks for your invitation for 30 years CDR1. Did you fix the dates of the meeting as I may go to Asilomar

Regards

trick, Wouter, Jolien, Stefanie and Jana

Prof. Patrick Van Dijck

KU Leuven | Laboratory of Molecular Cell Biology Institute of Botany and Microbiology Kasteelpark Arenberg 31 - Bus 2438 | 3001 Heverlee-Leuven | Belgium Tel. + 32 (0)16 32 15 12 http://www.bio.kuleuven.be/mcb



Small Meeting on Yeast Transport and Energetics 2023

After a flictus of 3 years, the organizing committee invites you to at the ordinate the Soft SMYTE meeting, which will be half at the belgion of 341 from 1347 september 2023 You not expect intressing its you. I shall be a covering the structure, function and required or distributions proteins combined with interesting discussion according signaling, namedators physiology and drug pulmance.

Deadlines

TAP 12023 Applications carriers

15 July 1020: Above oil deadline

1 flug ist 2013. Appening times should

Registration

Abutiners, for wearn

Sponsors

The organizing committee would like to thank the sponsors for supporting this event.





Speakers



Dr. O. Zimmermannová

Affiliation: Laboratory of Membrane Transport, Institute of Physiology of the Czech
Academy of Sciences
Expertise: Ion transporters

Title : Saccharomyces cerevisiae as a tool to study structure, function and biogenesis of eukaryotic Na+/H+ antiporters



Professor T. Cooper

Affiliation: Department of Microbiology, Immunology, and Biochemistry, University of Tennessee Health Science Center Expertise: regulation of TorC1 and GATA-targets



Professor A. M. Marini

Biology of Membrane Transport Laboratory, Department of Molecular Biology, Université Libre de Bruxelles, Gosselies, Belgium Expertise : translocation of ions and other solutes across cell membranes

Title: Ammonium transport proteins of the Mep-Amt-Rh family
Short description: The NH4+ ammonium ion is a ubiquitous compound, in pHdependent equilibrium with its uncharged form ammonia (NH3). Whereas it can serve
as a principal nitrogen source for microorganisms and plants, 'ammonium' is mostly
described as a cytotoxic metabolic waste in animals where it nevertheless plays a key
role in pH homeostasis. Seminal studies from Marcelle Grenson's lab have been
determinant for the identification of the specific ammonium transport proteins of the
conserved Mep-Amt-Rh family, as for the characterization of their multilevel
regulation. The research projects of Marini's team combine converging approaches
and appropriate models including baker yeast, mice, and human cells, to (i) dissect
ammonium transport processes at the molecular level, (ii) explore their roles,
regulation, and impact on signaling and differentiation at single-cell level and (iii)
address their pathophysiological implication at whole-organism level.



Professor P. Ljungdahl

Department of Molecular Biosciences, The Wenner-Gren Institute Expertise: Amino acid sensing, transport and metabolism

Title: Proline inhibits mitochondrial respiration in Candida albicans
Short description: The Ljungdahl laboratory is committed to fully understand the
cell biology of amino acid-induced gene expression in eukaryotes using the yeast
Saccharomyces cerevisiae as a model. We have exploited our findings to investigate
nutrient regulated virulence in opportunistic fungal pathogens of the Candida spp.
complex capable of causing life threatening infections in humans. Our findings reveal
significant differences in the regulatory networks and metabolism of yeast and
pathogenic fungi, particularly regarding proline metabolism, which is a critical
determinant of virulence.



Professor I. Borodina

The Novo Nordisk Foundation Center forBiosustainability, Technical University of Denmark

Expertise: Synthetic Biology, Bio-based Chemicals, Metabolic Engineering

Topic: Irina's Yeast Metabolic Engineering Group engineers yeast cell factories for sustainable production of chemicals from renewable feedstocks. We study how small molecules are transported across the cellular membranes and how this transport can be engineered to create more efficient cell factories.



Professor R. Rao

Department of Physiology, The Johns Hopkins University School of Medicine Expertise: ion transporters, including secretory pathway Ca2+-ATPases and endosomal Na+/H+ exchanger

Title: Modeling human disease in yeast

Short description: Research Interest: The Rao laboratory investigates ion transporters, including secretory pathway Ca2+-ATPases and endosomal Na+/H+ exchangers, with a focus on their role in human disorders. These evolutionarily ancient transporters were originally identified in yeast, and then shown to have mammalian orthologs linked to disease. Our experimental reach is broad and multidisciplinary, harnessing the range of available models: (i) bacterial orthologs for structural insights, (ii) yeast for data mining and functional screening of human variants, (iii) 3D organoids and epithelial cultures for cell biological and transport studies and (iv) mouse models and patient databases for pathophysiological insight. Currently, we apply these approaches to understand the cellular and molecular basis of cancer, neurological and metabolic disorders.



Professor R. Prasad

Faculty of Science Engineering And Technology, Amity University Haryana Expertise: Clinical resistance to Antifungal Mechanism Regulation of resistances new Antifungal molecular mycology.

Title: Sugar Transporters as new determinants of drug resistance in Candida Short Description: Our work led to the first identification of a major multidrug transporter Cdr1 in Candida albicans which has changed the whole gamut of antifungal research. Multidrug resistance (MDR) transporters belonging to either ATP-binding Cassette (ABC) or Major Facilitator Superfamily (MFS) groups are major determinants of clinical drug resistance in fungi. The current focus has been to understand the pan-resistant emergence of C. auris which is simultaneously resistant to multiple classes of antifungal agents and poses the greatest impediment to antifungal therapy. The canonical drug-resistance mechanisms are unable to explain why C.auris manifest high intrinsic resistance. The experimental evolution of drug resistance and analysis of alterations in karyotype and, transcriptional profiling of evolved drug-resistant isolates of C. auris is not only helping to track down different trajectories of adaptation but also revealing new determinants of antifungal resistance.



Professor S. Paiva

Department of Biology, University of Minho Expertise: Carboxylic acid transport and metabolism



Professor G. Diallinas

Affiliation: Department of Biology, National and Kapodistrian University of Athens Expertise: Structure-function relationships and evolution of transporters

Research in our lab (Aspergillus nidulans Molecular Genetics Laboratory) aims at:

- Genetically, biochemically and biophysically dissecting the structure-function relationships underlying transporter function, specificity and molecular evolution
- Identifying the pathways and molecular mechanisms involved in the membrane trafficking, exocytosis, endocytosis and turnover of specific transporters and other membrane cargoes in response to fungal growth and to various physiological or stress signals
- Studying the role of transporters in fungal pathogenicity and use in silico modelling of specific purine transporters for rational antifungal drug design.



Miguel Teixeira

Miguel Teixeira's Lab focuses on understanding Candida species' ability to acquire pathogenesis related features, including drug resistance, virulence and biofilm formation. Emphasis has been given to the use of genome-wide systems biology approaches and to drug transporters and transcription factors as key effectors of pathogenesis. Altogether, the gathered knowledge is expected to aid in the design of novel tools for the diagnosis of drug resistance in clinical isolates and the identification of new antifungal therapies.



Prof. Hiroshi Takaai

Affiliation: Nara Institute of Science and Technology

The Takagi Lab will find and clarify novel biological phenomena and molecular functions using yeast, mainly Saccharomyces cerevisiae, cells. Our lab will also develop high-functionality and design metabolism of yeast that contributes to the fermentation production of useful substances. Currently, we are focusing the regulatory mechanism of fermentation ability in yeast to overcome nutrient-related fermentation problems. For example, proline is a predominant amino acid in wort and grape must but poorly utilized by yeast in beer-brewing and wine-making processes. Our lab addresses the underlying regulatory mechanism of proline utilization in yeast cells and its application to screening and breeding of yeast



Programme

DAY 1: 13th of September (Wednesday)

15:30-...: Check-in

15:30-17:30: Registration conference

17:30-17:45: Welcome by Patrick Van Dijck and practical information

17:45-19:15: Opening lectures

- 17:45-18:30: Keynote lecture 1
- 18:30-19:15: Keynote lecture 2

19:15-20:30: Dinner

20:30-...: Free evening: meeting in the bar

DAY 2: 14th of September (Thursday)

7:30-10:00: Breakfast

9:00-10:30: Session 1: Role of transporters in drug resistance (Part A)

- 9:00-9:30: Invited speaker 1
- 9:30-10:00: Invited speaker 2
- 10:00-10:15: Selected speaker 1
- 10:15-10:30: Selected speaker 2

10:30-11:00: Coffee break

11:00-12:30: Session 1: Role of transporters in drug resistance (Part B)

- 11:00-11:30: Selected speaker 3
- 11:30-12h00: Selected speaker 4
- 12:00-12:15: Selected speaker 5
- 12:15-12:20: Pitch 1
- · 12:20-12:25: Pitch 2
- · 12:25-12:30: Pitch 3

12:30-14:15: Lunch

14:15-15:45: Session 2: Membrane transporters and regulatory processes (Part A)

- 14:15-14:45: Invited speaker 1
- 14:45-15:15: Invited speaker 2
- 15:15-15:30: Selected speaker 1
- 15:30-15:45: Selected speaker 2

15:45-16:15: Coffee break

16:15-17:45: Session 2: Membrane transporters and regulatory processes (Part B)

- 16:15-16:45: Selected speaker 3
- 16:45-17:15: Selected speaker 4
- 17:15-17:30: Selected speaker 5
- 17:30-17:35: Pitch 1
- 17:35-17:40: Pitch 2
- 17:40-17:45: Pitch 3

18:00-19:30: Dinner

19:30-22:30: Poster session sponsored by Belgian beer breweries

DAY 3: 15th of September (Friday)

7:30-10:00: Breakfast

9:00-10:30: Session 3: Mitochondria and energetics (Part A)

- · 9:00-9:30: Invited speaker 1
- 9:30-10:00: Invited speaker 2
- 10:00-10:15: Selected speaker 1
- 10:15-10:30: Selected speaker 2

10:30-11:00: Coffee break

11:00-12:30: Session 3: Mitochondria and energetics (Part B)

- 11:00-11:30: Selected speaker 3
- 11:30-12h00: Selected speaker 4
- 12:00-12:15: Selected speaker 5
- · 12:15-12:20: Pitch 1
- 12:20-12:25: Pitch 2
- · 12:25-12:30: Pitch 3

12:30-14:00: Lunch and group picture

14:00-...: Excursion to Bruges (bus to Bruges included).

Guided excursion

Free evening for dinner

DAY 4: 16th of September (Saturday)

7:30-10:00: Breakfast

9:00-10:30: Session 4: Transporters in human fungi (Part A)

- 9:00-9:30: Invited speaker 1
- 9:30-10:00: Invited speaker 2
- 10:00-10:15: Selected speaker 1
- 10:15-10:30: Selected speaker 2

10:30-11:00: Coffee break

11:00-12:30: Session 4: Transporters in human fungi (Part B)

- 11:00-11:30: Selected speaker 3
- 11:30-12h00: Selected speaker 4
- 12:00-12:15: Selected speaker 5
- 12:15-12:20: Pitch 1
- 12:20-12:25: Pitch 2
- · 12:25-12:30: Pitch 3

12:30-14:15: Lunch

14:15-15:45: Session 5: New tools (Part A)

- 14:15-14:45: Invited speaker 1
- 14:45-15:15: Invited speaker 2
- 15:15-15:30: Selected speaker 1
- 15:30-15:45: Selected speaker 2

15:45-16:15: Coffee break

16:15-17:45: Session 5: New tools (Part B)

- 16:15-16:45: Selected speaker 3
- 16:45-17:15: Selected speaker 4
- 17:15-17:30: Selected speaker 5
- 17:30-17:35: Pitch 1
- 17:35-17:40: Pitch 2
- 17:40-17:45: Pitch 3

17:45-18:30: Lessons from another research perspective

18:30-18:45: Concluding remarks

18:30-21:00: Conference dinner

21:00-... : Party

DAY 5: 17th of September (Saturday)

7:30-10:00: Breakfast and check-out



Registration

Registration will start on the 1st of April.

General registration info

- O All registration fees are VAT exempt based on article 44 § 2, 4° of the Belgian VAT directive.
- O Registration fees are to be paid in Euros (€) by bank transfer.
- O Please note the respective registration fees shall only be valid if registration is submitted and full payment is received by us by the respective deadline. If payment of the registration fee is received later than the early deadline registration, the respective next higher fee shall be due.
- Your registration is effective upon the receipt of full payment of the registration fee by us, i.e. only those participants having fully paid their registration fees will be entitled to participate in the conference.
- O The conference registration fee includes: (1) access to all conference lectures; (2) conference programme and materials; (3) lunch and coffee breaks; (4) drinks during the poster session; (5) guided excursion to Bruges; (6) transport to Bruges (7) accompdation and (8) congress dinner.

5

- O Please find below an overview of the registration fees:
 - PI: € 800
 - · Post-doctoral researcher: € 650
 - Student (PhD or masterstudent): € 600
 - company: € 1000
 - Student without overnight stay: € 400
 - Accompanying person: € 550
 - Supplement single room: € 80

Registration process

- To register, please complete our registration form. You can find our registration tool by clicking on the button above.
- O The registration form consists of 5 steps:
 - O Step 1 General information: please include your personal information on this page
 - Step 2 Select the fee that is applicable to your situation (PI/post doc/student/company/student without overnight stay/accompanying person).
 - O Step 3 & 4 Accompanying persons: these steps are only relevant if you wish to bring your accompanying person along to the social activities. If not, please click on "Skip this step".
 - O Step 5; Payment
- You will receive a first email with an automatic confirmation that the registration has been received. This e-mail will also contain all payment details. All payments should be made in advance in Euro (EUR, €) within 14 days after your registration.
- O After payment, you will receive a second email confirming that we have received your payment.
- O If you did not receive these emails, the emails may have gotten stuck in your spam filter, or either your registration or payment was unsuccessful. Should this happen, please contact info@smyte-2023.org.

Cancellation policy

- Unpaid reservations will be cancelled by the KU Leuven Conference Office 4 weeks after they have been made. The conference office must be notified in writing of cancellation of registration.
- Until 13 August 2023: the registration fee will be refundable, with the exception of a € 50/€ 25 handling fee.



Contact

Do you have any questions regarding this conference? Please do not hesitate to contact us!



KU Leuven Conference Office - PCO

Naamsestraat 22, box 5004 3000 Leuven



Mail

info@smyte-2023.org



Dev Mani <hpkmani@gmail.com>

Fwd: Brusells Travel Plan

1 message

Rajendra Prasad <rp47jnu@gmail.com> To: dev mani <hpkmani@gmail.com>

Tue, Apr 25, 2023 at 2:43 PM

Rajendra Prasad, Ph.D, FNASc, FASc, FNA Dean, Faculty of Science, Engineering and Technology Director, Amity Institute of Integrative Sciences and Health Director, Amity Institute of Biotechnology Amity University Haryana, Amity Education Valley Gurgaon-122413 India email: rprasad@ggn.amity.edu

Please consider the environment before printing this e-mail.

----- Forwarded message -----

From: manish arora <manisharora30@gmail.com>

Date: Tue, Apr 25, 2023 at 2:41 PM Subject: Re: Brusells Travel Plan

To: Reandex Holidays <reandexholidays@gmail.com>

Cc: <rp47jnu@gmail.com>

Resent

On Sat, 22 Apr, 2023, 12:37 pm Reandex Holidays, <reandexholidays@gmail.com> wrote:

Dear Sir,

As per your discussion with Manish, we are forwarding itineraries from Delhi(DEL) - Brussels(BRU) on Tuesday, 12 September 2023, return Brussels(BRU) - Delhi(DEL) on Sunday, 17 September 2023 -

Current fare for this option - INR 71500 Per Person

Delhi(DEL) to Brussels(BRU)All | 1 Adult(s)

Outbound Flight		
LH 763 EL	Depart: Delhi (Indira Gandhi Airport) Time: 01:10	Arrive: Munich (Franz Josef Strauss) Time: 05:55
LH 2282 EL	Depart: Munich (Franz Josef Strauss) Time: 06:50	Arrive: Brussels (Brussels National) Time: 08:10
Inbound Flight		Total Flight Time: 10 hr 30 min
LH 5629 EL	Depart: Brussels (Brussels National) Time: 06:55	Arrive: Munich (Franz Josef Strauss) Time: 08:15
LH 762 EL	Depart: Munich (Franz Josef Strauss) Time: 12:25	Arrive: Delhi (Indira Gandhi Airport) Time: 23:30

Total Flight Time: 13 hr 05 min

Regards, (Ms) Rozy Relax and Explore Holidays Mohali, Punjab, India Phone - +919899809701 Email - reandexholidays@gmail.com Affidavit



Indian-Non Judicial Stamp Haryana Government



Date: 02/05/2023

Certificate No.

G0B2023E2089

G0B2023E2089

Stamp Duty Paid: ₹101

GRN No

102107675

102107675

(Pa. Gely)
Penalty:

₹0

Deponent

Name:

Dr Rajendra Prasad

H.No/Floor: D2/002 City/Village: Gurugram

Sector/Ward: 57

District: Gurugram

Landmark: The legends sushant lok iii

State: Haryana

Phone:

99*****46

State: Haryana

_

Purpose: Bond to be submitted at Amity university harvana

The authenlicity of this document can be verified by scanning this QrCode Through smart phone or on the website https://egrashry.nic.in

This Bond is made on 02/05/2023 by Prof. Rajendra Prasad S/o Late Narain Prasad Srivastava R/o D-2, 002, The Legend, Sec-57, Sushant Lok-III, Gurgaon Pin-122001, Haryana India, hereafter Called as the EXECUTOR (which expression shall include his/her heirs, successors, legal representatives, nominees, and the others) of one part.

AND

Amity University Haryana having its office in Gurgaon, Manesar, Panchgaon – 122413, hereinafter called as the Institution (which expression shall include his / her Heirs, successors, legal representatives, nominees, and others) of one part.

WHEREAS the EXECUTOR is a Dean, Director at AIISH/AIB, Amity University Haryana.

AND WHEREAS the presentation of paper titled "Sugar transport as new determinants of drug resistance in Candida", For which the EXECUTOR is the main author has been accepted for Presentation in Small Meeting on Yeast Transport and Energetics (SMYTE) to be held in Blankenberge, Belgium. from 13th to 17th September 2023.

Now this Bond, witnessed and is hereby agreed between the two parties here to as follows: THAT the Institution has permitted the EXECUTOR to present the paper in Small Meeting on Yeast Transport and Energetics (SMYTE), **smyte-2023.org** to be held in Blankenberge, Belgium. from 13th-17th, September 2023.

THAT the Institution has agreed to give financial support towards Registration Fee and TA / DA to the EXECUTOR amounting to Rs 1,53,000.00

THAT the Institution has permitted the Executor to attend the Conference and provide financial support on the condition that the EXECUTOR shall continue to serve Two Years Amity University Haryana for a minimum period of two year from the date of the Conference / Seminar.

THAT the EXECUTOR has agreed that in case, he/she leaves this job before expiry of two years, he/ shewill refund the entire amount of financial assistance provided to him/ her.

THAT the EXECUTOR has agreed to all above conditions and as such hereby executes this BOND. In witness where of the EXECUTOR has signed this BOND in the presence of the following Witness:

Dr. Anurag Sharma

PROF.RAJENDRA PRAS



AMITY UNIVERSITY HARYANA

Dated: 26/06/2023.

NOTE SHEET: FINANCIAL ASSISTANCE TO ATTEND INTERNATIONAL CONFERENCE "Solar World Congress 23. FROM / ON 30 October – 04 November 2023 AT Ashoka Hotel, New Delhi.

I, Dr Subhra Das, been invited for oral presentation of my Paper in International Conference /workshop titled (Modelling and Estimation of Photosynthetically Active Solar Radiation in an Agrivoltaic Plant in New Delhi) to be organized by International Solar Energy Society, ISES. from 30th October -4th Nov 2023 at Ashoka Hotel, New Delhi.

As per policy guidelines for financial assistance to faculty member/ faculties are entitled, full Registration Fee, 50% of Travel, Lodging and Meals to attend Conferences/Seminars/Workshops, not more than once a year and International Conferences/Seminars not more than once in two years.

1. According to the policy I request for financial assistance as under:-

S. No.	Description	Requested Amount	<u>Remarks</u>
(a)	Registration Fee	600 USD	Rs 49, 175.76 as on 26th June 2023
(b)	Travel(Both Way) 52km *2=104km for 1 day	104*Rs7/km=Rs. 728/day For 6 days = 728*6 =Rs. 4,368	Ý.
O	Lodging	NA	
(d)	Any other		=
TOTAL		53,543.76	

2. I am working with Amity University, Haryana since (1st Oct 2012) and has NOT availed the financial assistance till date, as per details below:-

Conference/Seminar /Workshop	Place	National/Inter national	Date (From – To)	Financial Provided	Assistance

- I request to kindly sanction Rs 49, 175.76 (600 USD) which may be paid on presentation of bills/receipts along with the claim on return.
- 4. Put up for approval please

Signature with
Name & Designation
Dr Subbra Das

Dr Subhra Das Professor & HoD

Remarks by HoI....

Remarks by Registrar

S. No.	Description	Requested Amount	Recommended Amount Remark
(a)	Registration Fee	600 USD	100USD(RA 100) 1USD=
(b)	Travel(Both Way) INR	4,368	2184-00
(c)	Lodging	NA	1
(d)	Any other	•	
TOTAL		Rs. 53,543.76	10 WICOD

Recommendation by PV

Vice Chancellor.

Registrar.

Hav

Fwd: Solar World Congress 2023 - Your Abstract has been accepted

Dr Subhra Das <nips.subhra@gmail.com>

Thu 22-Jun-23 09:26 AM

To:Dr. Subhra Das <sdas@ggn.amity.edu>

----- Forwarded message -----

From: <secretariat.swc2023@conferenceindia.in>

Date: Wed, 21 Jun 2023, 11:51

Subject: Solar World Congress 2023 – Your Abstract has been accepted

To: < nips.subhra@gmail.com >

Cc: < secretariat.swc2023@conferenceindia.in >

Dear Dr. Subhra Das,

Congratulations! On behalf of the Scientific Committee of the Solar World Congress 2023, we are pleased to inform you that your abstract with the ID SWC23_ABS_P6992 titled *Modelling and Estimation of Photosynthetically Active Solar Radiation in an Agrivoltaic Plant in New Delhi* has been accepted as an Oral presentation for the Solar World Congress 2023 in New Delhi, India to be held from 30 October – 04 November 2023. We are beyond excited to have you become a part of SWC 2023!.

The registration portal is going to open very soon. You will receive a separate email with all the necessary information regarding registration. To secure your place in the program, you will be required to register for the conference by 31 July at the latest.

Please find more information regarding your presentation and paper submission in the <u>Author's area</u> on the SWC 2023 website.

For all international authors who need a visa for India, we are happy to guide you through the visa application process. <u>Here</u> you can already find some preliminary information, and you will receive more information during the registration process.

We cannot wait to welcome you to New Delhi!

Best wishes, SWC 2023 Organizing Team Home

About

Program

Sponsors

Partners

Author's area

Rea

Registration

Home - Rad stration

Registration fees

What is included in the registration fee?

The following services are included within the SWC 2023 registration fee:

Catering during the SWC 2023 including coffee/tea breaks and buffet lunch from Tues 30th October - Friday 3rd November Home About Program Sponsors Partners area Reg

published in proceedings if accepted)

- For authors: publication fee of your completed paper if chosen for publishing in the open-access Solar Energy Advances Journal (no additional publication fee)
- For authors: inclusion of your abstract in the SWC 2023 digital program
- Admission to all plenary, technical and social events under the SWC 2023.
- Wifi during the SWC 2023 congress days Tues 30th October -Friday 3rd November
- Certificate of attendance upon request
- 18% Indian tax (GST) rate

The following services are NOT included in the SWC 2023 registration fee and must be purchased seperately:

- The SWC 2023 gala dinner ticket (approx. 70 USD)
- The technical or social tours. (information will be provided on how to purchase tickets for tours)
- Poster printing (there may be printing options on-site. This is still to be confirmed)
- Dinner in the evenings
- Accommodation (participants must organize their own accommodation/hotels and pay for this separately)
- Transfer to and from the SWC 2023 venue (although buses may be provided for groups upon request)
- Please note there will be a 3% bank charge for use of the payment gateway upon payment for delegates who pay in INR and 3.5% bank charge for other currencies.

Home	About	Program	Sponsors	Partners	Author's area
Professiona		930 USD			
Professiona bird	l Early	840 USD		5	
Professiona Member	ISES	840 USD		to the	
Professional bird + ISES N	-	745 USD			
Student (with ID)	n valid	465 USD	w		
Student Early	/ bird	420 USD			
Student ISES member		420 USD			
Student Early ISES membe		370 USD			
*Early bird rate July 2023	es end af	ter 31			
** 3.5% bank c	harges a	pply .			
***Not yet an IS Click here to le how to become our global sola	arn all ab e a mem	oout ber of			

Reg

Home About Program

Sponsors

Partners

Author's area

Req

We are happy to offer a special rate to local as well as international participants from lower income countries. India is included in this list.

This is the first ISES Solar World Congress that is making lower registration prices available to people residing in lower income countries. We have received much feedback over the years from participants looking for funding to attend ISES SWCs and this is our contribution to making the event more accessible to all interested people across the globe. While we understand that even with offering a lower fees category, not everyone can afford to pay the registration fee, we hope this will at least make a contribution to many who can. The ISES Board members and ISES headquarters staff continue to strive to find other sources of funding and sponsorship in order to lower the cost of registration for all people.



Home About	Program	Sponsors	Partners	Author's area	Reg
Larry Diru	USD			~	
ISES Member	600 USD				
Early bird + ISES Member	555 USD				
Student	200 USD				
Student Early bird	170 USD				
Student + ISES member	170 USD				
Student + Early bird + ISES member	140 USD				
*Registration before 31	July.	1			
** 3.5% bank charges a	ipply				
***Not yet an ISES men Click here to learn all ab now to become a mem	out				

Please note: To pay for registration within the category of lower income countries, your current address must be within the listed countries.

Home	About Program Sponsors Partners area Reg
Internationa Solar Energy Society Wiesentalstr	mailing list to stay up to date on SWC 2023 and swc@ises. SES activities
50	First Name Email
79115 Freiburg,	Last Name Country ~
Germany	Enter the characters
	shown in the image.

3

in



You Tube

......

© 2023 International Solar Energy Society - Founded 1954

SWC 2023

Modelling and Estimation of Photosynthetically Active Solar Radiation in an Agrivoltaic Plant in New Delhi

Subhra Das
Solar Engineering Department, Amity School of Engineering and Technology, Amity University
Haryana

Summary

With the proliferation of solar energy generation in India, people have started taking interest in combining farming with solar photovoltaic power generation. The objective of this paper is to estimate the solar radiation under a conventional ground mounted solar photovoltaic plant located in New Delhi and thereby estimate the photosynthetically active solar radiation under the solar panels.

Significance of the work from Indian Context: Small and marginalized farmers in India are unable to earn enough money from the agriproducts and are selling off their land and taking up other secure job roles to earn money for their livings. This is leading to loss of agricultural land and loss of skilled manpower (farmers) whose knowledge and skills goes a waste as they move into some other profession. Now, the Government of India has provided a solution to the farmers to increase their revenue from the same piece of land under the KUSUM scheme by combining solar PV power generation with agriculture(Pulipaka et al. 2021). As per the scheme farmers can install solar PV power plant in their agricultural field which can be installed at a height of 3 ft above the ground so that the land can be utilized for farming. Sandbox Solar, founded by Ian Skor, PE, has developed an agri-voltaic software modelling tool to optimize the design of collocated solar PV with crops. Agri-voltaic is seen to be a technology which can increase the revenue of the farmers from the same piece of land over the entire year. There are three different layouts of the AVPs based on the arrangement of solar panels and agricultural area (Pulipaka et al. 2021). The first one is the interspace farming wherein crops are grown in the space between two rows of solar arrays. The second type is farming below the panels which are installed with a tilt angle equal to the latitude and no special arrangement is made for growing crops underneath these panels. Manual cultivation is only possible under these panels. The third type is the farming below elevated

structures which are around 3m high (Casares de la Torre et. al. 2022). The elevation enables farmers to use machineries for farming and allow sunlight to uniformly spread over the land area. As per the available literature there are sixteen operational agri-voltaic plants in India (Das 2022) scaling from 1 MW agri-voltaic plant at GPCIL Amrol Gujrat to 7 kW at Junagadh Agricultural University.

The major challenges that one faces while growing crops underneath the solar panels is of the availability of solar radiation. Mathematical relations were derived to calculate the fraction of light that reach the ground under the collector field when collectors are mounted 2m above the ground with row spacing equal to three times the height of the collectors (Goetzberger et al. 1982). Trommsdorff et al. 2022 proposed two categories of agri-voltaic plants viz. Category I- Overhead PV with vertical clearance > 2.1 m and Farming under the agri-voltaic system Category II-Interspace PV with vertical clearance < 2.1 m and Farming between the rows of agri-voltaic systems.

Solar radiation is the main source of energy for all natural processes especially photosynthesis and solar PV performance (Oliphant and Stoy, 2018; Norman and Welles, 1983) Analogous to solar PV system, plants use solar radiation in the wavelength of 400-700 nm for photosynthesis. This component of the solar radiation is known as photosynthetically active radiation (PAR). Quantum sensors are utilised for measuring PAR at any site. But it is difficult to have a ground measured PAR data for all sites which can be utilized for decision making for the selection of plants that can be grown in the given site. Ghayas et al. (2022) reported that long term study of PAR for Indian region is not available because of the absence of dedicated sensor network for regular measurement of PAR over Indian regions. They have conducted a study to measure PAR for Delhi for four years starting from 2013 to 2016. These calls for the requirement of models to predict PAR for Indian regions. The present work will focus on developing a model to estimate PAR for New Delhi. Gardea (2020) presented a review of the empirical models developed by researchers across the

Gardea (2020) presented a review of the empirical models developed by researchers across the globe to estimate PAR. PAR_{total} is estimated using various parameters like global solar radiation, solar elevation angle, clearness index, aerosol optical depth to name a few. Salim et al.(2014) developed a non-reproducible model to estimate PAR at Dehradun, India. Researchers have proposed decomposition models to estimate PAR_{diffuse} as a function of parameters like clearness index, diffuse fraction, solar elevation, PAR_{total} and these models are compared to check their accuracy in estimating PAR_{diffuse} (Lu et al. 2022). Decomposition models are found to be useful in

the absence of on-site diffuse measurements. It is used to predict diffuse horizontal irradiance at any arbitrary locations, which can be further utilised to estimate PAR_{diffuse}. Lu et al. (2022) compared seven stand-alone decomposition models and an EMOS approach model for global horizontal radiation which is used to estimate PAR.

Keywords: Agro-voltaic, PAR, Decomposition model

Proposed Model

In an Agri voltaic system decomposition of photosynthetically active solar radiation into diffuse and direct component is essential because of the shading caused by the solar panels which shows seasonal and diurnal variation. The diffuse and total PAR values are computed using the following steps:

Step 1: Inputs- Latitude and longitude of the location, Day of the year.

Step 2: Inputs- Description of the solar PV plant, tilt angle of the panels, length of panel, height of the lowest and heights point of the panel, type of panel.

Step 3: Estimation of the length of the shadow

Distance between two panels is calculated based on the length of the shadow the panel will cast over the day and over the entire year. The length of the shadow D is given by

$$D = L[\cos \beta + \sin \beta \tan(\delta + \varphi)] \tag{1}$$

where L is the length of the panel, β is the tilt angle of the panel, φ is the latitude of the place and δ is the declination angle which is given by

$$\delta = 23.45 \sin[360(284 + n)/365]$$
 where n is the day of the year. (2)

where n is the day of the year.

Step 4: Estimating monthly average daily global radiation (H_g) using the relation proposed by Page (1961):

$$\overline{H_g}/\overline{H}_o = a + b \left[\overline{S}/\overline{S}_{max} \right] \tag{3}$$

Where \overline{H}_o is monthly average of daily extraterrestrial radiation on horizontal surface (kJ/m²day), \bar{S} is the monthy average sunshine hours per day at the location (h), \bar{S}_{max} is the day length on a horizontal surface (h), a and b are the regression constants which are calculated for 17 Indian cities by Modi and Sukhatme (1979).

$$H_o = \left[24 I_{sc} (1 + 0.033 \cos\left(\frac{360n}{365}\right)) \{\omega_s \sin\varphi \sin\delta + \cos\varphi \cos\delta \sin\omega_s\}\right]/\pi$$

Here ω_s is the sunset hour angle. Klein (1977) determined that the value of Ho is equal to \overline{H}_o on January 17, February 16, March 16, April 15, May 15, June 11, July 17, August 16, September 15, October 15, November 14 and December 10.

Step 5: Estimating monthly average daily diffuse radiation (\overline{H}_d) using the relation proposed by Modi and Sukhatme (1979):

$$\frac{\overline{H}_d}{\overline{H}_g} = 0.8677 - 0.7365 \frac{\overline{S}}{\overline{S}_{max}}$$

And \overline{H}_d is monthly average of daily radiation on a horizontal surface.(kJ/m²-day). the hourly extraterrestrial radiation on horizontal surface can be obtained by calculating the instantaneous value (I) and then multiplying it by 3600 s.

Step 6: The total PAR over a horizontal surface can be determined from the monthly average hourly radiation directly by utilizing the following expression proposed by Grima et al. (1999):

$$PAR_{total} = \bar{I}_g \times 1.83$$

Step 7: Lu et al. (2022) calculated PAR_{diffuse} as a function of diffuse fraction and solar elevation angle using decomposition method.

$$k_{d,PAR} = \frac{PAR_{diffuse}}{PAR_{total}} = \frac{\left[1 + 0.3(1 - k_d^2)\right]k_d}{1 + \left(1 - k_d^2\right)cos^2\left(90 - \alpha\right)cos^3\alpha}$$

Here k_d = DHI/ GHI is the diffuse fraction where DHI and GHI are respectively the diffuse and global horizontal irradiance (W/m²), and α is solar elevation angle measured in degree. The ASHRAE model can be used to compute DHI and GHI.

Results and Discussions

Consider a ground mounted solar PV power plant intalled at New Delhi (28°35' N, 77°12'E) having an average of 8.6 h of sunshine hours per day. The dimensions (length x breadth x thickness) of the modules used in the plant is 197.6 x 99.2 x 3.5 cm. the modules are tilted at an angle of 30° with the horizontal. Applying the proposed model, the photosyntheically active solar radiation is estimated for the entire year.

It is observed that the PARdiffuse varies between 99.8 - 268.7W/m^2 having a mean of $190\pm0.2 \text{W/m}^2$ and the total PAR value varies between $318\text{-}525 \text{ W/m}^2$ having an average value of $440\pm0.29 \text{ W/m}^2$. It is observed that the 80-90% of interrow spacings between the panels are mostly shaded during the winter months and hence during this time the plants which are grown in this region will

get PARdiffuse. Only during the summer months that 20-30% of the space remains under the shadow and hence plants recives both direct and diffuse component of PAR.

Conclusions

The proposed model can be utilised to estimate the photosythetically active solar radiation under a conventional solar PV power plant. The information regarding the available PAR can be utilised to select the variety of plant that can be grown under the plant.

References

- Pulipaka S., & Peparthy M (2021). Agrivoltaics in India: Overview of Operational Projects and relevant Policies. Report by National Solar Fedarion of India and Indo-German Energy Forum Support Office, New Delhi version v1.4.
- Casares de la Torre F.J., Varo M., Lopez-Luque R., Ramírez-Faza J., Fernandez-Ahumada L.M. (2022). Design and analysis of a tracking / backtracking strategy for PV plants with horizontal trackers after their conversion to agrivoltaic plants. Renewable Energy 187, 537-550.
- Subhra Das. Status of Agri-voltaic in India and the Opportunities and Challenges. Book of Proceedings, Agricultural Innovation, Sustainability, Entrepreneurship and Networking (i-FAISEN), July 4th-8th, 2022, pp 71-77, Thailand. Organized by Asian Association of Agricultural Colleges and Universities, Maejo University Thailand.
- Goetzberger A., & Zastrow A. (1982) On the coexistence of solar-energy conversion and plant cultivation. International J Solar Energy 1,55-69.
- Max Trommsdorff, Simon Gruber, Tobias Keinath et al. Agrivoltaics: Opportunities for Agri-culture and the Energy Transition. A Guideline for Germany | April 2022, Fraunhofer Institute for Solar Energy Systems ISE.
- Oliphant, A.J., Stoy, P.C., 2018. An evaluation of semiempirical models for partitioning photosynthetically active radiation into diffuse and direct beam components. J. Geophys. Res. Biogeosciences 123, 889-901. https://doi.org/10.1002/2017JG004370.
- Norman, J.M., Welles, J.M., 1983. Radiative transfer in an array of canopies. Agron. J. 75, 481-488. https://doi.org/10.2134/agronj1983.00021962007500030016x.
- Humaira Ghayas, Radhakrishnan S.R, Vinay Kumar Sehgal, Sachchidanand Singh. Measurement and comparison of photosynthetically active radiation by different methods at Delhi. Theoretical and Applied Climatology, 150 (3-4):1-13, October 2022

- Ma Lu, S. Zainali, B. Stridh, A. Avelin, S. Amaducci, M. Colauzzi, P.E. Campana Photosynthetically active radiation decomposition models for agrivoltaic systems applications. Solar Energy 244 (2022) 536–549.
- Molina Grima, E, Fernandez, FGA, Camacho, FG, Chisti, Y: Photobioreactors: light regime, mass transfer, and scale up. J. Biotechnol. 70, 231–247 (1999)

Proposed Expenditure (INR)	Rs. 41684
Financial/ Non- Financial	Financial
Brief Description	Dr. Subhra Das has applied for financial assistance to attend the International Conference "Solar World Congress 23 from 30th October – 4th November 2023 at Ashoka Hotel, New Delhi to be organized by International Solar Energy Society, ISES. Her Paper titled "Modelling and Estimated of Photosynthetically Active Solar Radiation in an Agri voltaic Plant" has been accepted for Oral Presentation. The faculty has projected total expense of Rs. 53,543.76/, which includes Registration Fee Rs. 49,175.76 (equivalent to USD 600 as on 26th June 2023), and Travel expenses (Both Way) Rs. 4,368. The request has been seen by VC sir and is recommended for Rs. 41684.00/- as per AUH norms.
Dated	4-Jul
Note Sheet No.	AUH/FA/2089
Department	Solar Energy

From: Ved Prakash Rawat <vprawat@ggn.amity.edu>

Sent: Monday, July 24, 2023 04:08 PM
To: Dr. Subhra Das <sdas@ggn.amity.edu>

Cc: registrarauh < registrarauh@ggn.amity.edu>; Mahavir Prasad Aggarwal

<mpaggarwal@ggn.amity.edu>

Subject: Approval: To attend International conference

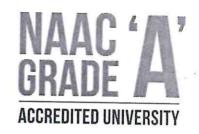
Dear Madam,

PFA approval to attend international conference.

with warm regards

Ved Prakash Rawat Deputy Registrar Amity University Haryana 2337015 / 4110





From: Dr. Subhra Das <sdas@ggn.amity.edu> Sent: Tuesday, August 29, 2023 6:23 PM

To: Ved Prakash Rawat <vprawat@ggn.amity.edu>

Cc: registrarauh < registrarauh@ggn.amity.edu>; Mahavir Prasad Aggarwal

<mpaggarwal@ggn.amity.edu>

Subject: Re: Approval: To attend International conference

Dear Mr Rawat.

This is to inform you that being a member of International Solar Energy Society and a Plenary Speaker, I could register Free of cost for the International Solar World Congress 2023.

I don't need the sanctioned money for registration and transport.

Thank you, for your support.

Thanks & Regards

Dr. Subhra Das

M Tech (Jadavpur Univ), Ph D(Jadavpur Univ) Professor & HoD Solar Department Amity School of Engg. & Tech Amity University Haryana

⊞Hide message history VR