

Research based online course:

**”Atomic Astrophysics and Spectroscopy with
Computational workshops on SUPERSTRUCTURE and
R-matrix Codes”**

- PROF. SULTANA N. NAHAR

Astronomy Department, Ohio State University, USA

Email: nahar.1@osu.edu

web: <http://www.astronomy.ohio-state.edu/~nahar>



A.P.J. Abdul Kalam STEM-ER Center
(Indo-US collaboration)

- Organized under the Indo-US STEM Education and Research Center of OSU-AMU, AMU, Aligarh, India, & OSU, Columbus, USA

October 16 - 31, 2021

Support: OSU-AMU STEM ER Center, AMU, OSU, OSC

Date: 10/30/2021

Dear Prof. Suctana Nahar

It is my great honor to take Astrophysics course from you. when you teach the course, wollaah! you are so wonderful, you completely aware what you are doing on the course, your time management is so amazing. You inspired me a lot. I have very much even eager to continue my higher study in KFUPM for the course you thought me. ~~This~~ This course contain computational workshop, that is one of the best aspect of the course, which thought me to see how the Atomic Astrophysics Research Look Like. ~~Am. Abdurahman~~

Please Prof. Nahar continue and keep it up by delivering a very important course like this one, which inspired a lot of us. may Allah bless you more and more!!!

Habib Abdurahman Arebu

Addis Ababa University, Ethiopia

SHOT ON P33
itel DUAL CAMERA

2. Ankit, NIT-Srinagar, India

Ankit Sabharwal <ankit_2020mschm011@nitsri.net>

Wed 03/11/2021 08:24

To: Nahar, Sultana <nahar.1@osu.edu>

Dear Mam

First Of all thank you so much for your efforts about this online course. It's really a good initiative you started. I hope more online course will be organised by you in future for the well being of humanity.

Now I want to bring your kind attention towards an issue which I am facing.

Mam I have issue with the certificate actually we had to fill Last name in the application form but I don't have surname my Name is only Ankit not Ankit Sabharwal . There wasn't any option to leave Last name Blank in the online registration form so I filled my Name As Ankit Sabharwal in application form . This name wouldn't work as my Name is Ankit

So mam can you please update this in your records and provide me a new certificate with my Name as Ankit

I shall be thankful to you for this.

Thanking you

Ankit

National Institute Of Technology Srinagar India.

3. Prof. Maher Ghossain, Islamic University of Gaza, Palestine

Re: Salam and AAS: Certificates 7
Maher Ghossain <ghossain@iugaza.edu.ps>
Wed 03/11/2021 13:36
To: Nahar, Sultana <nahar.1@osu.edu>

Dear Prof. Nahar,
Asalamu Alikum,

Thank you for the certificate, for the time, and the valuable information in atomic and in computation.
You did very hard work during the lectures, which are very interesting and exciting. I like to get an idea about a possible research work that I can do after the workshop with your cooperation, and with my student.

Regards.

Dr Maher O. El-Ghossain
Professor of physics
Physics Department
The Islamic University of Gaza
Gaza, Palestine

4. Dr. Rahla Naghma, OSU (affiliated), India

AAS

Rahla Naghma <rahlanaghma@gmail.com>

Sun 31/10/2021 04:06

To: Nahar, Sultana <nahar.1@osu.edu>

1 attachments (2 MB)

IMG_20211030_220148.jpg;

Dear Prof Sultana Nahar,

Being a participant of your online course "Atomic Astrophysics and spectroscopy with computational workshop on Superstructure and R matrix codes" is a great experience for me. The course itself reflects how much effort was given by the resource person and her commitment to the service of science in general and to atomic astrophysics in particular. The course is designed in such a fashion that both experts of the field as well as the young researcher and undergraduate can understand easily. Starting from basic physics to technical problems and the connection between atomic physics and astrophysics is well explained. Besides, the lecture notes are a great help to recapitulate the course. The notes provided for the computational workshop are unique in its kind. The lectures are very interactive and keep us engaged throughout the course. We just forget how time has passed and 3 hours are over. Furthermore, the course has given us a great platform to collaborate with people across the globe. My sincere thanks to Prof. Sultana Nahar for tireless effort to bring back our interest in the course. In the future I will carry forward the work for sure.

I also observed in the whole lecture series that you have not taken any break even for a sip of water. I really appreciate how much you encourage women to stay in science and hope you will remain an inspiration for people especially from the developing part of the world. .

Thank you very much. Wish you all the best in your future endeavors.

Regards

Dr Rahla Naghma

5. Mohsin Sayeed, Student at AMU, India

me, Mohsin requesting Certificates.

Mohsin Sayeed <syedmohsinsayeed@gmail.com>

Mon 01/11/2021 09:58

To: Nahar, Sultana <nahar.1@osu.edu>

Cc: ahmadtauheed@rediffmail.com <ahmadtauheed@rediffmail.com>

Assalamualaikum Professors,

Professor Nahar, I have not received my Certificates yet. Did you started distributing them?

Professor, I learnt a lot about the course especially how I can use the atomic spectroscopy that I learnt from Professor Tauheed in AMU during BSc and MSc in Astronomy field.

It will help me a lot to work on space science projects in future. You were very kind and hard working. I will be very happy to be in touch with both of you in future for my academic growth.

Thanks a lot for your teaching support.

Thank you Sir for your kind support.

Mohsin Sayeed

Lucknow, India

me, Mohsin Expressing an Interest for PhD in Physics

Mohsin Sayeed <syedmohsinsayeed@gmail.com>

Mon 15/11/2021 08:24

To: Nahar, Sultana <nahar.1@osu.edu>

Dear Professor

Assalamualaikum,

Professor, I am motivated to pursue PhD in Physics at The Ohio State University from the Fall semester 2022. I am very much interested in doing Phd research work in Atomic Astrophysics and Spectroscopy under your supervision.

Professor, I have an English IELTS Academic score of 6.5 that is just 0.5 less than the required English proficiency IELTS Academic test

5. Mohsin Sayeed, ... continues

score(7.0) at the Ohio State University. I have also now GRE score, particularly in quantitative reasoning section of GRE I got 150 out of 170. But I think GRE is waived at the Ohio State University.

Professor, I have now gained good knowledge in the Atomic Astrophysics and Spectroscopy course taught by you particularly in the application of Atomic Spectroscopy in Astronomy.

Professor, I will be very happy to work with you and pursue PhD under your supervision.

Alhamdulillah, I have been taught Atomic Spectroscopy from Professor Tauheed Ahmed in BSc and MSc classes and as well as he supervised my experiments in the Spectroscopy lab of AMU and also I am very thankful to you Professor for teaching me Atomic Astrophysics course.

Looking forward to hearing from you soon positive response

Thanks

Your sincerely

Mohsin Sayeed

Lucknow, India

6. Prof. Dr. Alok Kumar Singh Jha, J.N.U., India

Computational workshop

Alok Jha <aloksinghja@gmail.com>

Mon 01/11/2021 07:30

To: Nahar, Sultana <nahar.1@osu.edu>

Dear Prof Sultana Nahar,

I hope this mail finds you well. I participated in the online course "Atomic Astrophysics and Spectroscopy with Computational workshops on SUPERSTRUCTURE and R-matrix codes. It was a condensed course and covered a number of topics useful in atomic, molecular, optical and plasma physics. Participants got the opportunity to learn and run successfully SUPERSTRUCTURE and state-of-the-R-Matrix codes .

This course was attended by participants from various countries. The way in which you gave the lectures was really very wonderful and it contained various information. You drilled the knowledge into the brain of participants. I am sure that this workshop will be very very useful for those who want to do research in atomic astrophysics and spectroscopy or in fact in an interdisciplinary field too. In the last lecture you discussed x-ray and its application in cancer treatment. You showed how theory and experiment go together.

Thank you very much for providing me with this platform. I got an opportunity to learn various things related to my research work. you worked very hard for us. You spent more than 4 hours in a stretch daily and gave answers to all the queries asked by the participants. I am sure that everyone benefited from this weekend condensed course. Thanks again.

With Regards,

Dr. Alok Kumar Singh Jha

Assistant Professor

School of Physical Sciences

J.N.U. New Delhi.

7. Muhammad Ibrahim, Tanta University, Egypt

Comments on Atomic Physics Course.pdf

mohammed30845343 <Muhammad.Ibrahim@science.tanta.edu.eg>

Sun 31/10/2021 16:13

To: Nahar, Sultana <nahar.1@osu.edu>

Dear Professor Sultana,

These are my comments expressing my gratitude.

Sincerely,

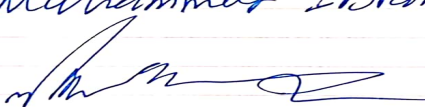
Muhammad

Dear Prof. Sultana's

Thanks for giving us this opportunity
to learn and to train on a new technique.

Thanks for giving us all of this time, answering
our questions with no hesitation.

It was really a wonderful opportunity to be here
and participate in this valuable course.

Sincerely,
Muhammad Ibrahim


About "Atomic Astrophysics and Spectroscopy" with Computational Workshops on the R-matrix Codes

I am Mahbuba Aktary, a glad participant of this wonderful course. I am from Begum Rokeya University, Rangpur, Bangladesh. As an undergraduate student in physics, I found this course very advanced and extremely knowledgeable.

I have many things to be grateful and to appreciate this courseware.

I am highly impressed by Prof. Sultana N. Nahar, Astronomy Department, Ohio State University, USA for her priceless efforts to make this course easy and suitable for all kinds of participants. She do care her every single student to get the course material well-learned. Her inspirations make us fearless to start learning things though they are completely unknown in the beginning.

I have never seen such a quick and kind responses of a high profile Professor to me like Prof. Sultana N. Nahar to their students to fix up problems very easily within a very short time.

I cannot thank her for that. I will pray to Allah & beg for her best worldly and after-life.

8. Mahbuba Aktary, ... continues

I would like to mention the successful maintainance and helpful manner of "Ohio Supercomputer Center" and want to thank the employees who put a lot of efforts for us cordially to fix up "log in" issue.

I would like to thank Prof. Muhammad Aslam Beig, National Center for Physics and QAU, Pakistan and Prof. Tauheed Ahmad, Aligarh Muslim University, India for their time for discussion based on coupling rules and finding ground levels among a number of states. They answered my questions and it made me very happy and inspired.

It is a completely a new experience for me to get in contact simultaneously with 102 participants from all over the world. We get an wonderful platform to know each other and I hope it will help us to build up a strong network among us for future Physics journey.

I found them very very helpful, co-operative and energetic during the group discussions regarding this course.

I love their enthusiasm for this course.

I hope to join this type of courses an hope to get you in contact many times in future, In-sha-Allah.

I would like to complete this feedback paper by thanking Prof. Sultana N. Nahar again for her concern about Physics students, wemen who have passon to love & learn physics, and to utilize their knowledge for the betterment of the world.

8. Mahbuba Aktary .. continues

Evaluation of AAS

Mahbuba Aktary <aktarymahbuba@gmail.com>

Sat 30/10/2021 11:52

To: Nahar, Sultana <nahar.1@osu.edu>; ahmadtauheed@rediffmail.com <ahmadtauhee

Dear All,

Assalamu Alaikum.

Hope my mail finds you well.

I'm very happy to send you mail on evaluation of "Atomic Astrophysics and Spectroscopy" course. Please find the attached file.

Waiting to see you in the class.

Salam.

Best Regards

Mahbuba Aktary

UG students

Department of Physics

Begum Rokeya University, Rangpur, Bangladesh

Member of American Physical Society (APS) & International Society of Muslim Women in science (ISMWS) (Lifetime)

Contact: (+88)01516795931

Linkedin: <https://www.linkedin.com/in/mahbuba-aktary-phy61>

"May Allah bless you all, all the time."
I am grateful to Allah for this blessing to me and also grateful to Prof. Sultana N. Nahar for many things I have learned from this course.

Stay Blessed, Stay Safe
all the time by the Bless of Allah.

Evaluation of Atomic Astrophysics and Spectroscopy

This course was a well set-up, engaging, and very informative course. Dr. Nahar is an amazing professor who has the knowledge and understanding to teach the students quickly, but with a great amount of depth. I also appreciate her understanding of mistakes, and how they are more to help you than hurt you.

Something I believe could be improved was the usage of the Zoom platform. A lot of the time, the class would pause for up to 15 min. simply due to technical difficulties or interruptions due to Zoom. Most of the issues simply came from students not muting their mics. I would request that the professor for next year's course knows how to mute students on Zoom. Effective communication over Zoom is also important.

It was really informative session/course. Your ~~efforts~~ I highly praise your efforts. But the session/course was very hard for me that is because I was not able to attend all the lectures. The course timings although was very flexible but it was not for me unfortunately. Therefore, I couldn't attend all the lectures. Because of this reason I also I was not able to do any computational work. I have not done any computational work before that's why it was also bit harder for me.

I would suggest that please record all your lectures and post them on google drive or YouTube or whatever is ~~bit~~ easier. It will be more easier for everyone if someone is facing internet or timing issue.

Sidra-Tul-Muntaha
International Islamic University,
Islamabad, Pakistan.

11. Kevin Hoy, The Ohio State University, USA

This course is a great introduction to spectroscopy and atomic physics.

Sultana is an excellent instructor, she really cares about teaching everyone.

The only thing that I could think of to improve it would be to expand it. Make it longer, cover more topics, etc. But at that point, you're tackling a whole new animal, so I understand maintaining the current scope.

Thanks again!

12. Dr. Nupur Verma, Deen Dayal College, India

Graded score 55 Nupur Verma

nupur verma <verma_nupur123@rediffmail.com>

Sun 31/10/2021 16:17

To: Nahar, Sultana <nahar.1@osu.edu>

1 attachments (5 MB)

graded_score_answer_sheet.pdf;

Greetings

I have attached graded answer sheet.

It was an enriching experience attending your worship.

Regards

Dr Nupur Verma

13. Prof. Raheel Ali, Quaid-i-Azam University, Pakistan

Ph.D.

Raheel Ali <raheelali@qau.edu.pk>

Sun 14/11/2021 14:42

To: Nahar, Sultana <nahar.1@osu.edu>

1 attachments (123 KB)

letter-Nahar.pdf;

Dear Dr. Sultana

Assalam Alekam

1. First of all I want to congratulate you on arranging a very informative and useful workshop. The energy you had put in to make it successful must be appreciated. Due to my personal engagements I couldn't attend the last two sessions.
2. The revised later is attached herewith.
3. I will be able to reply to you about an article in Photoionization of Atoms in a couple of days.
4. One of my students, Sumera, has contacted you for admission in OSU. She is interested to work with you. Further she is interested to know about the prospects of funding there. Could you please send me some information?

Best regards,

Raheel

14. Mustahsina Nomi, BUET, Bangladesh

(No subject)

Mustahsina Nomi <nomi20232@gmail.com>

Tue 16/11/2021 09:31

To: Nahar, Sultana <nahar.1@osu.edu>

Dear Ma'am,

Assalamualikum!

Hope you are well by the grace of Almighty Allah

My name is Mustahasina Faruq Nomi, a M.Sc (thesis) student at Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh.

I was a participator of course "Atomic Astrophysics and Spectroscopy with computational workshops on the R-matrix codes" on zoom for the 3 weekends during October 16-31, 2021. I also get a salutray and compilation certificate and these certificate and course is encourage me lot.

Madam, I learn everywhere from your lecture, i learn everything from you, that give me a new life.

Madam, I am highly interested to join a member of International Society of Muslim women in science and APS with your kind permission and response. Madam i want to stay with you on your prayer and blessings.

Dear, madam, I will be blessed enough by getting an wonderful opportunity to join those course.