

NASCENT

Going out with a BANG!!!



After almost 4 years of penny-pinching and being careful with the NASCENT budget I was happy to go ahead and authorise the organisation of the last NASCENT winter school and International Meeting in Israel. Everyone had been very positive and enthusiastic when the idea was first proposed, back in July 2009, by the 'always proactive' and 'super-keen' NASCENT Deputy Coordinator (for the non-initiated that is Karsten) and fully supported by Levi, who was going to be the local host.

I thought it would be a wonderful opportunity for all researchers to see each other again and present all their excellent work and also, for the ESRs, to get that additional extra motivation and energy to finish their PhD thesis.

Despite being involved with the organisation and aware of all the details, I was not yet prepared for the magnificent event that our Host Team put together.

Levi and his A team were terrific and the chosen venue proved to be a big success.

Unfortunately not all of the NASCENT members (past and present) were able to attend, due to unavoidable circumstances, but they were all terribly missed. The Meeting provided an excellent opportunity to report on the final progress of the project, with all ESRs giving top presentations. Our invited speaker, Prof. Shabat, from Tel-Aviv University, gave a superb key-note lecture that everyone truly enjoyed.

The trip to Masada, with everyone wearing their NASCENT t-shirts, provided a unique photo opportunity shown above and this was followed by what can only be described as the 'best ever' NASCENT Gala Dinner!

It was a truly special meeting and there was a bit of sadness in everyone, as the group parted at the end of the Meeting, but I am sure that the memories of this last NASCENT event will stay with everyone for a very long time!!!

Marina

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An Amazing Experience

By Tibor Renkecz (BME)



As an invited guest it was a great pleasure to be a participant of the NASCENT events in February 2010. It was extra lucky that these events were in Israel, where I have never been before and that is such a wonderful country, mainly for a European.

The 5th Winter School was organized in Beer Sheva which is located in the Negev desert, so that was the first face of the many Israel has. All the lectures were really useful, I especially liked the microscopy laboratory which put the morning lecture into practice improving our skills. For me the world of stem cells and motor proteins was also a completely new field. I extended my knowledge to a significant extent.

The hospitality of the organizers: Professor Levi Gheber and his 'A-team' Yael, Inbal and Daniel was exceptional. They were always keen to assist us, and arranged everything for our convenience.

The Dead Sea was amazing!!! The Sea, the surrounding mountains, the spa are all unforgettable. We were just

floating in the Dead Sea in February, still incredible.

The presentations of the NASCENTists were good for not only learning, but of course for me also to get to know the network's research activities. I had the opportunity to give my first presentation of my PhD studies in front of such a friendly audience. It was useful both for developing my oral communication skills in an English-speaking scientific atmosphere and I received advice that I could successfully apply in my research project, too.

The last day in Jerusalem was great, but I have to add that I could have spent several days there. An afternoon was certainly not enough for the Holy City. The tour in the Old City gave an insight into the world of the three religions.

Herein I also would like to express my thanks to the NASCENT Network for letting me have this unique experience.



Brilliant

By Judith Ray (QMUL)



After a short overnight stop in Tel Aviv seven of us (Ana, Pinar, Nataliya, Ania, Rita, Paolo and I) made the train journey to Beer-Sheva where we were met by Levi's A team, Inbal and Yael, to take us to the student residence. In Tel Aviv we (six girls) had stayed in a hostel all in one small room so it was lovely to discover the spacious individual en-suite rooms



organised for us to go and play snooker which was great fun, albeit with my appalling snooker skills! It wasn't long before I gave up and let the boys show us how it was done!

On the final day of the winter school we were given a really exciting talk on stem cells which became more of an interactive discussion than a one way talk, which was great, and the work done by Razi Vago on bone replacement was incredible! The final talk of the school was given by Robert Marks on biosensors which was a great lecture to finish on. On the final evening we all went to the end of school dinner where we had more traditional Israeli food with lots of hummus much to Ania's delight!

On the Thursday we travelled to the Dead Sea for the international meeting where we heard some great talks on everyone's work and a fabulous lecture from Prof. Doron Shabat on Self-Immolative Polymers. The Dead Sea was incredible; being able to 'stand' on water was amazing, although a little cold when we first went in it was well and truly worth it! All in all it was a brilliant experience and I would like to

thank all those in Nascent who made me feel so welcome in Budapest, it was so nice to see you all again! A massive thank you to Levi and his A team for all the organisation and planning they put into our entire trip and also to Dr Resmini for giving me the opportunity to go.

that awaited our arrival! (Paolo – disorganised as ever - left it too late to book into the hostel so had stayed in a very nice hotel in Tel Aviv!) That evening Levi took us for a traditional "Donna Kebab," having never liked the "British version" it was a pleasant surprise to find out how



much I enjoyed it! On Monday morning, Ana led us to Beer-Sheva University where we had a fabulous lecture by Levi on how microscopes work which is actually really useful for my studies as I use microscopes to analyse zebrafish, when they stop swimming! In the afternoon Levi and his A team gave us a practical session on microscopy enabling us to identify the actual size of the specimens we were looking at which was also very interesting and again very useful. That evening Levi and his A team took us to a local restaurant which served us all a variety of couscous dishes which were delicious and, as ever in Israel, gigantic!

On Tuesday we had two lectures, the first in the morning by Levi's wife, Leah, on motor proteins which was really interesting and in the afternoon Ilana Bar gave us a talk on Raman spectroscopy, which again, was a very informative lecture. That evening Levi and his A team had



An Amazing Israel - a land of wonders

By Marcin Dabrowski (IPC)



INTRODUCTION

It was a day before my 25th birthday when I was informed about an opportunity to attend the NASCENT Winter School in Israel in February 2010. I was really surprised and excited. A few days later I was officially invited but I still could not believe it was true. I had never been to Israel before. I had a feeling that this could be a journey of a lifetime and now I know that it was indeed so.

AIMS

My trip from Warsaw to Beer Sheva was very long but stimulating. When me and Zhenia departed from Warsaw it was a midwinter season. There was 30 – 40 centimeters of snow covering the streets and the temperature was around -15 degrees Celsius. When we landed at the Tel-Aviv airport of Ben Gurion at 4 o'clock a. m. it was completely dark. After a very quick passport control we could start exploring the Holy Land! In Tel-Aviv the temperature was +15 degrees Celsius. So, the difference was 30 degrees, quite a change. Our first reaction was... taking off a few layers of clothes. The sky was completely clear so I could see the stars and during the trip to Beer Sheva - the sunrise. The first impression was: 'Israel is a wonderful land!'

RESULTS

BEER SHEVA

After we reached our hostel and took a rest it was time to explore the city of Beer Sheva. First of all, everyone here can speak Russian. To our question 'Do you speak English?' we heard in reply 'Говорите по русски?!' I was a really lucky guy because my companion was Zhenia, a native Russian speaker! Nevertheless, it was a strange language experience for me, because I thought that Israel was a country oriented rather to the West! However, I soon realized that a lot of Jewish people from different states of the former Soviet Union immigrated here to their own country. The number of those people totals nearly one million! In Beer Sheva, we were accommodated in a student hostel located very close to the Ben Gurion University of the Negev. Apart from everything, David Ben-Gurion, patron of the university and of the Tel-Aviv airport as well as other sites was the first prime minister of Israel and he was born in... Płońsk in Poland. On the next day the Winter School begun. I will never forget the extremely warm hospitality of Dr. Levi Gheber and his Angels. Thanks to them I could try so much in Israel. Every evening we



could taste something different from the Israeli cuisine: couscous, falafel, roasted beef or lamb and we tried different types of entertainment, for instance snooker.

EIN BOKEK

Our stay at the Dead Sea in a five-star hotel with a spa and a private beach was a real experience of luxury for me. As everyone knows, 'water' in the Dead Sea is a saturated solution of salt, so the human body can float like a cork. 'Swimming' in the Dead Sea was a lesson of hydrostatics and experience of Archimedes principle exerted on my own body. But the best was still to come as I had a great opportunity to broaden my knowledge about the newest research results at the NASCENT scientific meeting .

MASADA

Our visit to Masada, an ancient memorial place of heroic struggle of the Jewish people in an uprising against the Romans, was the first touch of history of the land. It was really impressive to see a huge ramp, built by the Romans to conquer the fortress. I thought that the ramp was talking to me: 'The Roman empire was for real and reached this land!'

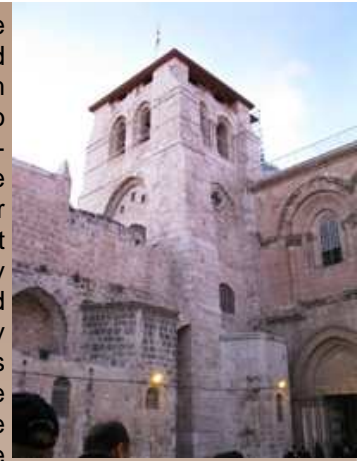
JERUSALEM

I was waiting for this day since my arrival in Israel. The weather was beautiful. After leaving the Dead Sea, the landscape was changing with each kilometer on the bus. It changed from desert to hills before we arrived in Jerusalem. Our guided tour in the city of peace was initiated from the Jaffa Gate. After that we immediately moved to quite a different world. To the world, which was a cross section through millennia. First, we passed the Armenian Quarter, and then via a small staircase entered the roofs of the houses to admire the view over the town – the

Dome of the Rock, the Mount of Olives with the Old Cemetery and the Church of the Holy Sepulchre – so many different famous architectural sites within the reach of my sight. After lunch, we visited the most important place for every Jew, the Wailing Wall and then the Church of the Holy Sepulchre. For me, it was the most important temple for all Christians. At the end of this eventful day, we saw a mosque. So, it was an experience of three monotheistic religions in a nutshell. I know that this was only the tip of the iceberg and I could not see all, which was worth seeing, but I am deeply impressed by Jerusalem and I miss this city very much.

DISCUSSION AND CONCLUSION

This whole trip was an unforgettable experience for me. I will not forget it until the end of my life! Here, I would like to take this opportunity to thank from the bottom of my heart Levi and his Angels for their hospitality, Dr. Marina Resmini for inviting me to this meeting and all the participants for a very special atmosphere. Certainly, it was an opportunity to deepen my knowledge, but also to meet many extraordinary people and to learn a lot about the culture of the country I had never been to before. All this meant that it was a journey of my life. I am convinced that the exchange of expertise and new contacts will bring new ideas for my future research, and help to develop closer cooperation!



Thank you Levi and Angels! Everything was organized so well! Visit to Israel left vivid and pleasant recollection.
IEVGEN

*"For it's always fair weather
When good fellows get together
With a beer on the table
and a good song ringing clear"*
by R.Hovey.
Muito Obrigado, dear Angels!
Saudade
RITA

This wonderful land, fantastic people and your hospitality caused that it was journey of my life! TODA!
MARCIN

I am still amazed by the beauty of Israel and by the kindness of the organizers. I spent a wonderful week together. Shalom my friends!
GIORGIO

Thank you very much Levi and your fantastic A team for this wonderful winter school in Israel. It was a great experience and I will always remember it.
ANIA

Israel was an amazing experience, a mix of science and fun. A masterpiece, unforgettable. Dead Sea... you see that and die.
PAOLO B.

Go raibh maith agat
KEVIN

TODA RhABA!!
JOLANTA

Thank you very very much for everything especially for making me feel at home..
PINAR

Thank you, Levi and Angels for this unique, unforgettable experience.
TIBOR

Patria est ubicumque est bene
PAOLO L.

I have enjoyed that the plan went without hitch... thank you very much!
TRISTAN

I'll never forget the land of miracles! Thank you guys!
ANA

I can't imagine a better way how to conclude this three years long and intense period than this amazing winter school and even better meeting at the Dead Sea. The job Levi and his angels did was just extraordinary! Thank you very very much!
GITA

Many thanks to Levi and his Angels for the organization of an absolutely fantastic meeting in Israel. I have unforgettable memories of this meeting.
TOMAS

"Weather, accommodation, sea, food... everything was wonderful. Thanks to Levi and his angels not only for this week, but for two amazing years spent together."
SILVIA

My first and last NASCENT experience could never be better.... all the fault of Levi and his Angels.
JUAN

Thank you very^1000 much for this unforgettable and amazing (not cold at all!) winter school!
NATALIYA

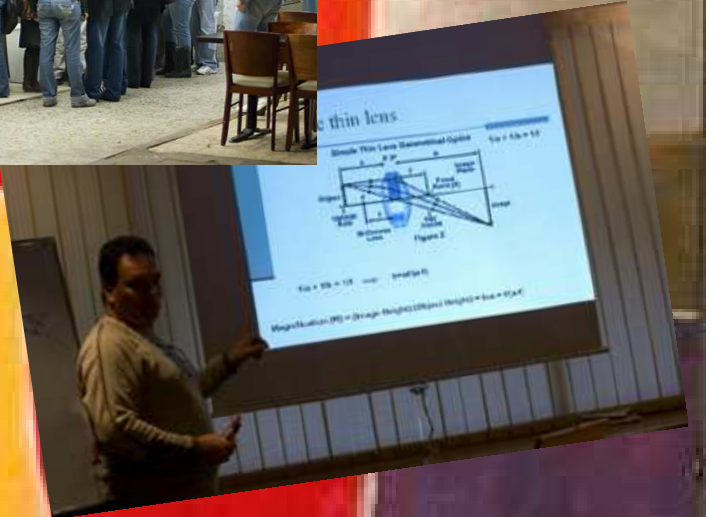
Thanks Levi and his angels, mission accomplished, over and out!"
JUDITH



**Levi's
Angels**

באר שבע
بنير شيبع
Be'er Sheva

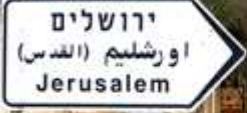
5th NASCENT Winter School Ben-Gurion University of the Negev



4th NASCENT International Scientific Meeting



The team enjoyed the tours at Masada and Jerusalem

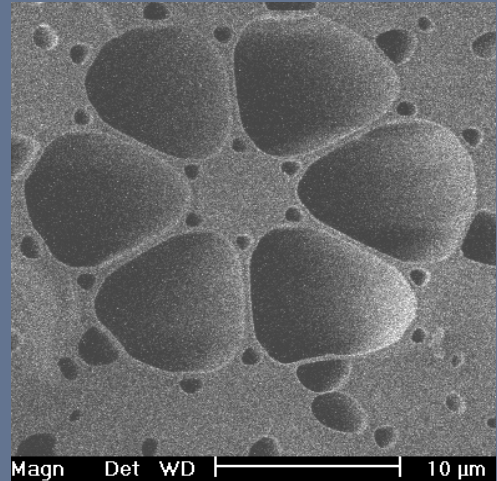


The Star of David

By Tomas Martan (CiS)

I am glad for this opportunity to write a few words about our NASCENT meeting in Israel. It was absolutely amazing. I was really glad to meet with NASCENT old and new members at such a lovely place by the Dead Sea and spend so nice a time together. I have to thank to Levi and his A-team for the organization of such a wonderful meeting.

When I came back to Prague, I started to work with special optical fibres. These fibres, such as microstructured optical fibres (MOFs), can be used as a tool for sensing gaseous or liquid analytes. I have taken a SEM photo of the inner structure (cross section) of so-called grapefruit MOF, see figure. The core of this fibre is surrounded by six big cladding air-holes. Please Levi look at the core of this MOF and you can recognize the star of David.



NEW ESR at QMUL



Silvia Pavan was born in 1984 in Treviso, a town near Venice, Italy.

She graduated in 2009 in Pharmaceutical Chemistry and Technology at University of Trieste where she performed her 12 months internship at the Anti-infective Peptides Laboratory working on solid phase synthesis, purification, analysis and biological activity of antimicrobial peptides to identify the role of their primary structural features in determining microbicidal properties.

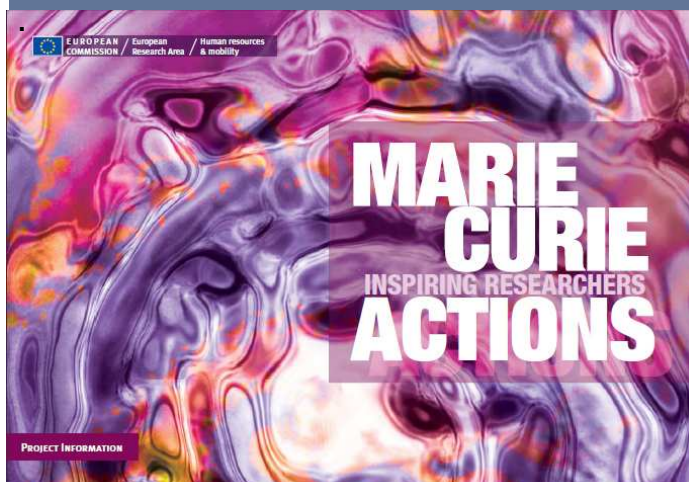
In July of 2009 she joined Prof. Benedetti's group at the University of Trieste as a post-graduate fellow. Her research interests focused on the organic synthesis of HIV antiretroviral analogues to obtain libraries of binder peptides for therapeutic drug monitoring.

In January of 2010 she began her PhD in same field and since February she started training in synthesis of molecularly imprinted polymers of HIV antiretroviral drugs in the NASCENT Network based at Queen Mary, University of London. Research objectives will be the design and development of new artificial receptors based on nanostructured polymeric materials, on short peptides, or a combination of both, with their interesting potential applications as biosensors.

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The European Commission
"Marie Curie Actions:
Inspiring Researchers"
publication is out now.

This publication features all the successful Marie Curie research projects and researchers' experiences. The NASCENT team is very proud to be among these successful stories.



ICfE SMCBS'2009 ISE

Surface Modification for Chemical and Biochemical Sensing

The 4th International Workshop

Przegorzaly near Cracow, Poland, November 6 through 10, 2009



Professor Wlodzimierz Kutner from The Institute of Physical Chemistry of the Polish Academy of Sciences, Warsaw, Poland, organized the 4th International Workshop on Surface Modification for Chemical and Biochemical Sensing'2009 that was held in Przegorzaly near Cracow (Poland) from 6 to 10 November 2009.

Several NASCENT members actively participated in the event: levgen Obratsov (IPC), Giorgio Ceolin (BME), Dr Viola Horbath (BME) and Professor Karsten Haupt. Professor Haupt was a Member of the International Scientific Advisory Board of the Workshop and delivered a splendid tutorial lecture. Giorgio Ceolin presented an oral communication and levgen presented a poster. Proceedings of the Workshop will be published as a Special Issue of Bioelectrochemistry. For more information on this event visit:

<http://science24.com/event/smcb2009/>



Wieliczka Salt Mine excursion

BME team

MANY CONGRATULATIONS TO OUR FIRST NASCENT PhD



I am sure that all teams from NASCENT will want to join me in congratulating **Dr Artur Moro** for successfully defending his thesis and gaining his PhD title.

This will hopefully be the beginning of a long and positive series of NASCENT doctors

Well done Artur

Marina

Thesis title

Design of fluorescent chemosensors for Naproxen and ATP and subsequent immobilization in nanoparticles

Supervisor: Dr Gerhard Mohr



Artur defending his theses



Artur with his parents

Two more letters before my name

The day had come. The previous two nights were hard to endure. Barely slept and too much concern on what was to me, the "D day" (where "D" stands for "defense").

The thesis was relatively easy to write and many other ideas for the future even came up during the writing process, which took about one month and a half.

I had spent the past few weeks preparing a presentation of about half-an-hour to summarize three years of work. It was not so simple, since there are many details that you have to set aside, and some of them were quite important. Apart from the slideshow, I was also concentrating on how to withstand a massive assault on my whole research.

In the meantime, I was dealing with all the bureaucracy revolving around the defense process, such as inviting Professors and Drs. who I had never really met before. Three of the people who I invited to be a part of my defense jury had already two other defenses to attend on the same morning. Luckily, they were all very friendly and agreed to be also present for my defense.

My parents had come two days earlier, in order to record the event accordingly. They helped me a lot throughout my whole nervous phase. Nevertheless, they could not avoid my getting up during the night prior to "D day" at around 2 a.m. and filling six blank pages with formulas regarding thermodynamic equilibrium constants in order to come up to the same result as I had written in my presentation.

The morning passed on really slowly, practising the speech for the 28th time (and 29th, and 30th...). The defense took place at 12.15 so most of the audience and members of the jury were all starving. The presentation was not so bad but the actual defense part was a bit difficult. I was quite nervous in a few questions but in the end, it all turned out well! After about thirty minutes of questioning, the jury left the room and five minutes later, they were back to communicate their decision. When they announced that I passed, I felt immediately relieved and suddenly quite HUNGRY. Since it was already late for lunch (usually people have lunch between 11.30 and 13.00, and it was already 14.30), our best alternative was to order some pizzas.

The afternoon was spent with my wife and parents, preparing a celebration that took place at our apartment in the evening. We managed to put about twenty people in a two room apartment, with lots to drink and eat. The party lasted until 1 a.m. and by then I was completely exhausted. For the first time in the week, I had a good night's sleep.

Currently I am planning for the future, which involves going back to Portugal but for now I am still in Jena, finishing up the research.

For all the PhD students in NASCENT, I wish you all the luck and success for your work, so that in the end you can finally add the two coveted letters before your name!

Greetings from Jena

Artur

Explorations in Budapest

By Ievgen Obraztsov (BME)



The last two weeks of February from 14th to 27th I spent in Budapest visiting laboratory of Dr. Viola Horvath at the Budapest University of Technology and Economics.

The whole week before the Secondment, I was running round like a squirrel in a cage to prepare for the visit. Thanks to Giorgio, I had a room booked in the Professor's Guesthouse which had been our residence during the Summer School and the International Meeting last year. In the Guesthouse they installed the second wi-fi access point at the end of the hall, so internet was not a problem anymore.



The scientific program was to prepare imprinted porphyrin polymer films in different conditions, to image them with scanning electron microscopy and examine extraction of the ligand by the energy dispersive spectroscopy analysis. It was a bit difficult to establish preparation of my MIPs in the new laboratory even if I had everything needed, but with the help of Giorgio, Tibor and Dr. Viola Horvath I managed to do that.





My wife Valya joined me in Budapest for the weekend. She learns Hungarian as a hobby, it always surprises people. Together with Giorgio, we made a detailed plan for two days.

On the first place was the open air Museum of Soviet monuments. A few dozen USSR period monuments were moved outside the city and collected in one place. It was a nice experience for me because Dnepropetrovsk has enough resources to organize a similar museum :) I guess one will be made.

I feel that Hungarians moved these monuments not because they are Soviet but rather because of their shocking look. I could hardly stop taking photographs when I saw these monuments.

The weather wasn't too friendly and we enjoyed the famous Hungarian thermal baths a lot.

The second week passed much faster than the first one. I successfully completed everything I planned. I would like to thank Dr. Viola Horvath, Giorgio, Tibor and other people who were helping me in the lab. It was nice to see you again!



Forthcoming Events

Frontiers of Chemistry:

From Molecules to Systems

Symposium on 21st May 2010 in Paris



Celebrating 10 Years of
CHEMPHYS-CHEM
CHEMBIO-CHEM

Frontiers of Chemistry: From Molecules to Systems

Celebrating 10 Years of
ChemBioChem & ChemPhysChem

This is a one day celebratory symposium on the occasion of the 10th anniversary of ChemBioChem and ChemPhysChem, European journals of chemical biology and physical chemistry/chemical physics, will take place at the

Maison de la Chimie in Paris
21st May 2010

Worldwide recognized scientists, including Nobel Laureates, will present at this symposium and will guarantee the high scientific level of this prestigious event.

Main topics will include: catalysis, biochemical imaging, chemical biology, bionanotechnology, proteomics, spectroscopy, solar cells. For further information visit the symposium website:

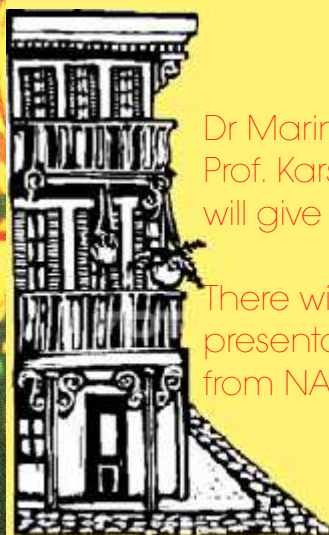
www.chembiophyschem.org

Dr Marina Resmini, Dr Paolo Bonomi and Miss Silvia Pavan from QMUL will be attending this event.



The 6th International Conference on Molecular Imprinting MIP2010

9-12 August 2010
New Orleans
USA



Dr Marina Resmini and Prof. Karsten Haupt will give invited lectures.

There will also be oral presentations and posters from NASCENT researchers.

<http://macro.lsu.edu/msgsa/MIP2010/MIPHomepage.html>

NASCENT

<http://www.nascent.qmul.ac.uk/>

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