Oral Presentations NGS15

Plenary talks 40 minutes, Invited talks 30 minutes, Contributed talks 20 minutes, including 5 minutes of discussions

	Monday August 1	Location
1:30-3:30 PM	Registration	Lobby of Hancock Hall
3:30-4:30 PM	Welcoming Reception	Hancock Hall, Room 100
4:30-4:45 PM	Welcoming Comments by Giti Khodaparast and the Vice President for Research	Hancock Hall, Room 100
4:45-5:25 PM	Plenary Talk: History of narrow gap systems	B. McCombe, SUNY Buffalo, USA
5:25- 6:05 PM	Plenary Talk: Dirac fermions in HgTe quantum wells	L. Molenkamp, Universität Würzburg, Germany
6:05-6:45 PM	Plenary Talk: Topological Surface States, Topological Insulators and Superconductors	Z. Hasan, Princeton University, USA
	Tuesday August 2, Morning Sessions	*Hancock Hall, Room 100*
Session 1	**Topological Insulators, Session Chair: Zahid Hasan**	
8:20-8:50 AM	Invited Talk: Robustness of topologically protected surface states in layering of Bi2Te3 thin films	K. Park, Virginia Tech, USA
8:50-9:10 AM	Spin phenomena and pseudospin quantum Hall ferromagnetism in the HgTe quantum well	M. V. Yakunin, Inst. Met., Ekaterinburg, Russia
9:10-9:30 AM	THz response and colossal Kerr effect in the topological insulator Bi2Se3	R. V. Aguilar, The Johns Hopkins Univ., USA
9:30-9:50 AM	Effect of electron-electron interaction on surface transport in three dimensional topological insulators	H. K. Pal, University of Florida, USA
9:50-10:20 AM	Coffee Break	Lobby of Hancock Hall
Session 2	**Graphene, Session Chair: Bruce McCombe**	
10:20-10:50 AM	Invited Talk: Terahertz dynamics in graphene	V. Ryzhii, University of Aizu, Japan
10:50-11:10 AM	Spatially resolving edge states of chiral graphene nanoribbons	C. Tao, UC Berkeley, USA
11:10-11:30 AM	Terahertz radiation helicity induced electric currents in graphene	P. Olbrich, University of Regensburg, Germany
11:30-11:50 AM	Coherent phonons in carbon nanotubes and graphene	G. Sanders, Univ. of Florida, USA
11:50-12:10 PM	Modeling flat-band nanostructures	V. Scarola, Virginia Tech, USA
12:10-1:45 PM	**Lunch Break, Hosted by the Conference**	**Virginia Tech Inn**
	Tuesday August 2, Afternoon Sessions	*Hancock Hall, Room 100*
Session 3	**Transport, Spin dependent Phenomena, Devices 1, Session Chair: Jean Heremans**	
1:50-2:20 PM	Invited Talk: Towards room temperature InSb 2DEG nanosensors	A. Gilbertson, Imperial College, UK
2:20-2:40 PM	Electron spin alignment in InSb Type-II quantum dots in an InAs matrix	M. S. Mukhin, Ioffe Institute, Russia
2:40-3:00 PM	Spin dependent transverse electron focusing of spin polarized photocurrents in InSb/InAlSb QW devices	J. Li, University of Surrey, UK
3:00-3:20 PM	Single electron transport through site-controlled InAs quantum dots probed by nanogap electrodes	K. M. Cha, University of Tokyo, Japan
3:20-3:40 PM	Coffee Break	Lobby of Hancock Hall
Session 4	**Transport, Spin dependent Phenomena, Devices 2, Session Chair: Louis Guido**	
3:40-4:00 PM	Determination of spin-orbit coefficients in InGaAs/InAlAs quantum wells	T. Koga, Hokkaido University, Japan
4:00-4:20 PM	Large spin and non-parabolicity effects in InGaAs/GaAsSb resonant tunneling diodes	J. Sousa, Inst. Festkoerperelektronik, Austria
4:20-4:40 PM	Enhanced hole mobility and density in GaSb quantum wells for p-channel FETs	B. R. Bennett, Naval Research Laboratory, USA
4:40-5:00 PM	Nonlocal transport in PbTe/PbEuTe microstructures	K. A. Kolwas, Instytut Fizyki PAN, Poland
5:00-7:00 PM	**Posters and Refreshments**	**Lobby of Hancock Hall**

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	Wednesday August 3, Morning Session	***Hancock Hall, Room 100***
Session 5	**QCL and Detectors 1, Session Chair: Ben Murdin**	
8:20-8:50 AM	**Invited Talk: Quantum cascade detectors and THz lasers**	**F. Julien, Univ. Paris-Sud, France**
8:50-9:10 AM	**A new generation of interband cascade lasers**	**J. Meyer, Naval Research Laboratory, USA**
9:10-9:30 AM	**135 K operation of InGaAs/GaAsSb Terahertz quantum cascade lasers**	**C. Deutsch, Vienna Univ. of Tech., Austria**
9:30-9:50 AM	**Two dimensional integration of ring cavity surface emitting quantum cascade lasers**	**C. Schwarzer, Vienna Univ. of Tech., Austria**
9:50-10:10 AM	**Coffee Break**	**Lobby of Hancock Hall**
Session 6	**QCL and Detectors 2, Session Chair: Jerry Meyer**	
10:10-10:40 AM	**Invited Talk: Lead salt microdisk lasers**	**G. Springholz, Univ. of Linz, Austria**
10:40-11:00 AM	**Quantum dot IR photodetectors and solar cells enhanced by built-in-charge**	**V. Mitin, SUNY Buffalo, USA**
11:00-11:20 AM	**High operability 1024×1024 long wavelength infrared focal plane array based on type-II InAs/GaSb superlattices**	**A. Haddadi, Northwestern University, USA**
11:20-11:40 AM	**New approaches to bulk, direct bandgap III-V materials for long-wavelength infrared detectors**	**W. Sareny, US Army Research Laboratory, USA**
	Bus Tour starts at 12:00 PM, Lunch Boxes Provided	
	Excursion/Banquet	
	Thursday August 4, Morning Session	***Hancock Hall, Room 100***
Session 7	**Mercury Cadmium Telluride, Session Chair: Hiro Munekata**	
8:20- 8:50 AM	**Invited Talk: Negative-band-gap quantum dots**	**N. Malkova, KLA-Tencor Company, USA**
8:50 -9:10 AM	**Correlation between band structure, Hall, Seebeck and Shubnikov-De Haas effects in a two dimensional far infrared detector n-type HgTe/CdTe superlattice**	**A. Nafidi, Ibn Zohr University, Morocco**
9:10-9:20 AM	**Restructuring of the phonon spectra of the MCT and MZT alloy at the Dirac point-singularity**	**E. M. Sheregii, University of Rzeszow, Poland**
9:20-9:40 AM	**Photoluminescence, photoreflection and optical absorption of HgCdSe**	**D. Miranda, Univ. Ind. de Santander, Colombia**
9:40-10:00 AM	**Magneto-optical response of HgMnTe alloys quantum wells and superlattices**	**D. Talwar, Indiana Univ. of Pennsylvania, USA**
10:00-10:30 AM	**Coffee Break**	**Lobby of Hancock Hall**
Session 8	**Terahertz and Coherent Phenomena, Session Chair: Chris Stanton**	
10:30-11:00 AM	**Invited Talk: THz coherent control in Si**	**B. Murdin, Univ. of Surrey, UK**
11:00-11:20 AM	**Time resolved THz magneto-optical polarization modulation spectroscopy**	**A. Stier, SUNY Buffalo, USA**
11:2 0-11:40 AM	**Detection of a coherent longitudinal optical phonon in a GaAs buffer layer optically covered with a GaSb top**	**H. Takeuchi, Univ. of Shiga Prefecture, Japan**
11:40 -12:00 PM	**Synchronized mid-infrared beam characterization of narrow gap semiconductors**	**L. Olafsen, Baylor University, USA**
12:00-1:45 PM	**Lunch Break, Hosted by the Conference**	**Virginia Tech Inn**

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	Thursday August 4, Afternoon Session	***Hancock Hall, Room 100***
Session 9	**Narrow Gap and Magnetic Semiconductors 1, Session Chair: Mike Santos**	
1:50-2:10 PM	**Invited Talk: Terahertz studies of collective excitations in InSb magneto-plasmas**	**A. Belyanin, Texas A&M, USA**
2:10-2:30 PM	**Magnetogyrotopic photogalvanic effects in InSb-based low-dimensional structures**	**S. Stachel, University of Regensburg, Germany**
2:30-2:50 PM	**Rashba and Dresselhaus spin-orbit interaction strength in III-V 2DEG system**	**E. A. de Andrada e Silva, Inst. Nac. de Pesquisas Espaciais, Brazil**
2:50-3:10 PM	**Probing spin-relaxation anisotropy in 1D InSb wires by weak anti-localization**	**P. Jayathilaka, University of Oklahoma, USA**
3:10-3:40 PM	**Coffee Break**	**Lobby of Hancock Hall**
Session 10	**Narrow Gap and Magnetic Semiconductors 2, Session Chair: Takaaki Koga**	
3:40-4:00 PM	**Evaluation of spin polarization in p-InMnAs using Andreev reflection spectroscopy including inverse proximity effect**	**H. Munekata, Tokyo Inst. of Technology, Japan**
4:00-4:20 PM	**(In,Mn)Sb studies by Cross-Sectional STM**	**S. J. C. Mauger, Eindhoven I.T., Netherlands**
4:20-4:40 PM	**Electron g-factor of Mn ions in GeMnTe**	**W. Knoff, Polish Academy of Sciences, Poland**
4:40-5:00 PM	**Giant Zeeman effect for two-dimensional electrons in InAs quantum wells with manganese doped ZnTe barrier**	**Ya. Terentev, Ioffe Institute, Russia**
5:00-7:00 PM	**Posters and Refreshments**	**Lobby of Hancock Hall**
	Friday August 5, Morning Session	
Session 11	**New Substrates, Session Chair: Natalia Malkova**	
8:20-8:50 AM	**Invited Talk: PbSe nanocrystals, nanorods, and nanowires**	**J. Tischler, Naval Research Laboratory, USA**
8:50-9:10 AM	**Substrate dependence of PbTe nanowire growth**	**P. Dziawa, Polish Academy of Sciences, Poland**
9:10-9:30 AM	**Photoconductivity of PbTe(In) films with variable microsctructures**	**V. I. Chernichkin, Moscow State Univ., Russia**
9:30-9:50 AM	**Topological insulators Bi2Te3 and Bi2Se3 grown by MBE on (100) GaAs substrate**	**X. Liu, University of Notre Dame, USA**
9:50-10:10 AM	**PbSe quantum well VECSEL on Si**	**M. Fill, ETH Zurich, Switzerland**
10:10-10:40 AM	**Coffee Break**	**Lobby of Hancock Hall**
Session 12	**Optical and Magneto-Optical Phenomena, Session Chair: E. A. de Andrada e Silva**	
10:40-11:00 AM	**Magneto-optical properties of narrow-gap semiconductor heterostructures**	**X. Pan, University of Florida, USA**
11:00-11:20 AM	**Recombination and optical properties of unrelaxed InAsSb grown by MBE on GaSb and InSb substrates**	**D. Donetsky, Stony Brook University, USA**
11:20-11:40 AM	**Mid-Infrared Continuously Tunable Single Mode VECSEL**	**A. Khiar, ETH Zurich, Switzerland**
11:40-12:00 PM	**Optical properties of strain-balanced InAs/InAs(1-x)Sb(x) type-II superlattices**	**E. H. Steenbergen, Arizona State Univ., USA**
12:20-12:30 PM	**Conference Announcements**	