

## Crystal defects for qubits, single photon emitters and nanosensors



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Season Control (1967)  1970 1970 1970 1970 1970 1970 1970 1970		8:50	-	09:00	Opening and welcome, Thomas Frauenheim	09:00	- 09:40	Gavin W. Morley. University of Warwick.	09:00	- 09:40	Ngven Tien Son. Linköping University	09:00	- 09:40	Igor Aharonovich. University of Technology
9-94-0 - 9-94-0 Jose Westfrikus, University of Statusars Applying agrees and state quantum defects of Applying agrees and state quantum defects of Coffee Break 10-20 - 10-20 Devis 2, Amoustains, The University of 10-20 - 10-50 Coffee Break 10-20 - 10-20 Coffee Break 10-20 Coffe	9	ession:			•			Coventry (UK)			(Sweden)			Sydney, New South Wales (Australia)
Combination		0.00		00.40							silicon vacancy in isotopically purified SiC			boron nitride
Part   Part   Content   Part   Content   Part   P	,	19:00	-	09:40	(Germany)	09:40	- 10:20	John J. L. Morton, University College London $(UK)$	09:40	- 10:20	Lee C. Bassett, University of Pennsylvania, Philadelphia (USA)	09:40	- 10:20	Munich, Garching (Germany)
Cheege, Ristoner (US) 1 10-10 Controlling deficient states with photomatic properties of the controlling deficient states with photomatic properties of the controlling deficient states with photomatic properties of the controlling deficient prope		10.40		10.20	David D. Awschalom, The University of			Strain effects on donor spins in silicon			Optically addressable spin defects in hexagonal boron nitride			in diamond
19.20 10.45 Coffee Break  19.20 10.45 Coffee	T)	7.40		10.20	Chicago, Illinois (USA)	10:20	- 10:50	Coffee Break						
19-10 19-12 Soffen Break  19-10 19-12 Add an Gail, Wigner Research Ceptre for by Quantum profess from an Drug Delay Profess from 2019 prof					Controlling defect spin states with photons, magnons, and phonons	10:50	- 11:30		10:20	- 10:50	Coffee Break	10:20	- 10:50	Coffee Break
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Session:  Sessio			-		Ádám Gali Wigner Research Centre for			by quantum probes for nano NMR			in SiC: how relativistic effects trigger spin-			
Session: Spin States Chair Peter Deak 12:10 - 13:50 Lunch Break (Restaurant Q1) and Coffee 12:10 13:50 Lunch Break (Restaurant Q1) and Coffee 12:10 5 Feder Jelscox (UII University (Semany) Characterized properties of Jointeed Colour Control of Company (Semany Control of Cont					Budapest (Hungary)	11:30	- 12:10	(Germany)	11:30	- 12:10	ŕ	11:30	- 12:10	Audrius Alkauskas, Center for Physical
Cherr Peter Deak  The Corporation of								Engineering of highly coherent vacancy spins in SiC			Seattle (USA)	,	12,15	Vibrational properties of isolated colour
12:20 - 12:05 Fedor Jelezko, Ulm University (Germany) Productive Circul readout of single splins in Productive Circular readout of spling splins in Productive Circular readout of single splins in Productive Circular readout of single splins in Productive Circle Splins in Productive C	9	ession:			Spin States Chair: Peter Deák	12:10	- 13:50	Lunch Break (Restaurant Q1) and Coffee			information applications '	12:10	- 12:20	
Section   Conference Organisers   Supplied		4.05		40.05	<b>5</b> 1 1 1 1 11 11 11 11 11 11 11 11 11 11	42.50	44.00		12:10	- 13:50	Lunch Break (Restaurant Q1) and Coffee		12.20	
12:05 Group photo    Novel ab initio and mode sign Hamiltonian methods for spin dynamic simulations of point defect quantum bits methods for spin dynamic simulations of point defect quantum bits in the defect q		1:25		12:05	Photoelectrical readout of single spins in	13:50	- 14:30	Physics, Hungarian Academy of Sciences, Budanest (Hungary)				12:20		Departure
12:15 - 13:35 Lunch Break (Restaurant Q1) and Coffee  13:35 - 14:15 Ronald Hanson, Delft University of Technology (The Netherlands) The dawn of quantum networks  14:10 - 14:55 Martin B. Plenio, Ulm University (Germany) Controlling nuclear spin registers by NV Centers  Quantum spintronics Chair: Addim Gall  14:30 - 15:10 Sohila Economou, Virginia Polytechnic Institute, Troy, New York (USA) Spin-photon interfaces for groph seperation based on defencts in diamond and St.C  Quantum spintronics Chair: Michael Lorke Chair: Michael Repeated Chair Chair: Michael Chair Chair: Michael Repeated Chair Cha		2:05						Novel ab initio and model spin Hamiltonian methods for spin dynamic simulations of	13:50	- 14:30	(South Korea)			
The Netherlands) The dawn of quantum networks  14:15 - 14:55 The dawn of quantum networks The first of the NV center in diamond and Sic  Conference Organisers  Conference Organisers Thomas Frauenheim University of Remen Department of Physics, BCCMS Wave.Crus.uni-The University of Remen Department of Physics, BCCMS Wave.Crus.uni-The University of Australia Thomas Frauenheim University of Remen Department of Physics, BCCMS Wave.Crus.uni-The University of Australia Thomas Frauenheim University of Story and The University of Australia Thomas Frauenheim University of Story and The University of Australia Thomas Frauenheim University of Story and The University of Australia Thomas Frauenheim University of Story and The University of Story and The University of Story and The University of Study and The Uni		2:15	-	13:35	Lunch Break (Restaurant Q1) and Coffee						in semiconductors for qubit applications			
14:15 - 14:55 Martin B. Plenio, Ulm University (Germany) Controlling nuclear spin registers by NV centers  Session:  Quantum spintronics Chair: Michael Lorke 15:10 - 15:10 Michel Bockstedte, University of Salzburg 14:55 - 15:35 Mike J. Ford, University of Technology Sydney, New South Wales (Applicable) Producting electronic structure calculations of single photon emitting defects in hBN 15:50 - 16:20 Coffee Break 16:40 - 16:40 Marcus W. Doherty, Australian National University, Camberra (Australia) Quantum spintronics Chair: Michael Lorke 15:10 - 15:50 Michel Bockstedte, University of Salzburg Spin and photo physics of prototypical defect centers in diamond and SIC  Spin and photo physics of prototypical defect centers in diamond and SIC  Spin and photo physics of prototypical defect centers in diamond and SIC  Spin and photo physics of prototypical defect centers in diamond and SIC  Spin and photo physics of prototypical defect centers in diamond and SIC  Spin and photo physics of prototypical defect centers in diamond and SIC  Spin and photo physics of prototypical defect centers in diamond and SIC  Spin and photo physics of prototypical defect centers in diamond and SIC  Spin and photo physics of prototypical defect centers in diamond and SIC  Spin and photo physics of prototypical defect centers in diamond and SIC  Spin and photo physics of prototypical defect centers in diamond and SIC  Spin and photo physics of prototypical defect centers in diamond and SIC  Spin and photo physics of prototypical defect centers in diamond and SIC  Spin and photo physics of prototypical defect centers in diamond and SIC  Conference Organisers  Thomas Frauenheim University of New South Wales Apparent Marcula Index of New South Wales Supported the NY center in diamond and SIC  Conference Organisers  Thomas Frauenheim University of New South Wales Apparent Marcula Dones spin qubits in SI: from single-shot and subtraction in SI: from single-shot and subtraction in SI: from single-shot and subtraction in SI: from single-shot and		3:35	-	14:15	(The Netherlands)	Sesson:			Session:		•			
Controlling nuclear spin registers by NV  Controlling nuclear spin registers by NV  Controlling nuclear spin registers by NV  Spin -photon interfaces for graph generation based on defencts in diamond and SiC  Virginal Spin -photon interfaces for graph generation based on defencts in diamond and beyond  Conference Organisers  Conference Organisers  Conference Organisers  Conference Organisers  Conference Organisers  Thomas Frauenheim University of Remen Department of Physics, BCDNS www.bccms.uni-bremen.de  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Coffee Break  15:35 - 16:00 Coffee Break  15:35 - 16:00 Coffee Break  15:30 - 16:40 Marcus W. Doherty, Australian National University, Canberra (Australia)  Quantum spintronic properties of diamond nanowires  16:00 - 16:40 Marcus W. Doherty, Australian National University, Canberra (Australia)  Quantum spintronic properties of diamond nanowires  16:00 - 17:20 Jeronimo R. Maze, Pontifical Catholic University of Phonons on individual electronic spin relaxation and electron spin resonance  18:40 Bus Pickup to Conference Dinner (Pickup Venue: Radisson Blu Hotel, Spin registers)  Spin and photo physics of prototypical defect centers in diamond and SiC  Conference Organisers  Thomas Frauenheim University of New South Wales, Sydney (Australia)  Donor spin qubits in Si: from single-shot readout to advanced control methods  Adam Gali Wigner Research Centre for Physics in Huniversity, Spin properties of diamond nanowires  Adam Gali Wigner Research Centre for Physics index.en.phtml  Dorg Wrachtrup  Joerg Wrachtrup  University of Stuttgart  3rd Institute of Physics www.pi3.uni-stuttgart.de  Www.pi3.uni-stuttgart.de  Www.pi3.uni-stuttgart.de  Www.pi3.uni-stuttgart.de  Www.pi3.uni-stuttgart.de  Www.pi3.uni-stuttgart.de  Poster Mounting		4.4E		1 4.EE		14:30	- 15:10	Sophia Economou, Virginia Polytechnic Institute and State University, Blacksburg.	14:30	- 15:10	Shengbai Zhang, Rensselaer Polytechnic Institute, Troy, New York (USA)			
Session:  Quantum spintronics Chair: Michael Lorke  15:10 - 15:50 Michael Bockstedte, University of Salzburg New South Wales (Australia)  14:55 - 15:35 Mike J. Ford, University of Technology Sydney, New South Wales (Australia)  15:35 - 16:00 Coffee Break  15:35 - 16:00 Coffee Break  16:00 - 16:40 Marcus W. Doherty, Australien National University, Canberra (Australia)  Quantum spintronics Chair: Michael Lorke  15:10 - 15:50 Michael Bockstedte, University of Salzburg (Australia)  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and photo physics of prototypical defect centers in diamond and SiC  Spin and		4; 15	-	14;55	Controlling nuclear spin registers by NV			Virginia (USA)			Dynamic Jahn-Teller effect of the NV center			
Quantum spintronics Chair: Michael Lorke  15:10 - 15:50 Michel Bockstedte, University of Salzburg (Austria)  14:55 - 15:35 Mike J. Fard, University of Technology Sydney, New South Wales (Austria)  15:30 - 16:00 Coffee Break  15:30 - 16:40 Marcus W. Doherty, Australien National University, Canberra (Australia)  Quantum spintronic properties of diamond nanowires  16:40 - 17:20 Jeronimo R. Maze, Pontifical Catholic University of Chile, Santiago de Chile (Chile)  Effect of phonons on individual electronic spin relaxation and electron spin resonance  18:40 Mike J. Fard, University of Salzburg (Austria)  15:10 - 15:50 Michel Bockstedte, University of Salzburg (Austria)  15:10 - 15:50 Michel Bockstedte, University of Salzburg (Austria)  15:10 - 15:50 Arne Laucht, University of New South Wales, Sydney (Australia)  Donor spin qubits in Si: from single-shot readout to advanced control methods  Adám Gali Wigner Research Centre for Physics & Hungarian Academy of Science www.fat.bme.hu/kulonc/galia/index.en.phtml  Silicon carbide single photon source devices  17:00 - 17:40 Sanzarius (Australia)  Ountum spintronic properties of diamond  18:40 Bus Pickup to Conference Dinner (Pickup Verue: Radisson Blu Hotel, Wachstrale)  Bus Pickup to Conference Dinner (Pickup Verue: Radisson Blu Hotel, Wachstrale)  Welstrae Department of Physics yodney (Australia)  Donor spin qubits in Si: from single-shot readout to advanced control methods  Adám Gali Wigner Research Centre for Physics & Hungarian Academy of Science www.fat.bme.hu/kulonc/galia/index.en.phtml  Joerg Wrachtrup University of Stuttgart 3rd Institute of Physics www.pi3.uni-stuttgart.de  Wigner Research Centre for Physics & Hungarian Academy of Science www.fat.bme.hu/kulonc/galia/index.en.phtml  University of Chile, Santiago de Chile (Chile)  University of Chile, Santiago de Chile (Chile)  Wigner Research Centre for Physics & Hungarian Academy of Science www.fat.bme.hu/kulonc/galia/index.en.phtml  University of Chile, Santiago de Chile (Chile)  Wigner Research Centre for Physics	_							based on defencts in diamond and SiC			in didinona and beyond	Confe	rence Org	ganisers
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40-00 20-20 Welsons Boostine (Borner Town Hell)					spin relaxation and electron spin resonance	18:40		(Pickup Venue: Radisson Blu Hotel,	17:20		Poster Mounting			
	10	8:00	-	20:30	Welcome Reception (Bremen Town Hall)	19:00	- 22:30	,	17:30	- 20:30	Poster Session and Catering Buffet	www.bccr	ms.uni-bremer	n.de/veranstaltungen/2018/cecam-qubit/







