

Preface

The 15th International Conference on Electronic Properties of Two-Dimensional Systems (EP2DS-15) was held from July 14th to 18th, 2003 in Nara, Japan, at the New Public Hall of Nara Prefecture (Nara-ken Shin-Kokaido). It was held jointly with the 11th International Conference on Modulated Semiconductor Structures (MSS-11). The total number of participants in the two conferences counted more than 550, with approximately equal number of registrants to each. There were two joint sessions, in each of which two plenary lectures were given. Other sessions of the two conferences were run in parallel. The participants were free to attend sessions of the both conferences.

The central focus of the EP2DS-15 was on latest developments in basic physics in such fields as quantum Hall effect, metal-insulator transition, single electron phenomena, coherence phenomena and spin-related phenomena in two or lower dimensional electron systems in various mesoscopic structures fabricated from semiconductor heterostructures. The scope also covered properties of electron systems in carbon nanotubes, organic conductors and helium surfaces, and various novel experimental techniques in this active research area. Closely related subjects, but generally with more emphases on materials aspects and device applications, were discussed in the MSS-11 conference.

The scientific sessions of EP2DS-15 consisted of 20 invited talks, 26 oral presentations and 213 poster presentations. At the time of submission deadline (March 1st, 2003), we received a little more than 300 abstracts (excluding those for invited talks). The selection done by the International Program Committee resulted in an acceptance rate of ~80%. The unrefereed manuscripts of the accepted contributions together with those of the invited papers were compiled as Conference Workbook which was handed to each participant at the registration desk.

Paper submission to the Conference Proceedings was optional. All the submitted papers were refereed. This Proceedings contains 189 accepted papers out of those contributions, of which some were accepted after multiple rounds of review and revision. We thank all the authors and the referees for their cooperation and patience during the reviewing process. We hope that this Proceedings may serve as a concise summary of the activities as of summer in 2003 in this fascinating field of quantum physics.

We would like to express our deep gratitude to the members of the International Program Committee and the International Advisory Committee for their help in shaping the scientific program. We also wish to thank our young colleagues and students who helped us run the conference. Special thanks are due to Ms. Junko Kawamura, Ms. Shizue Maruyama, Ms. Nobuko Yoshioka and Ms. Keiko Nakamura for their secretarial assistance.

Last but certainly not least, we would like to express our appreciation of the support given by the organizations and companies listed below which made this scientific event possible.

Yasuhiro Iye and Daijiro Yoshioka
on behalf of the Organizing Committee of EP2DS-15

EP2DS-15 Organization

Organizing Committee

Y.Iye (ISSP, Univ. of Tokyo): *Chair*
S.Iwabuchi (Nara Woman's Univ.)
S.Katsumoto (ISSP, Univ. of Tokyo)
K.Kono (Riken)
S.Tarucha (Univ. of Tokyo)
H.Takayanagi (NTT)
D.Yoshioka (Univ. of Tokyo): *Program*

International Program Committee

D.Yoshioka (Japan): *Chair*
M.I.Dykman (USA)
Y.Iye (Japan)
T.M.Klapwijk (Netherlands)
I.V.Kukushkin (Russia)
A.H.MacDonald (USA)
R.J.Nicholas (UK)
C.Tejedor (Spain)
K.von Klitzing (Germany)

International Advisory Committee

S.J.Allen (USA)	T.Ando (Japan)
H.Aoki (Japan)	R.Clark (Australia)
T.Dietl (Poland)	L.Eaves (UK)
K.Ensslin (Switzerland)	H.Fukuyama(Japan)
D.C.Glattli (France)	B.I.Halperin (USA)
M.Heiblum (Israel)	Y.Imry (Israel)
S.Kawaji (Japan)	S.Komiyama (Japan)
J.P.Kotthaus (Germany)	J.J.Lin (Taiwan)
Y.E.Loikov (Russia)	E.Molinari (Italy)
M.A.Paalanen (Finland)	F.Peeters (Belgium)
A.Pinczuk (USA)	P.Streda (Czech)
H.L.Stormer (USA)	N.Studart (Brazil)
S.-R.E.Yang (Korea)	

Sponsors and Benefactors

International Union of Pure and Applied Physics (IUPAP)
Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan
The Physical Society of Japan
The Japan Society of Applied Physics
Nara Convention Bureau
Commemorative Association for the Japan World Exposition '70

ELIONIX

Futaba Electronics Memorial Foundation
Hitachi, Ltd.
Inoue Foundation for Science
JECC TORISHA Co. Ltd.
MY SCIENCES/AIR LIQUIDE
NEC Corporation
NIKI GLASS CO. LTD.
NTT Basic Research Laboratories
Oxford Instruments KK
R-DEC Co., Ltd.
SAKAGUCHI GIKEN Co. Ltd.
The Tokyo Electric Power Company, Incorporated