

International Conferences on Representations of Algebras The first 50 years

Shanghai Jiao Tong University
31 July, 2024

Henning Krause
Bielefeld University

(PRELIMINARY NOTICE)

Carleton University Department of Mathematics

cordially invites you to an

International Conference on Representations of Algebras

September 3-7, 1974

(FOLLOWING THE INTERNATIONAL CONGRESS OF MATHEMATICIANS 1974 IN VANCOUVER)

TO DATE, THE FOLLOWING MATHEMATICIANS HAVE ACCEPTED A PRELIMINARY INVITATION:

M. AUSLANDER (BRANDEIS)
R. BRAUER (HARVARD)
S. BRENNER (LIVERPOOL)
M.C.R. BUTLER (LIVERPOOL)
C.W. CURTIS (OREGON)
A.W.M. DRESS (BIELEFELD)
P. GABRIEL (BONN)
H. JACOBINSKI (GOTEBORG)
G.J. JANUSZ (ILLINOIS)
C.U. JENSEN (KOBENHAVN)
M.M. KLEINER (KIEV)

H. KUPISCH (HEIDELBERG)
G. MICHLER (GIESSEN)
L.A. NAZAROVA (KIEV)
C. PROCESI (PISA)
I. REINER (ILLINOIS)
I. REITEN (TRODHEIM)
C.M. RINGEL (TUBINGEN)
K.W. ROGGENKAMP (BIELEFELD)
A.V. ROITER (KIEV)
M. TACHIKAWA (TOKYO)
T. YOSHII (SHIGA)

V. DLAB
FOR THE ORGANIZING COMMITTEE OF ICRA

THOSE WISHING TO OBTAIN THE FIRST NOTICE OF THE
CONFERENCE, PLEASE WRITE TO
SECRETARY OF ICRA, DEPARTMENT OF MATHEMATICS, CARLETON UNIVERSITY, OTTAWA, CANADA

The list of meetings 1974 – 2024

- 1974: ICRA, Carleton University (Ottawa, Canada)
 - 1979: ICRA 2, Carleton University (Ottawa, Canada)
 - 1980: ICRA 3, University of Puebla (Puebla, Mexico)
 - 1984: ICRA 4, Carleton University (Ottawa, Canada)
 - 1990: ICRA 5, University of Tsukuba (Tsukuba, Japan)
 - 1992: ICRA 6, Carleton University (Ottawa, Canada)
 - 1994: ICRA 7, Cocoyoc, Workshop at UNAM (Mexico)
 - 1996: ICRA 8, Geiranger, Workshop at Trondheim (Norway)
 - 2000: ICRA 9, Beijing Normal University (Beijing, China)
 - 2002: ICRA 10, Fields Institute (Toronto, Canada)
 - 2004: ICRA 11, Patzcuaro, Workshop at Queretaro (Mexico)
 - 2007: ICRA 12, Nicolaus Copernicus University (Torun, Poland)
 - 2008: ICRA 13, Universidade de Sao Paulo (Sao Paulo, Brazil)
 - 2010: ICRA 14, National Olympics Memorial Youth Center (Tokyo, Japan)
 - 2012: ICRA 15, Bielefeld University (Bielefeld, Germany)
 - 2014: ICRA 16, Tsinghua Sanya International Mathematics Forum (Sanya, China)
 - 2016: ICRA 17, Syracuse University (Syracuse, NY, United States)
 - 2018: ICRA 18, Charles University (Prague, Czech Republic)
 - 2020: ICRA 19, NTNU Trondheim (online)
 - 2022: ICRA 20, Universidad de Buenos Aires (Buenos Aires Argentina), Workshop at Universidad de la República (Montevideo, Uruguay)
 - 2024: ICRA 21, Shanghai Jiao Tong University (Shanghai, China)
- ## Similar Meetings
- 1985: ICRA 4.3, University of Durham (Durham, United Kingdom)
 - 1988: ICRA 4.7, Banach Center (Warsaw, Poland)
 - 1998: ICR(T)A 8.5, Bielefeld University (Bielefeld, Germany)

The first meeting 1974

- Following the International Congress of Mathematicians (ICM) 1974 in Vancouver (Canada)
- A predecessor was a smaller meeting organized by Peter Gabriel 1973 in Bonn (Germany)



Vlastimil Dlab



Peter Gabriel

LIST OF INVITED LECTURES

MAURICE AUSLANDER	Almost split sequences I
SHEILA BRENNER	Quivers with commutativity condition
M. C. R. BUTLER	On the classification of local integral representations of abelian p -groups
S. B. CONLON	Finite linear p -groups of degree p and the work of G. Szekeres
VLASTIMIL DLAB	Algebras, species and graphs
ANDREAS DRESS	Relative Grothendieck rings
KENT R. FULLER	On rings of finite representation type
LAURENT GRUSON	On rings with the decomposition property
H. JACOBINSKI	Unique decomposition of lattices over orders
GERALD J. JANUSZ	The local index of elements in the Schur group
HERBERT KUPISCH	Quasi-Frobenius algebras of finite representation type
GERHARD O. MICHLER	Green correspondence between blocks with cyclic defect group
IRVING REINER	Locally free class groups of orders
IDUN REITEN	Almost split sequences II
CLAUS MICHAEL RINGEL	The representation type of local algebras
K. W. ROGGENKAMP	The augmentation ideal of finite groups, an interesting module
WINFRIED SCHARLAU	Automorphisms and involutions of incidence algebras
HIROYUKI TACHIKAWA	Balancedness and left serial algebras of finite type

Final schedule of the first ICRA

1974 at Carleton University in Ottawa (Canada)

[illegible]

Indecomposable representations, II

A survey by Peter Gabriel

Published in Symposia Mathematica, Vol.XI, 1973

1. The results of Dade-Janusz-Kupisch on modular representations of finite groups.
2. The results of Gelfand and Ponomarev on quadruples of vector spaces.
3. The results of Kleiner-Nazarova-Roiter on linear representations of ordered sets.
4. Quivers with only finitely many indecomposable representations.
5. The work of Roiter on the Brauer-Thrall conjectures.
6. The homological characterisation of M. Auslander.

INDECOMPOSABLE REPRESENTATIONS. - II (*)

PETER GABRIEL

Let us call an abelian category a *length-category* if every object is both noetherian and artinian, that is has finite length, and if the isomorphism classes of objects form a set. The standard example is that of the category of modules of finite length over some ring (compare with § 7). But length-categories also appear naturally in various other situations, for instance in the representation theory of algebraic groups. In such cases, although any length-category may be interpreted as some category of modules (§ 7), it is often in the interest of geometric intuition not to use this interpretation.

In a length-category each object is a finite direct sum of indecomposable objects with local rings of endomorphisms, so that by Krull-Remak-Schmidt-Azumaya the decomposition is unique up to an isomorphism. The main and perhaps hopeless purpose of representation theory is to find an efficient general method for constructing the indecomposable objects by means of the simple objects, which are supposed to be given. This problem, which has been slumbering for some ten years, has been aroused recently by some new striking works. I want to take the opportunity of this talk in Rome to present a guide to the recent literature in this field, together with some more personal interpretations ⁽¹⁾.

1. The results of Dade-Janusz-Kupisch on modular representations of finite groups ([19], [35], [47], [48]).

1.1 In our terminology a *quiver* is a set of points connected together by some (directed) arrows (look at it as a category without composition law for the morphisms; a quiver is sometimes called a graph, but it

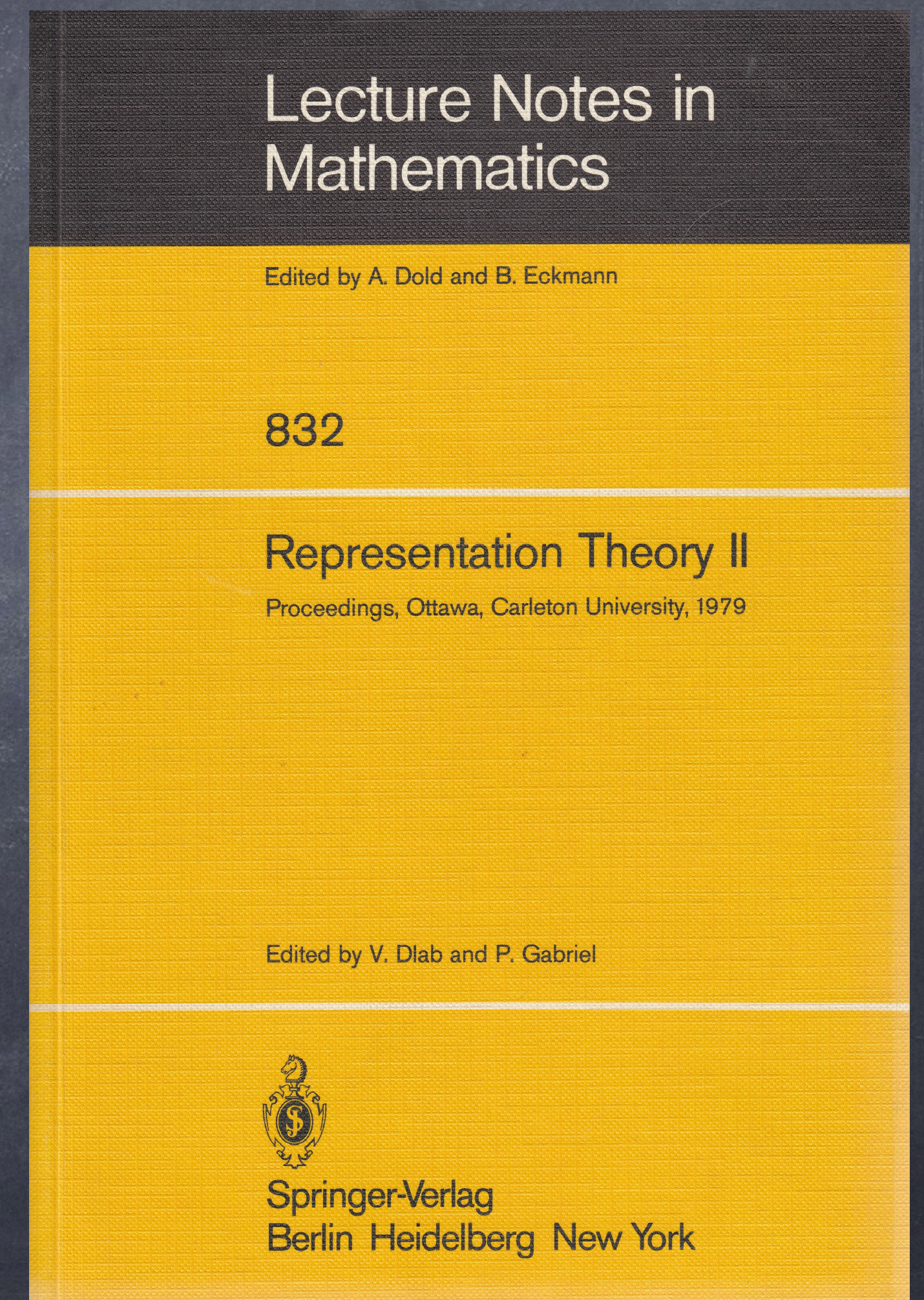
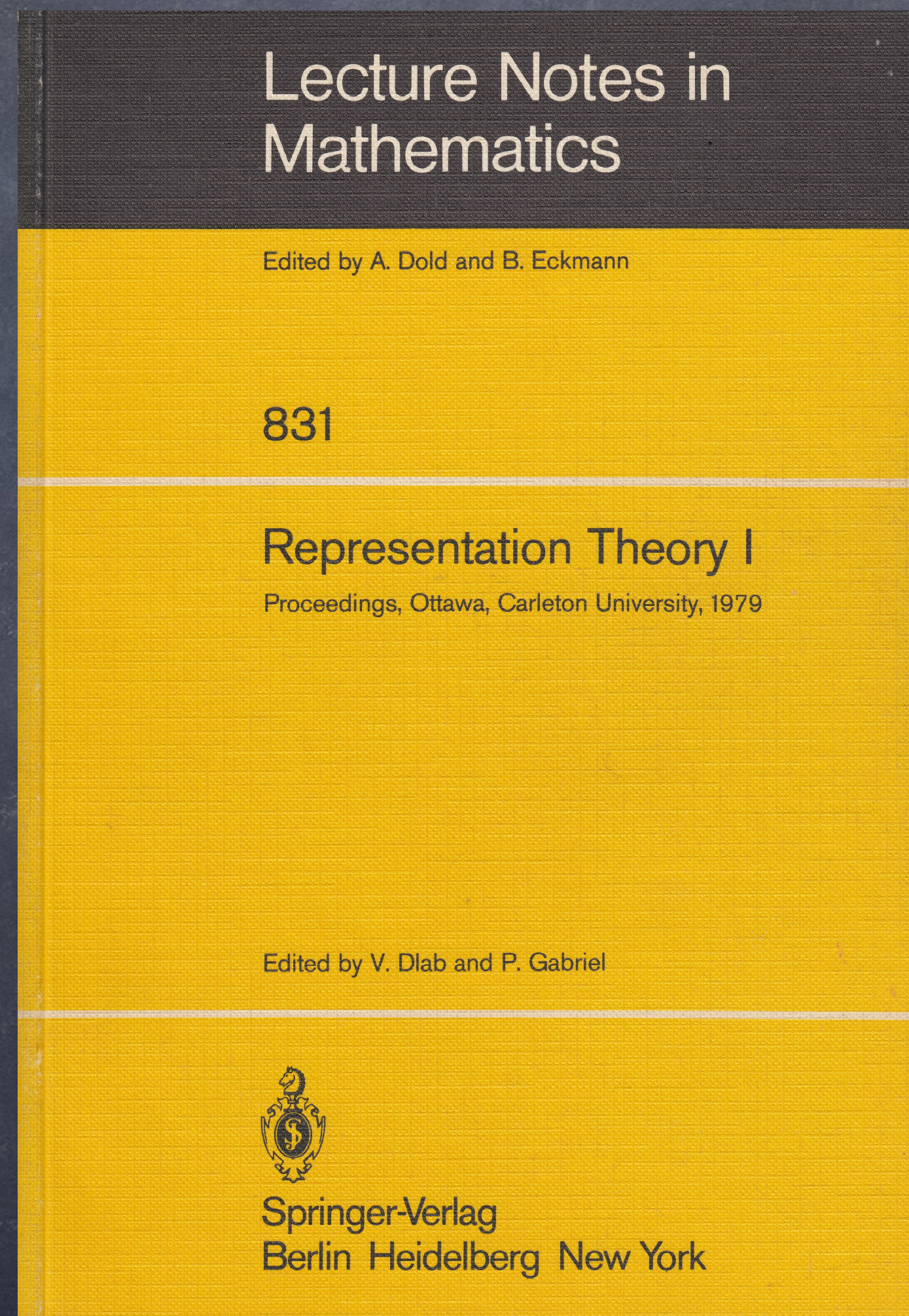
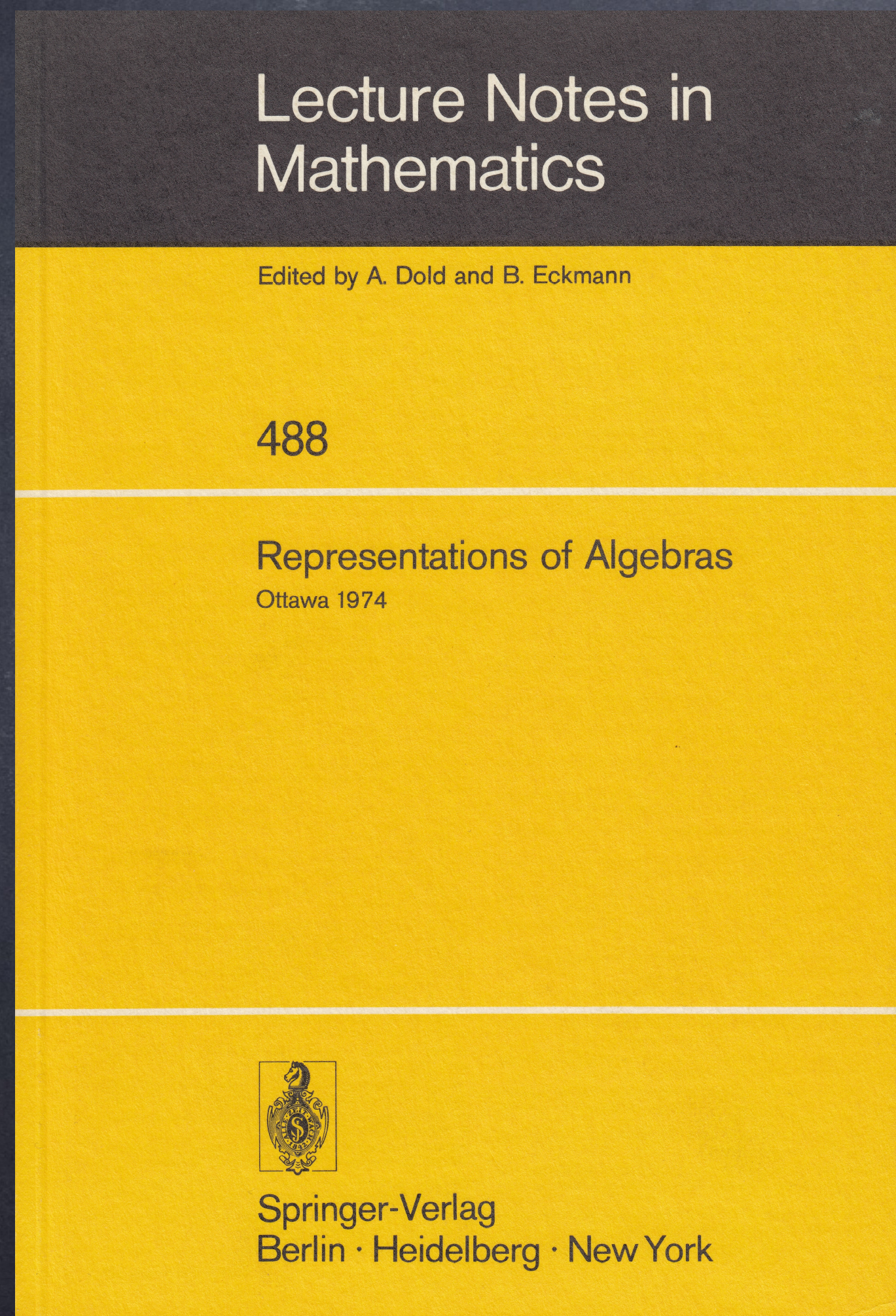
(*) I risultati conseguiti in questo lavoro sono stati esposti nella conferenza tenuta il 23 novembre 1971.

⁽¹⁾ I include in the manuscript the results of § 2 and § 3, which were unknown to me at the time of the talk.

Proceedings published as Springer Lecture Notes (1974 – 1984)

Containing a wealth of significant material

Format since 1979: Workshop & Conference



ICRA in 1994 in Cocoyoc (Mexico)



ICRA in 2000 at Beijing Normal University



International Conference on Representation Theory
of Algebras and Related Topics ICRA IX
at BeiJing Normal University

Home | Welcome | Scientific Committee | Local Committee | Program of Conference | Trips | Map of BNU | Contact with us

第9届国际代数表示论及其相关课题大会

Beijing, August 21-September 1, 2000

- Scientific Organizing Committee
- Program of Conference
- Local Organizing Committee
- Program of Workshop
- WorkShop Lecturers
- Registered Participants
- ICRA IX Main Speakers
- The Map of Beijing Normal University

Beijing 2000

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100875, Beijing, China 2000-2003

Representations of Algebras

Vol I

Proceedings of the Ninth International Conference
Beijing, August 21-September 1, 2000

Edited by
D. Happel
Y. B. Zhang

Beijing Normal University Press

ICRA in 2000 at Beijing Normal University



ICRA in 2012 at Bielefeld University

WORKSHOP AND INTERNATIONAL CONFERENCE ON REPRESENTATIONS OF ALGEBRAS

August 8-11 & 13-17, 2012
Bielefeld University

Organisers
C. Bessenrodt
R. Farnsteiner
D. Happel
S. König
H. Krause
M. Reineke
J. Schröer

Workshop Speakers
Lidia Angeleri Hügel (Verona)
Dave Benson (Aberdeen)
Jonathan Brundan (Eugene)
Osamu Iyama (Nagoya)
Sergey Mozgovoy (Oxford)
Dmitri Orlov (Moscow)

External Advisors
D. Benson
W. Crawley-Boevey
B. Keller
A. Kleshchev

Conference Speakers include
Sergey Fomin (Ann Arbor)
Hiraku Nakajima (Kyoto)
Julia Pevtsova (Seattle)
Raphaël Rouquier (Oxford/Los Angeles)
Michel van den Bergh (Hasselt)

ICRA Award-Committee
W. Crawley-Boevey
B. Keller
H. Krause
I. Reiten
K. Yamagata

Special Session dedicated to
Ragnar-Olaf Buchweitz

Funding
Sonderforschungsbereich 701
Schwerpunktprogramm 1388

ICRA 2012
INTERNATIONAL CONFERENCE ON REPRESENTATIONS OF ALGEBRAS

<http://www.math.uni-bielefeld.de/icra2012/>

Series of Congress Reports

Advances in Representation Theory of Algebras

David J. Benson
Henning Krause
Andrzej Skowroński
Editors

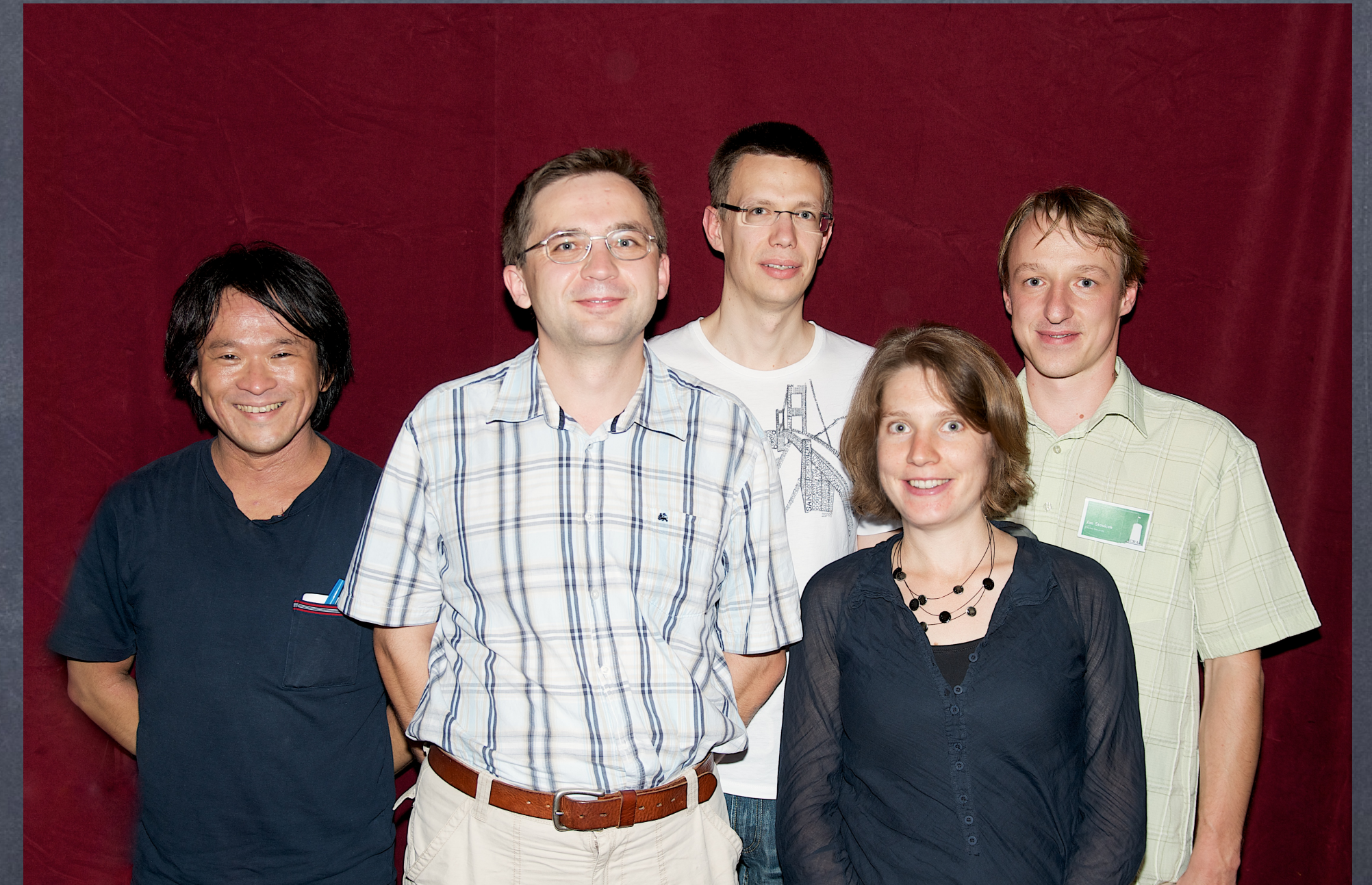
European Mathematical Society

ICRA in 2012 at Bielefeld University



ICRA Award since 2007

- Osamu Iyama (2007)
- Igor Burban and Steffen Oppermann (2008)
- Claire Amiot (2010)
- Jan Stovicek (2012)
- Hiroyuki Minamoto and Dong Yang (2014)
- Greg Stevenson and Qiu Yu (2016)
- Gustavo Jasso Ahuja and Julian Külshammer (2018)
- Fan Qin and Simone Virili (2020)
- Rosanna Laking and Alexandra Zvonareva (2022)



The first recipients 2012 in Bielefeld

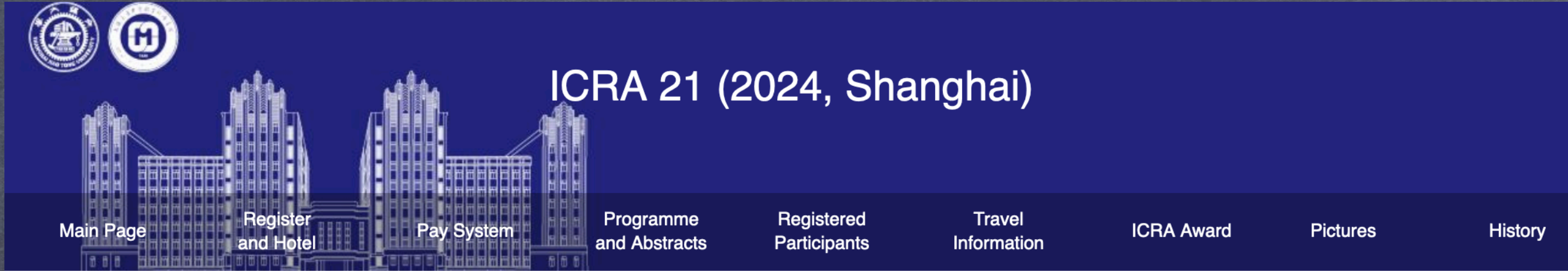
The first 50 years — a success story?

Some essential ingredients

- A first generation of visionary pioneers
- A beautiful subject with exciting connections to neighbouring fields
- A good sense of community
- An attractive meeting format (workshop, conference, award)
- A must to attend for everybody in the field

ICRA in 2024 at Shanghai Jiao Tong University

The beginning of the next 50 years



ICRA 21 (2024, Shanghai)

International Conference on Representations of Algebras (ICRA 21, 2024)

Shanghai Jiao Tong University (Xuhui Campus, No.1954 Huashan Road), July 31 to August 9, 2024

Workshop: July 31 to August 3, 2024 (Arrival day: July 30; ending at 16:30 August 3)

Conference: August 5 to 9, 2024 (Arrival day: August 4; ending at 16:30 August 9)

Venue: Inside Xuhui Campus: Wen Zhi Hall (文治堂, Workshop and plenary session)
Engineering Building (工程馆, Parallel sessions)

E-mail: icra21@sjtu.edu.cn

Scientific Committee:

Lidia Angeleri Hügel (Verona)	Javad Asadollahi (Isfahan)	Aslak Bakke Buan (Trondheim)	Igor Burban (Paderborn)	Xiaowu Chen (Hefei)
Claude Cibils (Montpellier)	Bangming Deng (Beijing)	Piotr Dowbor (Toruń)	Christof Geiss (Mexico City)	Osamu Iyama (Tokyo)
Bernhard Keller (Paris)	Henning Krause (Bielefeld)	Eduardo Marcos (São Paulo)	Ralf Schiffler (Connecticut)	Sibylle Schroll (Köln)
Andrea Solotar (Buenos Aires)	Michael Wemyss (Glasgow)	Pu Zhang (Shanghai)		