

# P.R.SURJÁN

## lectures, seminars and posters

1978 – 2023

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— The language of the title is the language of the presentation —  
— The name of speaker or presenter is underlined —  
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### 1978

1. Surján P.R.: Optikai rotátorerősségszámítás MTA KKKI Elméleti Kémia Csoport szemináruma, 1978 február (seminar)
2. P.R.Surján: Offdiagonal hypervirial relations and the semiempirical calculation of optical rotatory strength International Seminar on Quantum Chemistry, Visegrád, Hungary, september 1978 (talk)

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### 1980

1. Surján P.R.: Pirido-[1,2a]-pirimidinek optikai aktivitása MTA Anyagszerkezeti Munkabizottság előadóülése, Mátrafüred (talk)

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### 1981

1. Surján Péter: A molekulák optikai aktivitásának elmélete Magyar Kémikusok Egyesülete, Fizikai Kémiai Osztály előadódélutánja, 1981 márc. 9. (talk)
2. P.R.Surján: A linearized SCF approximation International seminar on quantum chemistry, Smolenice, Czechoslovakia, May 1981 (talk)
3. P.R.Surján: Rotációs barrierek számítása Extended Hückel elméletben MTA KKKI, Budapest (seminar)
4. P.R.Surján: Through space and through bond interactions leading to interbond delocalizations Microsymposium on Quantum Chemistry, Liblice, Czechoslovakia, 7-11 September 1981 (poster)
5. M.Kajtár, P.R.Surján, K.Simon, I.Hermecz and Z.Mészáros: Molecular structure and chiroptical properties of tetrahydro-pyrido[1,2a] pyrimidin-4-one derivatives

Symposium on steric effects in Biomolecules, October 5-8, 1981, Eger, Hungary  
(poster)

**6.** P.R.Surján and G.Náray-Szabó: Conformational analysis of the Ser-195 side chain in  $\alpha$ -chymotrypsin using localized molecular orbitals

Symposium on steric effects in Biomolecules, October 5-8, 1981, Eger, Hungary  
(poster)

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## 1982

**1.** P.R.Surján, I.Mayer and G.Náray-Szabó: On the different kinds of delocalization corrections to Strictly localized Molecular Orbitals  
International Seminar on Quantum Chemistry , August 1982, Győr, Hungary  
(talk)

**2.** P.R.Surján: On the evaluation of transition energies  
Univ. of Vienna, Inst. for Solid State Physics  
(invited seminar)

**3.** P.R.Surján: Konformációanalízis lokalizált pályákkal MTA KKKI, Budapest  
(seminar)

**4.** M.Kertész and P.R.Surján: Trapping of phase kinks in polyacetylene,  
Germany, 1982  
(poster)

**5.** Conformational analysis in light of localization and delocalization  
International Symposium on Theoretical Organic Chemistry August 30 – September  
3, 1983, Dubrovnik, Yugoslavia  
(poster)

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## 1984

**1.** P.R.Surján: Chemical bonds and interbond interactions  
Faraday Symposium on Quantum Chemistry, Cambridge 1984 (poster)

**2.** Geometry effects on the electronic structure of conjugated systems  
University of Vienna, Inst. Solid State Phys. December 14, 1984 (invited  
seminar)

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## 1985

**1.** P.R.Surján, Á.Vibák and H.Kuzmany  
Electronic Structure of Polyenes containing chain defects  
International Winterschool on the Electronic Structure of Polymers 2 February  
– 1 March 1985, Kirchberg in Tirol, Austria  
(poster)

**2.** Surján P.  
Geometria, konjugáció és elektronszerkezet összefüggése poliacetylénben  
MTA anyagszerkezeti munkabizottság előadóülése 1985 március, Visegrád  
(talk)

**3.** P.R.Surján, I.Mayer and I.Lukovits

Second quantization based theory for intermolecular interactions without basis set superposition error

Workshop on Quantum Chemistry, Harmonia/Bratislava, Czechoslovakia, March 20/22 1985  
(talk)

**4.** I.Lukovits, P.R.Surján and I.Mayer: Strictly localized geminals

Workshop on Quantum Chemistry, Harmonia/Bratislava, Czechoslovakia, March 20/22 1985

**5.** Quasiparticle transformations and a theory of the chemical bond

Fourth School of Advanced Methods of Quantum Chemistry Bachotek (Torun), Poland, 27 – 31 May  
(poster)

**6.** Quasiparticle transformations and the theory of the chemical bond

Ruder Boskovic Institute, Zagreb, Yugoslavia, 30 October  
(invited seminar)

**7.** I.Mayer and P.R.Surján: BSSE-free PT for intermolecular interactions

World Congress on Quantum Chemistry, Montreal, Canada, 1985

**8.** P.R.Surján, G.Náray-Szabó, I.Mayer and I.Lukovits

A new method for conformation analysis and potential surface calculations in biological systems  
Internat.Symp. on Steric Aspects of Biomolecular Interactions, 26 – 29 August, Sopron, Hungary  
(poster)

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**1986**

**1.** Quasiparticle transformations in the theory of the chemical bond

Inst.Solid State Physics, University of Wien, 15 January  
(invited seminar)

**2.** Second Quantized Approach to Quantum Chemistry

(short course)  
The University of Newfoundland, Dept. Chemistry, St.Johns, Canada, March – April

**5.** P.R.Surján

Accidental degeneracy in  $C_2$  molecules?  
Canadian Chemical Society Conference, June 1 – 4, Saskatoon, Canada  
(poster)

**6.** P.R.Surján

Quasiparticle transformations and the theory of the chemical bond  
Canadian Chemical Society Conference, Saskatoon, Canada, June 1986  
(poster)

**7.** P.R.Surján

Intermolecular Interactions

Mount Sinai Medical School, New York, USA  
(invited seminar)

**8.** P.R.Surján

Second Quantized Approach to Quantum Chemistry  
(3 invited seminars)  
Georgetown University, Dept. Chemistry, Washington D.C., USA, June 1986

**9.** P.R.Surján

BSSE- ree perturbation theory for intermolecular interactions  
International seminal on quantum chemistry,  
Szeged, Hungary, August 1986

**10.** P.R.Surján

Quantum Chemical Evaluation of Transition Energies  
Inst.Solid State Physics, University of Wien, November 1986  
(invited seminar)

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**1987**

**1.** P.R.Surján

Quasiparticle transformations and the theory of the chemical bond: intra- and  
intermolecular interactions  
Consejo Superior, Madrid, April 1987  
(invited seminar)

**2.** Optical activity of thioamides

M.Kajtár, J.G.Ángyán and P.R.Surján  
World Congress on Theoretical Organic Chemistry Budapest, Hungary, 1987  
(lecture)

**3.** R.A.Poirier, A.Yadav and P.R.Surján

A preliminary investigation of retinal analogs  
World Congress on Theoretical Organic Chemistry Budapest, Hungary, 1987  
(lecture)

**4.** J.Cioslowski, M.Kertész and P.R.Surján

Connected moments expansion calculations of the correlation energy in small  
molecules  
World Congress on Theoretical Organic Chemistry Budapest, Hungary, 1987  
(poster)

**5.** P.R.Surján, I.Mayer and R.A.Poirier

Second quantization and the Hellmann-Feynman theorem: A unified view on  
energy derivatives  
World Congress on Theoretical Organic Chemistry Budapest, Hungary, 1987  
(poster)

**6.** S.Kugler, P.R.Surján and G.Náray-Szabó

Theoretical estimation of static charge fluctuations in amorphous silicon  
World Congress on Theoretical Organic Chemistry Budapest, Hungary, 1987  
(poster)

**7.** J.Kürti, H.Kuzmany and P.R.Surján

Disorder and effective conjugation length in conjugated polymers

World Congress on Theoretical Organic Chemistry Budapest, Hungary, 1987  
(poster)

**8.** A.Yadav, R.A.Poirier and P.R.Surján

Retinal analogs in the  $^3\text{B}$  like state

World Congress on Theoretical Organic Chemistry Budapest, Hungary, 1987  
(poster)

**9.** A.Yadav, R.A.Poirier and P.R.Surján

Energy, geometry and valence: the influence of sulfur d/orbital exponent

World Congress on Theoretical Organic Chemistry Budapest, Hungary, 1987  
(poster)

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## 1988

**1.** P.R.Surján

Electron pair methods vs independent particle approximation

International Symposium on the Electronic Structure and Properties of Molecules  
and Crystals

August 29 – Sept 3, 1988, Cavtat, Yugoslavia  
(invited plenary talk)

**2.** I.Mayer and P.R.Surján

Improved SCF theory for intermolecular interactions without BSSE

International Symposium on Quantum Chemistry, Jerusalem, 1988 Aug 21 – 25  
(poster)

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## 1989

**1.** Surján P.

Általánosított Hückel módszerek alkalmazása  
BME Fizikai Intézet szemináriumá

**2.** J.Kürti and P.R.Surján

A simple model for studying quinoidal-aromatic transitions

Internat.Winterschool on the electronic structure of polymers, Austria, Kirchberg,  
1989

**3.** I.Mayer, A.Vibók and P.R.Surján

BSSE-free SCF methods for intermolecular interactions.

Sixth School of Advanced Methods of Quantum Chemistry, Bachotek, Poland,  
4 – 9 June 1989

**4.** P.R.Surján

Quinoid-Aromatic Structure of poly-iso-thionaphthene

TOC at MUN Conference, St.Johns, Canada 1989 July  
(lecture)

**5.** P.R.Surján

Ab initio perturbation theory for intermolecular interactions  
TOC at MUN Conference, St.Johns, Canada, 1989 July  
(invited plenary lecture)

**6.** I.Mayer and P.R.Surján  
Application of the chemical Hamiltonian approach to the problem of intermolecular  
interactions  
Sannibel Symposium, Florida, USA 1989  
(poster)

**7.** Rendezetlen rendszerek kvantumkémiaja  
Surján P.  
MKE előadás, Szeged 1989 november  
(talk)

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## 1990

**1.** P.R.Surján  
Másodkvantálás és a Hellmann–Feynman tétele  
BME Fizikai Intézet Szemináriuma, Február 2.  
(seminar)

**2.** P.R.Surján  
Nonlinear Schrödinger Equations and Intermolecular Interactions  
MATH/CHEM/COMP/90: International course and conference on the interface  
between mathematics, chemistry and computer science, Dubrovnik, Yugoslavia,  
25 – 30 June 1990  
(invited lecture)

**3.** P.R.Surján and I.Mayer  
Second quantization and exchange perturbation theories  
WATOC '90: The second world congress on theoretical organic chemistry,  
Toronto, Canada, 8 – 15 July, 1990  
(invited special lecture)

**4.** P.R.Surján  
Exchange perturbációs elmélet  
BME Fizikai Intézet Szemináriuma, 1990 December  
(seminar)

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## 1991

**1.** Surján Péter  
A hipervalens kén elektronszerkezete  
ELTE TTK Szerves Kémiai Tanszék szemináriuma, június 4  
(seminar)

**2.** Surján Péter  
Kis gerjesztési energiájú konjugált polimerek tervezése  
MTA Anyagszerkezeti Munkabizottság konferenciája, Budapest május 23 – 24  
(talk)

**3.** J.Kürti, P.R.Surján and M.Kertész  
Searching for low-band-gap polymers  
International Conference on Optical Probes of Organic Polymers, Snowbird,  
Utah, USA, August 19-22, 1991  
(poster)

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## 1992

- 1.** Surján Péter  
Elektronkorreláció és szupravezetés  
BME Fizikai Intézet szemináriuma, 1992 június  
(seminar)
- 2.** P.R.Surján and K.Németh  
Quinoid-aromatic competition as a tool for band structure design  
Intern.Conf. on Synth.Metals, Göteborg, Sweden, Aug. 1992  
(poster)
- 3.** J.Kürti, P.R.Surján, M.Kertész and G.Frapper  
Design of small-gap conjugated polymers  
Intern.Conf. on Synth.Metals, Göteborg, Sweden, Aug. 1992  
(poster)
- 4.** Surján Péter és Ángyán János  
Variációs torzulások megakadályozása pszeudopotenciálokkal  
Gáspár Rezső Szimpózium, Debrecen, 1992 október  
(invited talk)
- 5.** Surján Péter  
Szigorúan lokalizált geminálok MO bázisban  
BME Fizikai Intézet szemináriuma, 1992 november 13  
(seminar)
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## 1993

- 1.** Surján Péter, Udvardi László és Németh Károly  
Jahn-Teller torzulások gerjesztett C<sub>60</sub> molekulákban  
BME Fizikai Intézet szemináriuma, 1993 február  
(seminar)
- 2.** Surján Péter, Udvardi László és Németh Károly  
Jahn-Teller distorted excited states in C<sub>60</sub>  
Internat.Winterschool on the electronic structure of novel materials, Austria,  
Kirchberg, 1993 march  
(poster)
- 3.** P.R.Surján  
Jahn-Teller distorted excited states of fullerenes  
Consejo Supreior de Inv.Cientificas, Madrid, June 1993  
(seminar)
- 4.** P.R.Surján

Electronic Structure Calculation by Perturbed Strictly Localized Geminals  
1st Congress of the Intern.Society of Chemical Physics Girona, Catalonia, Spain,  
July 1993  
(invited talk)

**5.** P. R. Surján, L. Udvardi, and K. Németh  
Jahn-Teller distorted excited states of C<sub>60</sub>  
WATOC'93 World Congress, July 1993, Toyohashi, Japan  
(poster)

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## 1994

**1.** Surján Péter, Udvárdi László és Németh Károly  
Internat.Winterschool on the electronic structure of novel materials, Austria,  
Kirchberg, 1994 March  
(poster)

**2.** László Udvárdi, J.Kürti and P.R.Surján  
Internat.Winterschool on the electronic structure of novel materials, Austria,  
Kirchberg, 1994 March  
(poster)

**3.** Surján Péter  
A C<sub>60</sub> molekula elektronerjesztései  
A Magyar Tudományos Akadémia Fizikai Tudományok Osztályának és Kémiai  
Tudományok Osztályának tudományos ülésszaka Budapest, 1994 május 6  
(lecture)

**4.** P.R.Surján  
Correlation-induced interactions between chemical bonds  
Sattellite Conference on Electron Correlation, Smolenice (Slovakia), June 1994  
(lecture)

**5.** K.Németh, L.Udvárdi and P.R.Surján  
Semiempirical Studies on the Excited States of Buckminsterfullerene  
8th International Congress of Quantum Chemistry Prague 1994  
(poster)

**6.** P.R.Surján and J.G.Ángyán  
On the reliability of the point charge model  
8th International Congress of Quantum Chemistry Prague 1994  
(poster)

**7.** P.R.Surján  
Spin-adapted reduced Hamiltonians in non-orthogonal basis  
MATH/CHEM/COMP/90: International conference on the interface between  
mathematics, chemistry and computer science, Dubrovnik, Croatia, June 1994  
(invited lecture)

**8.** L.Udvárdi, K.Németh, P.R.Surján, J.Kürti and S.Pekker  
Calculation of the UV/VIS spectra of C<sub>60</sub>H<sub>2n</sub> (*n*=1,2,3)  
Intern.Conf. on Synth.Metals, Söul, South Korea, Aug. 1994  
(poster)

**9.** P.R.Surján

Quantum Chemical Approach to Novel Materials: Small-gap Polymers and Fullerenes

Biannual Congress of the Spanish Chemical Society, Vitoria, Spain, September 1994

(invited lecture)

**10.** P.R.Surján

A ponttöltés modell a kvantumkémiában

ELTE Elméleti Kémia Tanszék szemináriuma, okt. 19.

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**1995**

**1.** P.R.Surján

Electronic Excitations in Fullerenes

University of Stuttgart, Institute of Solid State Physics January, 1994

(invited seminar)

**2.** P.R.Surján and K.Németh

Sp<sup>3</sup> Carbons in fullerenes

Internat.Winterschool on the electronic structure of novel materials, Austria, Kirchberg, 1995 March

(talk)

**3.** P.R.Surján, L.Udvardi and K.Németh,

Excited states of the C<sub>60</sub> dimer

Materials Research Society Spring Meeting, Symp. K. on Fullerenes, Strasbourg, France, May 1995

(talk)

**4.** P.R.Surján

Electronic structure of fullerenes

University of Nancy, CNRS Lab Chimie Theorique, Nancy, June 1995

(seminar)

**5.** P.R.Surján

Electronic structure of fullerenes

DKFZ, Dept.Molecular Biology, Heidelberg, Germany, June 1995

(seminar)

**6.** K.Németh and P.R.Surján

Interaction of benzene with rare gas atoms

Int.Conf. on Molecular Quantum Mechanics, Cambridge, 3–7 September 1995

(poster)

**7.** P.R.Surján

Learning second quantization in one hour

School and Workshop in Quantum Chemistry, Debrecen, October 1995

(invited seminar)

**8.** P.R.Surján

Second quantization for composite particles

School and Workshop in Quantum Chemistry, Debrecen, October 1995

(invited seminar)

**9.** P.R.Surján and Á.Szabados

Damping in perturbation theory — a quantum chemical application  
School and Workshop in Quantum Chemistry, Debrecen, October 1995  
(talk)

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## 1996

**1.** K.Németh, M.Kállay, P.R.Surján

On the stability of Jahn-Teller distorted states of C<sub>60</sub> and smaller fullerenes  
Internat.Winterschool on the electronic structure of novel materials, Austria,  
Kirchberg, 1996 March  
(poster)

**2.** P.R.Surján, J.G.Ángyán, A.Lázár, K.Németh and L.P.Bíró

On the nature of the chemical bond between the monomeric units of the fullerene  
polymer  
Internat.Winterschool on the electronic structure of novel materials, Austria,  
Kirchberg, 1996 March  
(poster)

**3.** R.R.Surján, L.Lain and C.Perez del Valle Second quantization based  
exchange perturbation theory – third order results for intermolecular interactions  
2nd Congress of the Int.Soc.Theor.Chem.Phys., New Orleans, April 1996 (invited  
talk)

**4.** R.R.Surján, L.Lain and C.Perez del Valle Second quantization based  
exchange perturbation theory for intermolecular interactions Workshop on Electronic  
Structure of Complex Systems, Budapest, May 1996 (invited talk)

**5.** M.Kállay and P.R.Surján

Application of Group theory for Jahn-Teller Distorted Excited Fullerenes  
Workshop on Electronic Structure of Complex Systems, Budapest, May 1996  
(talk)

**6.** K.Németh and P.R.Surján

Zero-Field-Splitting of the Triplet States in C<sub>60</sub> and in Thiophene oligomers  
Workshop on Electronic Structure of Complex Systems, Budapest, May 1996  
(talk)

**7.** P.R.Surján, K.Németh and M.Kállay Electronic Structure and Zero-Field-  
Splitting of C<sub>60</sub> and other Fullerenes WATOC 4th World Congress, Jerusalem,  
Israel, July 7-12, 1996 (talk)

**8.** P.R.Surján and Á. Szabados Damping of Perturbation Corrections in  
Quasidegenerate Situations WATOC 4th World Congress, Jerusalem, Israel,  
July 7-12, 1996 (poster)

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## 1997

**1.** P.R.Surján, M.Kállay and Gy.Dömötör

Reaction coordinate analysis on the excited potential surface of fullerenes  
Internat.Winterschool on the electronic structure of novel materials, Austria,  
Kirchberg, 1997 March

(poster)

**2.** P.R.Surján

Quantum chemistry of excited states: Tamm-Dankoff approximation with geminal-type wave functions

MATH/CHEM/COMP/97: International conference on the interface between mathematics, chemistry and computer science, Dubrovnik, Croatia, June 1997  
(talk)

**3.** M.Kállay and P.R.Surján

Triplet state characteristics of higher fullerenes and fullerene dimers  
MATH/CHEM/COMP/97: International conference on the interface between mathematics, chemistry and computer science, Dubrovnik, Croatia, June 1997  
(talk)

**4.** A.Lázár and P.R.Surján

On the nature of excitations in molecular dimers  
MATH/CHEM/COMP/97: International conference on the interface between mathematics, chemistry and computer science, Dubrovnik, Croatia, June 1997  
(poster)

**5.** P.R.Surján and Á.Szabados

Green's functions in quantum chemistry  
University of Nancy, CNRS Lab Chimie Theorique, Nancy, November 1997  
(seminar)

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## 1998

**1.** P.R.Surján, M.Kállay and Á.Szabados

Non-conventional partitioning of the many-body Hamiltonian for studying correlation effects  
Sanibel Conference, St.Augustine, Florida, February 1998 (poster)

**2.** P.R.Surján and Zsolt Szekeres

Highly symmetruc borane clusters as fullerene analogs  
Internat.Winterschool on the electronic structure of novel materials, Austria, Kirchberg, 1998 March  
(poster)

**3.** Surján Péter, Kállay Mihály és Lázár Armand:

A polimerizálódó Buckminster-fullerén  
VIII. Anyagszerkezet-kutatási konferencia, MTA Anyagszerkezeti Munkabizottsága, Budapest, 1998 május 22  
(előadás)

**4.** Szabados Ágnes és Surján P.

A szinteltolás módszere a perturbációszámításban  
VIII. Anyagszerkezet-kutatási konferencia, MTA Anyagszerkezeti Munkabizottsága, Budapest, 1998 május 22  
(előadás)

**5.** Surján P.

Green's functions in quantum chemistry, I-IV. School and Workshop in Quantum Chemistry, Debrecen, May 1998

(course)

**6.** P.R.Surján and Á.Szabados

Perturbational Calculation of Intermolecular Interaction Energies by Kapuy's Partitioning

Internat. Seminar on Electronic Structure of Extended Systems, Dedicated to Prof. Ede Kapuy on His 70<sup>th</sup> Birthday, Szeged, 25-26 September, 1998

(invited talk)

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**1999**

**1.** P.R.Surján and Á.Szabados

How to partition the Hamiltonian in perturbation calculations - optimized level shifts for low order corrections

Department of Physics, Theoretical Physics Division, Linköping University, Sweden, May 28

(seminar)

**2.** Péter R. Surján, and Mihály Kállay

Excitation Energies from Geminal-type Wave Functions

WATOC 5th World Congress, London, Aug 1-6, 1999

(poster)

**3.** Mihály Kállay and Péter R. Surján,

Geminal-based CI Calculations

WATOC 5th World Congress, London, Aug 1-6, 1999

(poster)

**4.** Á. Szabados and Péter R. Surján

Optimized level shifts for a better partitioning in perturbative correlation calculations

WATOC 5th World Congress, London, Aug 1-6, 1999

(poster)

**5.** Péter R. Surján and Mihály Kállay,

Improving CISD with geminal-type reference states

University of Nancy, CNRS Lab Chimie Theorique, Nancy, October 1999

(seminar)

**6.** Péter R. Surján

The Contracted Schrödinger Equation: a tutorial

University of Nancy, CNRS Lab Chimie Theorique, Nancy, October 1999

(seminar)

**7.** Péter R. Surján, M.Kállay and E.Rosta

A CISD and an MP2 method with geminal type reference state Int.Congr.Theor.Phys.Chem.

(ICTCP), Mexico, 8-13 November, 1999

(invited talk)

**8.** Péter R. Surján and Á. Szabados

Optimized level shifts in perturbation theory

Int.Congr.Theor.Phys.Chem. (ICTCP), Mexico, 8-13 November, 1999

(poster)

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## **2000**

- 1.** Péter R. Surján  
Second Quantized Approach to Quantum Chemistry  
University of Nancy, CNRS Lab Chimie Theorique, Nancy, Apr 25–28 2000  
(course)
- 2.** Péter R. Surján  
On the killer condition in excited state quantum chemistry  
Consejo Superior, Madrid, 4 May  
(seminar)
- 3.** Péter R. Surján  
Using second quantization: on the killer condition in excited state quantum chemistry  
University of Nancy, CNRS Lab Chimie Theorique, Nancy, May 16 2000  
(seminar)
- 4.** Edina Rosta, Péter R. Surján, János Ángyán  
Chemical Potentials and Fukui Functions from Coupled Hartree-Fock Equations  
Chemical Bonding: State of the Art in Conceptual Quantum Chemistry, 1-4 June 2000, La Colle sur Loup (France)  
(poster)
- 5.** Edina Rosta, Péter R. Surján, János Ángyán  
Chemical Potentials and Fukui Functions from Coupled Hartree-Fock Equations  
Internat. Conf. on Density Functional Theory and its Applications to materials, Antwerp, Belgium, June 8–10 2000 (poster)
- 6.** Edina Rosta, Péter R. Surján  
The interaction of chemical bonds investigated by geminal-type wavefunction  
Int.Congr. Quantum.Chem., Mounton, France, June 2000  
(poster)
- 7.** P. R. Surján,  
Excited and Ionized States of Large Molecules: an MR-CIS Approach  
Third European Conference on Computational Chemistry (EUCO-CC3), Budapest, 4–8 September 2000  
(invited talk)
- 8.** M. Kállay and P. R. Surján,  
Computing coupled cluster wave functions with arbitrary excitations. Convergence of the CC series  
Third European Conference on Computational Chemistry (EUCO-CC3), Budapest, 4–8 September 2000  
(poster)
- 9.** E. Rosta and P. R. Surján,  
The interaction of chemical bonds investigated by geminal-type wave function  
Third European Conference on Computational Chemistry (EUCO-CC3), Budapest, 4–8 September 2000  
(poster)
- 10.** Á. Szabados and P. R. Surján,  
Perturbative electron propagator approximation computed with level shifts for

estimating ionization potentials  
Third European Conference on Computational Chemistry (EUCO-CC3), Budapest,  
4–8 September 2000  
(poster)

**11.** Zs. Szekeres and P. R. Surján,  
Kiler condition in EOM: A new approach for EOM-IP and EOM-EA Calculations  
Third European Conference on Computational Chemistry (EUCO-CC3), Budapest,  
4–8 September 2000  
(poster)

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## 2001

**1.** Peter R. Surján, Ágnes Szabados and Dora Kohalmi  
MODERN ASPECTS OF PERTURBATION THEORY, with special attention  
to convergence problems and the problem of quasi-degeneracy in quantum chemical  
applications

Symposium on Molecular Informatics and Combinatorial Quantum Chemistry,  
Collegium Budapest, 2001 February 19–21  
(invited talk)

**2.** Péter R. Surján and Ágnes Szabados  
The Green operator in quantum chemistry  
School and Workshop in Quantum Chemistry, Debrecen, May 2001  
(invited talk)

**3.** Péter R. Surján Ágnes Szabados and Edina Rosta  
Recent Advances in Multi-reference Petruftation Theory School and Workshop  
in Quantum Chemistry, Debrecen, May 2001  
(invited talk)

**4.** Edina Rosta and Péter R. Surján  
The interaction of chemical bonds investigated by geminal-type wave function  
School and Workshop in Quantum Chemistry, Debrecen, May 2001  
(poster)

**5.** Zsolt Szekeres and Péter R. Surján  
Ionization energy calculations using approximate density matrices School and  
Workshop in Quantum Chemistry, Debrecen, May 2001  
(poster)

**6.** Surján Péter  
A perturbációszámítás modern problémái  
Atom- és Molekulafizikus Találkozó, Debrecen, 2001. Szeptember 7-8 (elH  
oadás)

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## 2002

**1.** P. R. Surján and Á. Szabados  
MRPT and non-iterative corrections to CC wave functions  
Sanibel Conference, St.Augustine, Florida, February 2002  
(poster)

- 2.** Péter R. Surján and Ágnes Szabados  
The problem of partitioning in PT  
Inst.Chem., Univ. Strassbourg, France, July 2002  
(invited seminar)
- 3.** Péter R. Surján and Ágnes Szabados  
Recent developments in MRPT  
Int.Congr.Theor.Phys.Chem. (ICTCP), Marly le Roi, France, July 2002  
(talk)
- 4.** Edina Rosta and Péter R. Surján  
Two-body zeroth order Hamiltonians in multi-reference perturbation theory  
WATOC 2002 World Congress, Lugano, Switzerland, July 2002  
(poster)
- 5.** Péter R. Surján Z. Rolik and Ágnes Szabados  
The problem of partitioning in multi-reference perturbation theory  
Seventh European Workshop on Quantum Systems in Chemistry and Physics,  
Casta Papiernicka nr. Bratislava, Slovakia, 10-15 September, 2002  
(talk)
- 6.** Ágnes Szabados, Dóra Kőhalmi and Péter R. Surján  
Optimized one-particle energies in an MP-type perturbation theory  
Casta Papiernicka nr. Bratislava, Slovakia, 10-15 September, 2002  
(talk)
- 7.** Á.Szabados and P.R. Surján  
Superoperators in Calculating Ionization Potentials by Perturbation Theory  
*1<sup>st</sup> Central European Symposium on Theoretical Chemistry, Zwettl, Austria,*  
2002.  
(talk)
- 8.** P.R. Surján and Zs. Szekeres  
Direct determination of localized MOs: the extended Huzinaga equation  
*1<sup>st</sup> Central European Symposium on Theoretical Chemistry, Zwettl, Austria,*  
2002.  
(talk)

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## 2003

- 1.** P.R. Surján, Z. Rolik, D. Kőhalmi and Á. Szabados  
Multiconfiguration Perturbation Theory  
Symposium in Honour of István Mayer, MTA KKKI, April 12, 2003, Budapest  
(talk)
- 2.** Zs. Szekeres and P.R. Surján  
Localised Molecular orbitals from the Huzinaga and Szász equations  
Pomeranian Quantum Chemistry and Physics Workshop, Pobierowo, Poland,  
May 2003  
(talk)
- 3.** Á. Szabados and P.R. Surján  
Excitation and ionization energies from superoperator theory  
Pomeranian Quantum Chemistry and Physics Workshop, Pobierowo, Poland,

May 2003

(talk)

**4.** P.R. Surján

Open problems in perturbation theory Pomeranian Quantum Chemistry and Physics Workshop, Pobierowo, Poland, May 2003  
(invited talk)

**5.** R. Rolik, Á. Szabados and P.R. Surján

Test calculations with multi-configurational perturbation theory  
2nd Central European Conference on Theoretical Chemistry (CESCTC2003)  
Nové Hrady (Czech Rebublik), Oct. 25–28, 2003  
(poster)

**6.** D. Kőhalmi and P.R. Surján

Semiclassical treatment of atomcules  
2nd Central European Conference on Theoretical Chemistry (CESCTC2003)  
Nové Hrady (Czech Rebublik), Oct. 25–28, 2003  
(poster)

**7.** Zs. Szekeres and P.R. Surján

Group functions by building block equations  
2nd Central European Conference on Theoretical Chemistry (CESCTC2003)  
Nové Hrady (Czech Rebublik), Oct. 25–28, 2003  
(talk)

**8.** Á. Szabados and P.R. Surján

Perturbative treatment of interacting nanosystems: the role of Laplace-transformed denominators  
2nd Central European Conference on Theoretical Chemistry (CESCTC2003)  
Nové Hrady (Czech Rebublik), Oct. 25–28, 2003  
(talk)

**9.** P.R. Surján, Á. Szabados, D. Kőhalmi and Z. Rolik

Do we really need a multi-reference formalism to describe potential surfaces in coupled-cluster theory?  
2nd Central European Conference on Theoretical Chemistry (CESCTC2003)  
Nové Hrady (Czech Rebublik), Oct. 25–28, 2003  
(talk)

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**2004**

**1.** Péter R. Surján and Ágnes Szabados

Open Questions in Perturbation Theory: the Problem of Partitioning  
Indian Association for the Cultivation of Science, Kolkata, India, February 2004  
(seminar)

**2.** Ágnes Szabados and Péter R. Surján

Theoretical treatment of nanotube-nanotube interactions  
Indian Association for the Cultivation of Science, Kolkata, India, February 2004  
(seminar)

**3.** Ágnes Szabados and Péter R. Surján

Theoretical treatment of nanotube-nanotube interactions

Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India,  
February 2004  
(seminar)

**4.** P.R. Surján

Van-e még új fizika a kvantumkémiaban?  
Ortvay kolokvium, ELTE Fizika Tanszékcsoport, 2004. március 4.  
(seminar)

**5.** Péter R. Surján, Dóra Kőhalmi, Ágnes Szabados, Gábor Tóth, Zoltán Rolik and Zsolt Szekeres

The contracted Schrödinger equation and linear scaling methods  
Pomeranian Quantum Chemistry and Physics Workshop, Pobierowo, Poland,  
May 2004  
(invited talk)

**6.** Ágnes Szabados and Péter R. Surján

Size dependence of Feenberg's scaling  
Pomeranian Quantum Chemistry and Physics Workshop, Pobierowo, Poland,  
May 2004  
(talk)

**7.** D. Kőhalmi, Á. Szabados, G. Tóth, Zs. Szekeres and P. R. Surján,  
Obtaining the density matrix in the one-body framework: a new iterative formula

3rd Central European Symposium on Theoretical Chemistry, 2004, Tihany,  
Hungary  
(talk)

**8.** Z. Rolik, Á. Szabados and P. R. Surján,  
An efficient multiconfigurational PT code

3rd Central European Symposium on Theoretical Chemistry, 2004, Tihany,  
Hungary  
(talk)

**9.** Zs. Szekeres, P.G. Mezey and P. R. Surján,  
Helical graphite: Halfway between graphite and helicenes  
3rd Central European Symposium on Theoretical Chemistry, 2004, Tihany,  
Hungary  
(poster)

**10.** P.R. Surján,  
Excursions in the fields of perturbation theory and linear scaling,  
Dept. Theoretical Physics, Technical University, Budapest, 2004 November  
(seminar)

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## 2005

**1.** Á. Szabados, D. Kőhalmi and P. Surján  
Theoretical Treatment of Nanotube-Nanotube Interactions  
Hungarian Nanotechnology Symposium, Budapest, 21-22 March, 2005  
(talk)

**2.** Surján P.,

Perturbációs számítás a kvantumkémiaiban,  
Magyar Tudományos Akadémia, Fizikai Tudományok Osztálya "Atom- és Molekulafizika  
Ma" c. előadóülése, Budapest, 2005.04.05.  
(talk)

**3.** Á. Szabados, V. Rassolov, and P. R. Surján,  
Perturbation theory with CEPA-0 like second order: a novel way to perturb  
multi-configurational wave functions  
Fifth Congress of the Int. Soc. Theor. Chem. Phys., New Orleans, USA, July  
20 -26, 2005  
(poster)

**4.** P. R. Surján, P. Szakács, D. Kőhalmi, Á. Szabados, Z. Rolik and Zs. Szekeres,  
Diagonalization-free Energy Calculations: Hartree-Fock and Beyond  
13th European Seminar on Computational Methods in Quantum Chemistry  
(Strasbourg Seminar)  
(invited talk)

**5.** Á. Szabados, V. Rassolov, and P. R. Surján,  
CEPA-0-like perturbation corrections to geminal wave functions  
4th Central European Symposium on Theoretical Chemistry, 25-28 September  
2005, Sachticky, Slovakia  
(talk)

**6.** D. Kőhalmi and P. R. Surján,  
On the optimization of Davidson's  $\alpha$ -matrix in many-body perturbation theory,  
4th Central European Symposium on Theoretical Chemistry, 25-28 September  
2005, Sachticky, Slovakia (talk)

**7.** Z. Rolik and P. R. Surján,  
Orbital-free calculation of the MP2 energy correction,  
4th Central European Symposium on Theoretical Chemistry, 25-28 September  
2005, Sachticky, Slovakia (poster)

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## 2006

**1.** P. R. Surján, D. Kőhalmi, Z. Rolik and Á. Szabados  
Idempotent density matrices: Hartree-Fock and correlated calculations without  
molecular orbitals  
XIIth International Congress of Quantum Chemistry, May 21-26, 2006 Kyoto,  
Japan  
(invited talk)

**2. Á. Szabados and P. R Surján**

Theoretical modeling of nanotube bundles

Material-oriented Quantum Chemistry, Satelite to the XIIth International Congress of Quantum Chemistry, May 27-29, 2006, Osaka, Japan  
(talk)

**3. P. R Surján**

Perturbation theory of single- and multi-configurational states: the problem of partitioning,

Division of Physical Chemistry, Dept. of Chemistry, School of Science and Engineering, Waseda Univ., May 30, 2006, Tokyo, Japan  
(invited seminar)

**4. Á. Szabados and P. R Surján**

Theoretical interpretation of Grimme's spin-component-scaled Møller-Plesset approach

5th Central European Symposium on Theoretical Chemistry 2006, September 24-27, Zakopane, Poland  
(talk)

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## 2007

**1. P. R Surján and P. Szakács**

Convergence, Chaos or Divergence: Stability Analysis of the Coupled-Cluster Equations

Recent Trends in Many-Body methods for Electronic Structure and Properties of Atoms and Molecules, January 11-13, Orissa, India  
(invited talk)

**2. P. R Surján, D. Kőhalmi, P. Szakács, Á. Szabados and Z. Rolik**

Towards large biomolecules: Hartree-Fock calculations and beyond,  
From molecular informatics to bioinformatics, International symposium, 2007  
March 19-21, Institute for Advanced Study, Collegium Budapest, Hungary  
(invited talk)

**3. ZS. Szekeres, P. G. Mezey and P. R. Surján,**

Diagonalization-free initial guess to SCF calculations for large molecules,  
From molecular informatics to bioinformatics, International symposium, 2007  
March 19-21, Institute for Advanced Study, Collegium Budapest, Hungary  
(invited talk)

**3. P. R. Surján, D. Kőhalmi, P. Szakacs, A. Szabados and Z. Rolik**

How to obtain the correlation energy from the Hartree-Fock density matrix?  
Molecular Quantum Mechanics: Analytic Gradients and Beyond, A Conference in Honor of Peter Pulay, May 29- June 3, 2007, Margitsziget, Budapest, Hungary  
(invited poster)

**4. P. R. Surján, P. Szakács, Á. Szabados and Z. Rolik**

Convergence, Chaos or Divergence: Stability Analysis of Iterative Procedures in Quantum Chemistry  
16th Canadian Symposium on Theoretical Chemistry, August 4 - 9, 2007, MUN, St. John's, NL Canada  
(invited talk)

**5.** P. Szakács and P. R. Surján

Exact  $\pi$ -electron Hamiltonians for curved systems

6th Central European Symposium on Theoretical Chemistry 2007, September 23-26, Litschau, Austria  
(poster)

**6.** Surján Péter

Kalandozások két tudomány határán: bemutatkozó előadás  
Bolyai Kollégium, Budapest, 2007 október 4.

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**2008**

**1.** Kürti Jenő, Péter Szalay, Kamarás Katalin és Surján Péter

Teller Ede hatása a magyar molekulafizikai kutatásokra  
Teller Ede Centenáriumi ülés, Magyar Tudományos Akadémia, Budapest, 2008.  
jan. 16. (invited talk)

**2.** P. Surján

Effective  $\pi$ -electron hamiltonian for small-radii nanotubes: novel interpretation  
of curvature-induced conductivity  
"2008 Molecular Informatics and Bioinformatics Symposium", Collegium Budapest,  
2008 March 27-29  
(invited talk)

**3.** M. Kobayashi, Á. Szabados, P. Surján and H. Nakai

Simple perturbative correction to the APSG wavefunction,  
"11th Theoretical Chemistry Symposium (2008)", May 22–24, Keio University,  
Yokohama, Japan.

**4.** Surján Péter

*Antilla Chimiae* - Intézeti Szeminárium  
ELTE Kémiai Intézet, 2008.05.29., Budapest.

**5.** P. Surján

Bloch-equation-based exact effective  $\pi$ -electron Hamiltonians for curved systems  
13th International Workshop "Quantum Systems in Chemistry and Physics"  
(QSCP-XIII), Lansing, Michigan, July 6th – 12th, 2008.  
(invited talk)

**6.** Masato Kobayashi, Agnes Szabados, Peter Surjan, Hiromi Nakai

Multiconfiguration perturbation theory using generalized Møller-Plesset partitioning  
and its application to APSG reference function  
ISCTCP-VI, Vancouver, Canada, July 2008 (poster)

**7.** Agnes Szabados, Peter Surjan

Intruder-free partitioning in multiconfigurational PT  
7th Central European Conference on Theoretical Chemistry (CESTC-2008)  
Hejnice, (Czech Republik), Sept. 28 – Oct 1, 2008  
(talk)

**8.** Peter Szakacs, Dorina Kocsis and Peter Surjan  
Jahn-Teller distortions in Carbon nanotubes  
7th Central European Conference on Theoretical Chemistry (CESTC-2008)  
Hejnice, (Czech Republik), Sept. 28 – Oct 1, 2008  
(poster)

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## 2009

**1.** Peter Surjan, Peter Szakacs and Dorina Kocsis  
Jahn-Teller distortions in Carbon nanotubes  
Current Trends in Theoretical Chemistry and Physics  
Raman Center for Atomic, Molecular and Optical Sciences, Indian Association  
for the Cultivation of Science, Calcutta, January 3rd, 2009 (invited talk)

**2.** Peter Surjan, Agnes Szabados and Zoltan Rolik  
Multi-configuration Perturbation Theory  
Workshop 2009: Recent Advances in Efficient Correlation Methods  
(DFG Priority Program "Modern and Universal First-Principles Methods for  
Many-electron Systems in Chemistry and Physics",  
11-13 March 2009, Benzberg (Koln), Germany (invited talk)

**3.** Peter Szakacs and Peter Surjan  
Zero-field splitting of excited carbon nanotubes  
8th Central European Conference on Theoretical Chemistry (CESTC-2009)  
Dobogoko (Hungary), Sept. 25–28, 2009  
(poster)

**4.** Zoltan Rolik, A. Szabados and Peter Surjan  
Fourth order implementation of Multipartitioning MBPT  
8th Central European Conference on Theoretical Chemistry (CESTC-2009)  
Dobogoko (Hungary), Sept. 25–28, 2009  
(poster)

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## 2010

**1.** Péter Szakács, Péter R. Surján  
Jahn-Teller distortion and zero-field-splitting in carbon nanotubes 9th Central  
European Conference on Theoretical Chemistry (CESTC-2010)  
Novy Smokovec, High Tatras (Slovakia), Sept. 12–15, 2010  
(talk)

**2.** Zoboki Tamás, Mayer István, Surján R. Péter  
Electron Correlation Calculations with Strictly Localized Orbitals 9th Central  
European Conference on Theoretical Chemistry (CESTC-2010)  
Novy Smokovec, High Tatras (Slovakia), Sept. 12–15, 2010  
(talk)

**3.** Péter Jeszenszki, Ágnes Szabados, Péter R.Surján  
Exact diagonalization of bosonic Hamiltonians  
9th Central European Conference on Theoretical Chemistry (CESTC-2010)  
Novy Smokovec, High Tatras (Slovakia), Sept. 12–15, 2010  
(poster)

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## 2011

- 1.** Peter R. Surjan  
Multi-reference perturbation theories  
2011. August 26., Nanjing University, Laboratory of Theoretical Material Chemistry (LTMC), China  
(invited seminar)
- 2.** Peter R. Surjan  
Multi-reference perturbation theories  
2011. August 28., Biejing University, College of Chemistry and Molecular Engineering, China  
(invited seminar)
- 3.** Peter R. Surjan and Peter Jeszenszki  
Composite particles in chemistry: from geminals to modeling cold atoms  
ISTCP-VII September 2-8, 2011 Waseda University, Tokyo, Japan  
(invited talk)
- 4.** Peter R. Surjan  
Wonders in Science: Superatomic Orbitals, or Simple Group Theory?  
RAMET-2011, 1-4 December 2011, Puri, Orissa, India  
(invited talk)

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## 2012

- 1.** Agnes Szabados, Zsuzsanna Toth, Tamás Zoboki and Peter R. Surján  
Electronic transitions of molecular fragments obtained by the Frozen Localized MO scheme, 11th Central European Conference on Theoretical Chemistry (CESTC-2012), Maripfarr, Austria, 2 – 5 September, 2012  
(poster)
- 2.** Péter R. Nagy, Peter R. Surján and Ágnes Szabados  
 $\pi$ -electron contribution to Vibrational Optical Activity intensities, 11th Central European Conference on Theoretical Chemistry (CESTC-2012), Maripfarr, Austria, 2 – 5 September, 2012  
(poster)
- 3.** Tamás Zoboki, Peter R. Surján and Ágnes Szabados  
Coupled Cluster-type corrections to geminal wave functions Tamás Zoboki, Péter R. Surján, Ágnes Szabados 11th Central European Conference on Theoretical Chemistry (CESTC-2012), Mariapfarr, Austria, 2 – 5 September, 2012  
(poster)

- 4.** Peter R. Surján, Zs. Tóth, T. Zoboki, and Á. Szabados  
"Electron correlation calculation on molecular fragments for ground and excited states: the use of frozen localized molecular orbitals", Workshop on "Electron Correlation Methods: Past, Presence, and Future", in honor of Ivan Hubač and Miro Urban, Bratislava, October 12-13, 2012.  
(invited talk)
- 5.** Tóth Zsuzsanna, Zoboki Tamás, Szabados Ágnes, Surján Péter  
"Molekulafrag-mens UV-VIS átmenetéinek számítása fagyaszott lokalizált molekulapálya módszerrel", MTA Anyag- és Molekulászerkezeti Munkabizottság, MTA Szervetlen és Fémorganikus Kémiai Munkabizottság előadóülése, Szedres, 2012. október 13 – 14  
(előadás)
- 5.** Jeszenszki Péter, Surján Péter, Szabados Ágnes  
"Egy multireferenciás perturbációs módszer spin-adaptálásának buktatói"  
. MTA Anyag- és Molekulászerkezeti Munkabizottság, MTA Szervetlen és Fémorganikus Kémiai Munkabizottság előadóülése, Szedres, 2012. október 13 – 14  
(előadás)
- 6.** Nagy Péter, Szabados Ágnes, Surján Péter  
"π-elektronrendszer hozzájárulása a rezgési optikai aktivitás intenzitáshoz", MTA Anyag- és Molekulászerkezeti Munkabizottság, MTA Szervetlen és Fémorganikus Kémiai Munkabizottság előadóülése, Szedres, 2012. október 13 – 14  
(előadás)

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## 2013

- 1.** Péter Jeszenszki, Péter R. Surján, Ágnes Szabados  
Sensitivity analysis in state-specific multireference perturbation theory  
International Symposium on Theoretical Chemical Physics, Budapest, 25-31 August, 2013. (talk)
- 2.** Péter R. Nagy, Péter R. Surján, Ágnes Szabados  
Optical activity spectra of carbon nanostructures via a novel  $\pi$ -electron model  
International Symposium on Theoretical Chemical Physics, Budapest, 25-31 August, 2013. (poster)
- 3.** Tamás Zoboki, Ágnes Szabados, Péter R. Surján  
Linearized Coupled Cluster Corrections to Antisymmetrized Product of Strongly Orthogonal Geminals: role of dispersive interactions  
International Symposium on Theoretical Chemical Physics, Budapest, 25-31 August, 2013. (poster)
- 4.** Szabados Ágnes, Zoboki Tamás és Surján Péter  
Lokális spin stúdium: Az APSG hullámfüggvény és ennek perturbációs korrekciója  
MTA Anyag- és Molekulászerkezeti Munkabizottság előadóülése, Mátrafüred, 2013. október 17-19.
- 5.** Surján Péter  
Lokalizáció és delokalizáció: kémiai kötések kölcsönhatásai  
MTA Anyag- és Molekulászerkezeti Munkabizottság előadóülése, Mátrafüred,

2013. október 17-19.

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## 2014

**1.** Á. Szabados, T. Zoboki, P. Jeszenszi and P.R.Surján  
Geminals with strong orthogonality - varieties, capabilities  
16th European Seminar on Computational methods in Quantum Chemistry  
September 10-13 2014, Houffalize, Belgium  
(invited talk)

**2.** Peter R. Surjan  
Generalized Distributions to Describe Quasiclassical Mechanics  
LUEST in TELLURIDE, Telluride Science Research Center, USA, 2014  
(invited talk)

**3.** Á. Szabados, T. Zoboki, P. Jeszenszi and P.R.Surján  
Geminals with strong orthogonality - varieties, capabilities  
Central European Symposium on Theoretical Chemistry, 21-25. September  
2014, Nagybörzsöny, Hungary  
(talk)

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## 2015

**1.** P. R Surján, Zs. Mi'alka and Á. Szabados  
Struggling with reference states in multi-reference theory  
Recent Advances in Electronic Structure Theory , June 1-6, Nanjing, China  
(invited talk)

**2.** Á. Szabados, P.R.Surján and P. Jeszenszi  
Sypn-symmetry and size-consistency of strongly orthogonal geminals  
Recent Advances in Electronic Structure Theory , June 1-6, Nanjing, China  
(poster)

**3.** Péter R. Surján and Zs. Mihálka  
Struggling with reference states in multi-reference theory  
Symposium in Honor of J. Paldus  
November 27, Praague, Czech Republik  
(invited talk)

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## 2016

**1.** Péter R. Surján, Zs. Mihálka and A. Szabados  
Convergence enhancement in Rayleigh-Schrodinger Perturbation Theory: Quantum  
Chemical Applications  
ISTCP-VIII July, July 17-22, 2016 Grand Forks, ND - USA  
(invited talk)

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## 2017

1. Zsuzsanna É. Mihálka, Péter R. Surján  
Dissociation potential curves from single reference Møller-Plesset PT  
15th Central European Symposium on Theoretical Chemistry Wisła, Poland,  
September 3-6, 2017 (talk)

2. Péter Surján  
The problem of convergence in perturbation theory  
BME Elméleti Fizika Tanszék szeminárium 2018. december 8.  
(seminar)

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## 2018

1. Surján Péter  
Divergens perturbációs sorok felösszegzéséről  
SZEGED, Elméleti Fzikai Tanszék szeminárium  
2018 Február 22.  
(seminar)
2. P.R. Surjan, Zs.E. Mihalka and A. Szabados  
Large Order Perturbation Theory, Convergence Issues, Resummation and Extrapolation  
of Low-order Results  
7th Japanese-Czech Symposium on Quantum Chemistry, Prague, May 21-24,  
2018  
(invited talk)
3. Geminal PT based on the UHF wavefunction  
A. Szabados, D. Földvári, Zs. Tóth and P. R. Surján  
16th Central European Symposium on Theoretical Chemistry Srni, Czech Republik,  
September 9–12  
(talk)
4. Ádam Margocsy, Piotr Kowalski, Katarzyna Pernal, Péter Surjan, Ágnes  
Szabados  
Multiple bond breaking with APSG based correlation methods  
16th Central European Symposium on Theoretical Chemistry Srni, Czech Republik,  
September 9–12  
(talk)
5. Zs. É. Mihálka, Peter R. Surján, Ágnes Szabados  
Convergence issues in Rayleigh-Schrödinger Perturbation Theory – The inverse  
boundary value problem  
16th Central European Symposium on Theoretical Chemistry Srni, Czech Republik,  
September 9–12  
(poster)

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## 2019

1. Surján, Péter, Mihálka Éva Zsuzsanna, Szabados Ágnes  
Divergens perturbációs sorok felösszegzése  
Anyagtudományi Kiválósági Program Konferencia  
Visegrád, 2019.január 14–16.  
(talk)
2. Mihálka Éva Zsuzsanna, Szabados Ágnes, Surján, Péter,  
Half-projection applied to the strongly orthogonal geminal product wavefunction  
16th Central European Symposium on Theoretical Chemistry, 9th - 12th September  
2019, Stadtschlaining, Austria  
(talk)
3. Surján Péter  
A  $\gamma$  függvény: gy új szemiklasszikus mechanika felé  
MTA Anyag- és Molekulaszerkezeti Bizottság előadóülése,  
Mátrafüred, 2019 október 11–12  
(talk)

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## 2020

1. Margócsy Ádám, Surján P. és Szabados Á. Újabb eredmények a Coupled Cluster módszer geminál alapú általánosításában,  
Anyagtudományi Kiválósági Program Konferencia  
Visegrád, 2020.január 21–23.  
(talk)
2. Mihálka Éva Zsuzsanna, Szabados Á. és Surján P., Spinsértő hullámfüggvények tisztítása (fél)projekciós technikával,  
Anyagtudományi Kiválósági Program Konferencia  
Visegrád, 2020.január 21–23.  
(talk)
3. P. R. Surján  
Coping with Divergent Perturbation Series,  
University of Technology of Budapest, Faculty of Science, Institute of Mathematics,  
Farkas Miklós Seminar, March 5, 2020  
(seminar)

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## 2021

There were no conferences nor seminars due to the Covid pandemia this year.

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## 2022

**1.** P. R. Surján, Á. Szabados.

Many-body Perturbation Theory with Noncanonical Orbitals – a General Framework,  
QSCP 2020 – 25th International Workshop on Quantum Systems in Chemistry,  
Physics and Biology,  
19 – 24 June 2022, Toruń, Poland  
(invited lecture)

**2.** Á. Szabados, Zs. E. Mihálka and P. R. Surján,

Perturbative Correction of Spin-unrestricted geminal wave functions with half-projections,  
QSCP 2022 – 25th International Workshop on Quantum Systems in Chemistry,  
Physics and Biology,  
19 – 24 June 2022, Toruń, Poland  
(invited lecture)

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## 2023

**1.** Á. Szabados, Zs.E. Mihálka and P. R. Surján,

Spin-violating geminal wave functions and their correction by perturbation theory  
ICQC 2023, Satellite Meeting on Strong Correlation in Molecules, 20 - 23th June Znojmo, Czech Republik  
(invited lecture)

**2.** András Gombás, Zsuzsanna É. Mihálka, Ágnes Szabados, Péter Burlacu, and Péter R. Surján

To which extent can strong correlation be treated by single reference perturbation theory?  
ICQC 2023, Satellite Meeting on Strong Correlation in Molecules, 20 - 23th June Znojmo, Czech Republik  
(talk)

**3.** András Gombás, Ágnes Szabados and Péter Surján

Perturbation-adapted Perturbation Theory: Towards a Multi-Reference Approach,  
MTA Anyag- és Molekulászerkezeti Bizottság előadóülése,  
Mátrafüred, 2023 november 24–25  
(talk)

**4.** Surján Péter, Szabados Ágnes, Gombás András

A Davidson technika: egy kevéssé ismert eszköz  
MTA Anyag- és Molekulászerkezeti Bizottság előadóülése,  
Mátrafüred, 2023 november 24–25  
(talk)

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