Asocijacijske sheme

Vedran Krčadinac

20.11.2023.

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G. Chen, I. Ponomarenko, *Lectures on coherent configurations*, 2018.

http://www.pdmi.ras.ru/~inp/ccNOTES.pdf

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G. Chen, I. Ponomarenko, *Lectures on coherent configurations*, 2018.

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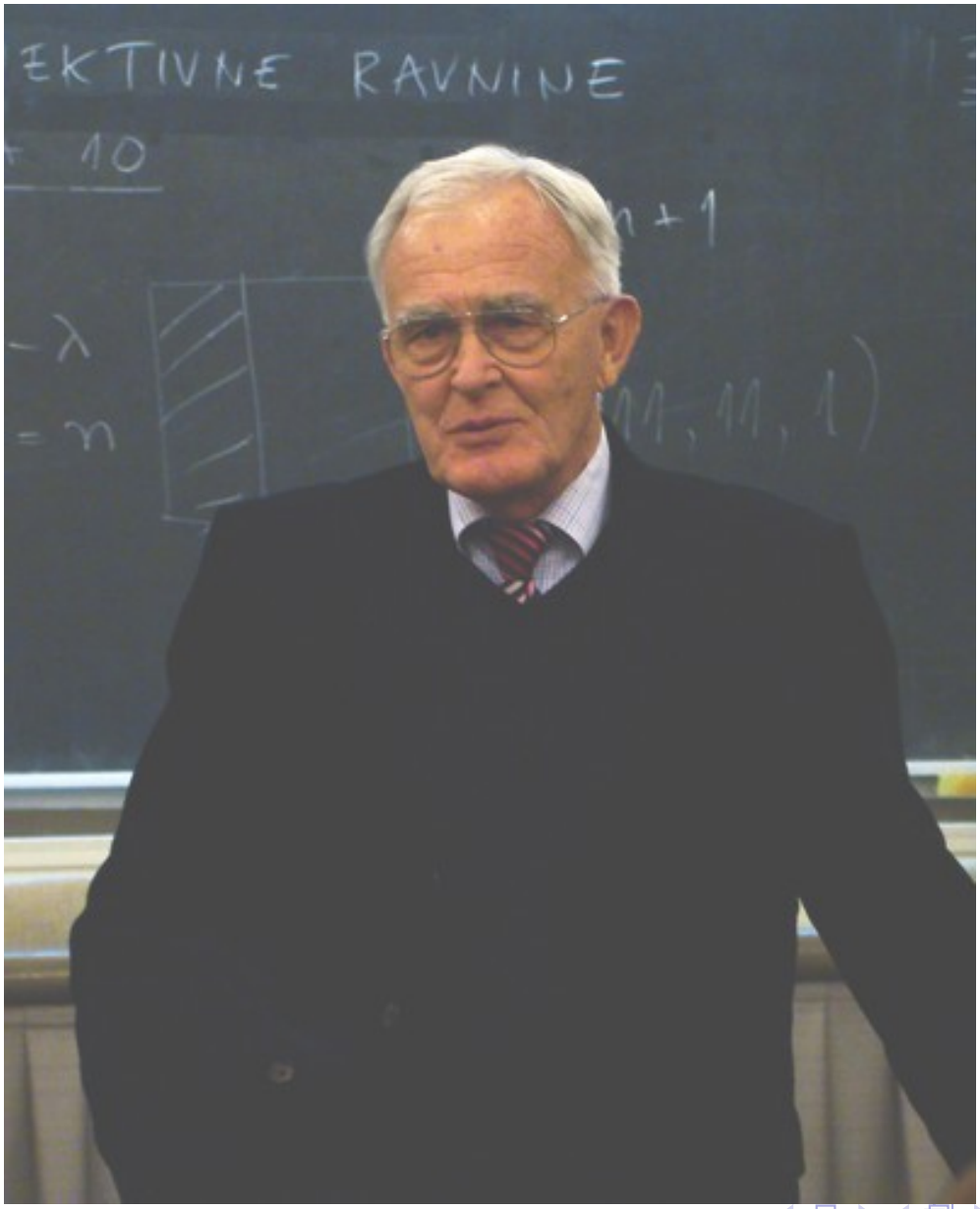
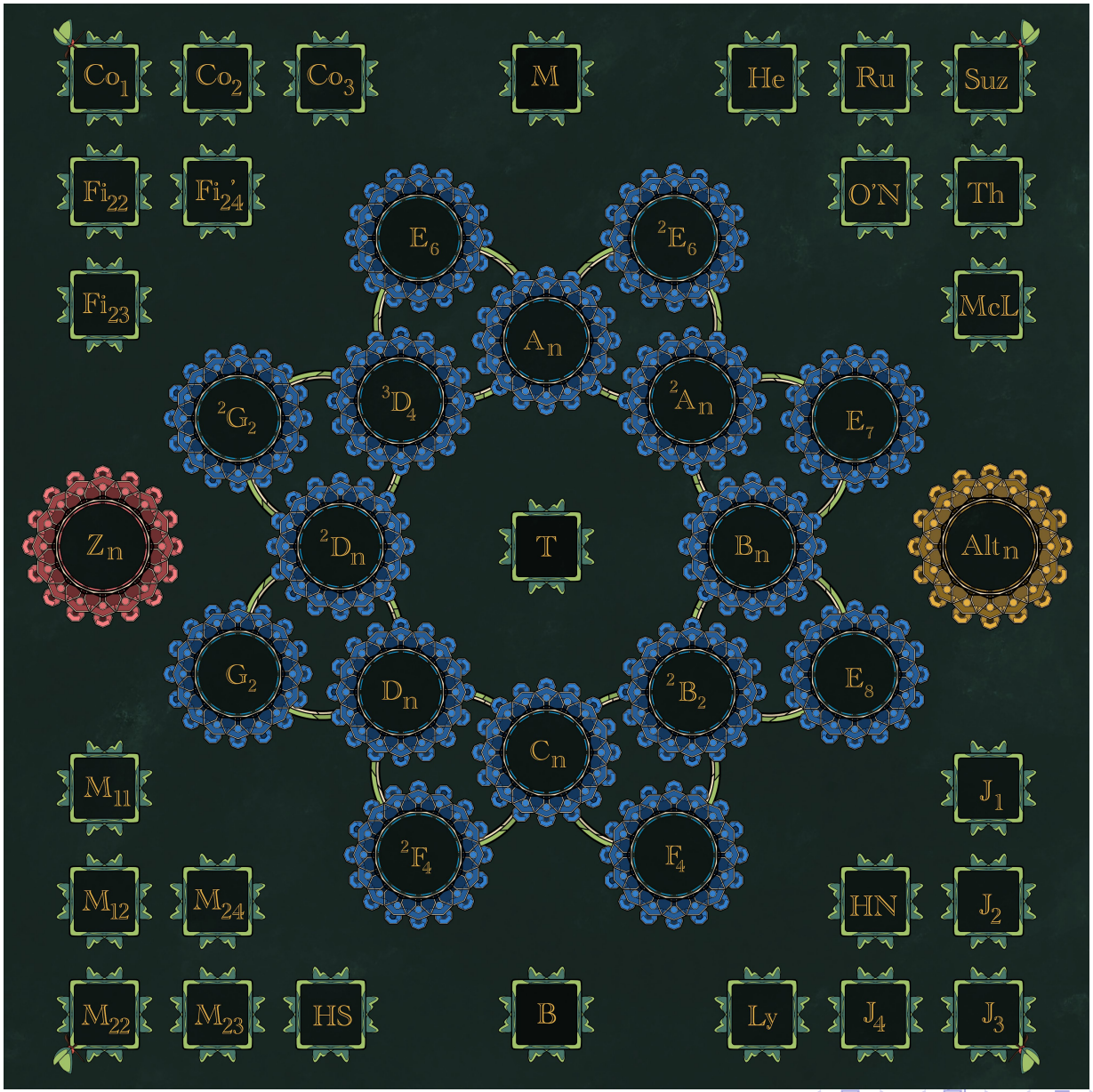
Paul Terwilliger, *Math 846 – Algebraic Combinatorics: Association Schemes*, 2023.

https://people.math.wisc.edu/~pmterwil/

Prof. Zvonimir Janko (1932.-2022.)



Klasifikacija konačnih jednostavnih grupa



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Z. Janko, *A new finite simple group with abelian Sylow 2-subgroups and its characterization*, J. Algebra **3** (1966), 147–186.

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$\rightsquigarrow |M| = 808\,017\,424\,794\,512\,875\,886\,459\,904\,961\,710\,757\,005\,754\,368\,000\,000\,000$

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Z. Janko, *A new finite simple group of order* 86 775 571 046 077 562 880 *which possesses* M_{24} *and the full covering group of* M_{22} *as subgroups*, J. Algebra **42** (1976), no. 2, 564–596.

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Z. Janko, H. Kharaghani, *A block negacyclic Bush-type Hadamard matrix and two strongly regular graphs*, J. Combin. Theory Ser. A **98** (2002), no. 1, 118–126.

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Z. Janko, H. Kharaghani, *A block negacyclic Bush-type Hadamard matrix and two strongly regular graphs*, J. Combin. Theory Ser. A **98** (2002), no. 1, 118–126. $\rightsquigarrow$ $SRG(936, 375, 150, 150)$, $SRG(1800, 1029, 588, 588)$

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Y. Berkovich, *Groups of prime power order, Vol. 1*, Walter de Gruyter GmbH & Co. KG, Berlin, 2008.

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Volume 4, 2016.

Volume 5, 2016.

Volume 6, 2018.

Primjer 1.37

$$[p_{ij}^0] = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 0 & 1 \\ 0 & 1 & 0 \end{bmatrix}, \quad [p_{ij}^1] = \begin{bmatrix} 0 & 1 & 0 \\ 1 & 0 & 0 \\ 0 & 0 & 1 \end{bmatrix}, \quad [p_{ij}^2] = \begin{bmatrix} 0 & 0 & 1 \\ 0 & 1 & 0 \\ 1 & 0 & 0 \end{bmatrix}$$

Primjer 1.39

$$[p_{ij}^0] = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 \end{bmatrix}, \quad [p_{ij}^1] = \begin{bmatrix} 0 & 1 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \end{bmatrix},$$

$$[p_{ij}^2] = \begin{bmatrix} 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 1 & 0 & 0 \end{bmatrix}, \quad [p_{ij}^3] = \begin{bmatrix} 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 \end{bmatrix},$$

Primjer 1.39

$$[p_{ij}^4] = \begin{bmatrix} 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 \end{bmatrix}, \quad [p_{ij}^5] = \begin{bmatrix} 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$