VERBALE

La Commissione giudicatrice del Book Prize dell'Unione Matematica Italiana, composta da Lucia Caporaso, Ciro Ciliberto (Presidente), Gianni Dal Maso, Camillo De Lellis, Alessandro Verra, ha svolto i suoi lavori per via elettronica.

La Commissione ha deciso di redigere il presente verbale in italiano ma, dato il carattere internazionale del premio, le motivazioni verranno redatte in lingua inglese.

La Commissione ha effettuato un primo esame delle tre domande pervenute, cioé:

- Lisa Beck, A first course in elliptic regularity theory
- Angelo Alessandro Mazzotti, Polycentric Ovals. Properties, Parameters and Constructions
- Francesco Russo, On the geometry of some special projective varieties

Da tale esame è risultato che, a parere della commissione, il lavoro di Mazzotti, non appare adatto al premio. Il giudizio espresso dalla Commissione su tale lavoro è infatti il seguente:

"This is an interesting , well written manuscript, which could be quite useful to engeeniers, architects and artists, and a pleasant reading for professional mathematicians. However, the mathematical contents of it are not very strong, as essentially only elementary euclidean and analytic geometry is used. Therefore this book does not fit in with the scope of this Prize, which should be awarded to an excellent, original mathematical monograph presenting the latest developments in an active research area of Mathematics."

Pertanto la Commissione decide di concentrare la propria attenzione sui lavori di Beck e Russo.
Si decide di sottoporre entrambi i lavori ad un doppio referaggio anonimo.

Acquisite le relazioni dei referee (che potranno essere messe a disposizione dell'Editorial Board della serie in vista della pubblicazione delle monografie) e dopo un esame accurato dei testi e molti scambi di pareri in merito, la Commissione decide all'unanimità di:

- assegnare il premio a Francesco Russo proponendo la pubblicazione della sua monografia sulle UMI LNiM, con la seguente motivazione:

"Russo's monograph concerns the study and the classification of smooth, complete algebraic varieties in complex projective space enjoying some special important properties, e.g., being of small codimension, being covered by special curves The leading conjecture in this field is Hartshorne's Conjecture (stated in 1970) to the effect that smooth varieties of suitably low codimension in projective space are complete intersection. The recent proof of this conjecture by Ionescu and Russo in the case of varieties defined by quadrics is an important breakthrough which opens the path to further developments on the subject. The complete exposition of this proof is one of goals of this monograph.
Important related topics are Severi varieties, the classification of varieties n-covered by curves of a fixed degree, quadro-quadrics Cremona transformations and connections with Jordan algebras, hypersurfaces with vanishing Hessian.

The book covers several topics in Algebraic Geometry and it stands as a bridge between classical projective geometry and modern moduli theory, with several appealing links with algebra.
The book starts from basic definitions but at the same time presents many open problems of current interest. The book presents in a comprehensive and unified way many results proved by the author, alone or with coauthors, with a very useful historical account.
One merit of this book is to exhibit connections between several different topics. The book will certainly become a standard reference for researchers in the future. It will probably play a role analogous to the famous Zak's book ``Tangents and Secant Varieties" (translated from Russian in AMS series in 1993) of which it contains a broad update.

In conclusion this memoir is one of the best ever written in its field.
The book will be a great contribution to the series UMI LNiM."

- proporre, in accordo col bando, la pubblicazione sulle UMI LNiM della monografia di Beck, con la seguente motivazione:

``These lecture notes present a systematic and self-contained account of the regularity theory for elliptic equations and systems in divergence form. They are intended for graduate students with some background in real and functional analysis. The notes present a quite detailed account of some classical results (De Giorgi-Nash-Moser theory). Then some recent results concerning special interesting aspects of the theory, like fractional differentiability of the gradient and dimensional estimates of the singular set of solutions, are presented for the first time in a systematic way and this make the notes attractive also for researchers in the field.

Due to the type of results presented and to the the clear and detailed style of writing, these notes provide a very good reference for the advanced theory of elliptic equations in divergence both for students and for researcher in the field.

The book is certainly worth publication in the series UMI LNiM."

Lucia Caporaso, Ciro Ciliberto, Gianni Dal Maso, Camillo De Lellis, Alessandro Verra

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