



SDI Review Form 1.6

Journal Name:	British Journal of Mathematics & Computer Science
Manuscript Number:	Ms_BJMCS_25791
Title of the Manuscript:	Action of a Polynomial Matrix on a Vector of Power Series
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	The author proves an interesting result. However, the way of presentation of this paper should be improved. The author is kindly asked to recall the definition of the adjoint of the operator studied in his work, and its connection with the corresponding calculations appearing in the sequel of his manuscript. This problem should be clarified in order to show that the result of this work is not a simple computational modified form of a definition. P.100: please correct the last line (W is defined on $\mathbb{N}^r$, etc.). P. 101: "...with $W_\alpha \in \mathbb{F}$ for all...". P. 101: "...$X^\alpha \leftrightarrow \delta_\alpha$ and then extending this by linearity". P 101: "Let...an integer. The Cartesian product...". P101: line 5 from below: please write explicitly X^ρ and prove that $X^\rho e_j^{(h)}, j = 1, \dots, h$ form a basis in D^h. P 101: "Writing $X = X_1, \dots, X_r??$..." (is there something missing? Is X a vector, or it becomes $X_1, \dots, X_r$ successively? Is there a comma before X_r?) P 102, line 3: "...from E into F". In (2.4), the sums are over the index j. P.104: "...the elements of the by..." (is something missing?). P. 105: "Making some calculations..." (please do those calculations). P. 105, the last line before the Conclusions: "For the proof of the D – linearity? see [4]".	-Usually, there are two definitions of an adjoint of a linear mapping: the one uses scalar product and the other uses a functor, which I called functorial adjoint (it is also called transpose). These definitions are somewhat confusing even though they agree in the case of finite dimensional vector spaces. I used the second definition. The inconvenience of the first definition is that it is not constructive. -p.100 : I've forgotten the exponent "r" -p.101 : I've written "d" instead of "W" -p. 101 : the image of a general polynomial should be explained p. 101 : The "t" in the word "the" is missing p.101 : there are many notations which may be confusing, and it is better to write the proof p.101 : X is a short notation for the sequence $X_1, \dots, X_r$ (there is a comma before X_r). It is already explained before, so I deleted it p.102 : I've written "et" instead of "into" p. 102 : that's true, over "j" and not "λ" p. 105 : because of the notations, this result is not easy to see p.105 : see is better than cf.



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<u>Minor</u> REVISION comments	P. 102: " $W(Y) \leftrightarrow d(X) \circ W(Y)$ ". P. 103, line 2: "Then starting from the definition...".	p.102 the "Y" is missing in W p.103 "starting" instead of "parting"
<u>Optional/General</u> comments		Page and equations numberings may have changed after the revisions