Corrections to

Representations and Invariants of the Classical Groups
by Roe Goodman and Nolan R. Wallach
(1999 paperback printing)

Revised February 27, 2001

p.25, l.10 replace: We denote by s_0

by: We denote by s_l

p.25, l.11 (display) replace: s_0 by: s_l

p.25, l.13 replace:

$$J_+ = \begin{bmatrix} 0 & s_0 \\ s_0 & 0 \end{bmatrix}, \qquad J_+ = \begin{bmatrix} 0 & s_0 \\ -s_0 & 0 \end{bmatrix},$$

by:

$$J_+ = \begin{bmatrix} 0 & s_l \\ s_l & 0 \end{bmatrix}, \qquad J_+ = \begin{bmatrix} 0 & s_l \\ -s_l & 0 \end{bmatrix},$$

p.25, l.-10 replace: $s_0 a^t s_0$ by: $s_l a^t s_l$

p.25, l.-7 replace:

$$A = \begin{bmatrix} a & b \\ c & -s_0 a^t s_0 \end{bmatrix},$$

by:

$$A = \begin{bmatrix} a & b \\ c & -s_l a^t s_l \end{bmatrix},$$

p. 25, l.-6 replace: such that $b^t = -s_0 b s_0$ and $c^t = -s_0 c s_0$

by: such that $b^t = -s_l b s_l$ and $c^t = -s_l c s_l$

p.25, l.-3 replace:

$$A = \begin{bmatrix} a & b \\ c & -s_0 a^t s_0 \end{bmatrix},$$

by:

$$A = \begin{bmatrix} a & b \\ c & -s_l a^t s_l \end{bmatrix},$$

p. 25, l.-2 replace: such that $b^t = s_0 b s_0$ and $c^t = s_0 c s_0$

by: such that $b^t = s_l b s_l$ and $c^t = s_l c s_l$

p.26, l.6 REPLACE:

$$S = \begin{bmatrix} 0 & 0 & s_0 \\ 0 & 1 & 0 \\ s_0 & 0 & 0 \end{bmatrix}.$$

BY:

$$S = \begin{bmatrix} 0 & 0 & s_l \\ 0 & 1 & 0 \\ s_l & 0 & 0 \end{bmatrix}.$$

p.26, l.12 REPLACE:

$$A = \begin{bmatrix} a & w & b \\ u & 0 & -w^t s_0 \\ c & -s_0 u^t & -s_0 a^t s_0 \end{bmatrix},$$

BY:

$$A = \begin{bmatrix} a & w & b \\ u & 0 & -w^t s_l \\ c & -s_l u^t & -s_l a^t s_l \end{bmatrix},$$

p.26, l.13 REPLACE: such that $b^t = -s_0 b s_0$ and $c^t = -s_0 c s_0$

BY: such that $b^t = -s_l b s_l$ and $c^t = -s_l c s_l$

p.40, end of line 1 The last word should be HINT:

p.40, end of line 3 The last word should be "that"

p.49, line -10 REPLACE:

Exercis (REMAINDER OF LINE DISAPPEARED IN TYPSETTING)

BY:

Exercise # 4 in Appendix A). However, in the case of algebraic groups, Theorem

p.94, l.6 REPLACE: Let $s_0 \in \mathrm{GL}(2l, \mathbb{C})$

BY: Let $s_l \in \mathrm{GL}(l, \mathbb{C})$

p.94, l.10 REPLACE:

$$\pi(\sigma) = \begin{bmatrix} s_\sigma & 0 \\ 0 & s_0 s_\sigma s_0 \end{bmatrix},$$

BY:

$$\pi(\sigma) = \begin{bmatrix} s_\sigma & 0 \\ 0 & s_l s_\sigma s_l \end{bmatrix},$$

p.95, l.8 REPLACE:

$$\phi(\sigma) = \begin{bmatrix} s_\sigma & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & s_0 s_\sigma s_0 \end{bmatrix},$$

BY:

$$\phi(\sigma) = \begin{bmatrix} s_\sigma & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & s_l s_\sigma s_l \end{bmatrix},$$

p.175, l.7 REPLACE:

4.1.4(1), which contradicts

BY:

4.1.4, which contradicts

p.227, l.-1 REPLACE: general Capelli problem."

BY: general "Capelli problem."

p.257, l.−3 REPLACE: *of size r such that* BY: *of size 2r such that*

p.258, l.18 REPLACE: it has degree $|\mu|$ BY: it has degree $|\mu|/2$

p.259, l.5 REPLACE: *such that* $|\mu| = r$ *and* BY: *such that* $|\mu| = 2r$ *and*

p.340, l.−16 REPLACE:

$$\gamma s_0 \gamma^t = I_{2l}$$

BY:

$$\gamma s_{2l} \gamma^t = I_{2l}$$

p.340, l−15 REPLACE: where s_0 is the matrix

BY: where s_{2l} is the matrix

p.340, l−14 REPLACE: corresponding to s_0 as in

BY: corresponding to s_{2l} as in

p.340, l−12 REPLACE:

$$\gamma g \gamma^{-1} (\gamma g \gamma^{-1})^t = \gamma g s_0 g^t \gamma^t = \gamma s_0 \gamma^t = I_{2l}.$$

BY:

$$\gamma g \gamma^{-1} (\gamma g \gamma^{-1})^t = \gamma g s_{2l} g^t \gamma^t = \gamma s_{2l} \gamma^t = I_{2l}.$$

p.340, l−9 REPLACE: defined by the equation $g^t g = I$.

BY: defined by the equation $g^t g = I_{2l}$.

p.434, l.11 REPLACE:

$$\mathcal{H}\mathcal{T}_r^{\otimes k} = \{u \in \mathcal{T}_r^{\otimes k} \,:\, u \cdot u = 0 \text{ for all } u \in \mathcal{B}_{k,r+1}(V,\omega)\}$$

BY:

$$\mathcal{H}\mathcal{T}_r^{\otimes k} = \{u \in \mathcal{T}_r^{\otimes k} \,:\, z \cdot u = 0 \text{ for all } z \in \mathcal{B}_{k,r+1}(V,\omega)\}$$

p.436, equation (10.3.4) REPLACE:

$$1 \le m(r,\lambda) \le \dim(G^\lambda)|\mathcal{M}(k,r)|$$

BY:

$$\dim(G^\lambda) \le m(r,\lambda) \le \dim(G^\lambda)|\mathcal{M}(k,r)|$$

p.436, l.−8 REPLACE: Let $r \ge 0$ BY: Let $r > 0$

p.487, l.−5 and l.−6 REPLACE:

and

$$\frac{d}{dt}(y^{-1}\theta(y)(I+t\theta(B))y(I+tB))|_{t=0} = \mathrm{Ad}(y^{-1})\theta(B) + B.$$

BY:

whereas the curve $t \mapsto y(I+tB)$ is tangent to Q at y provided

$$0 = \frac{d}{dt}(y^{-1}\theta(y)(I+t\theta(B))y(I+tB))|_{t=0} = \mathrm{Ad}(y^{-1})\theta(B) + B.$$

p.502, l.17 REPLACE:

algebraic groups by Theorem ??.

BY:

algebraic groups by Corollary 11.1.3.

p.502, l.−5 REPLACE:

$$(\exp yX_0)g(\exp -yX_0) = t\exp[(t^{-\alpha}-1)y + zX_0].$$

BY:

$$(\exp yX_0)g(\exp -yX_0) = t\exp[((t^{-\alpha}-1)y + z)X_0].$$

p.600, l.5 REPLACE: /6, Theorem 14 BY: §6, Theorem 14

p.611, l.11 REPLACE:

Ch. I, / 5.2, Theorem 3

BY:

Ch. I.5.2, Theorem 3

Typesetting Error: The ligature "fi" (as in the words: define, finite, field, fixed, satisfied, first, suffices, find) was omitted on the following pages:

15-32, 226, 227, 273-275, 278, 279, 598-611