ERRATA

- **Page 15:** The definition of composition is incorrect since e.g. the composition of $\{X/a\}$ with itself results in ϵ according to definition 1.20. The definition should be as follows:

  Let θ and σ be the substitutions

  $$\begin{array}{lcl} \theta & := & \{X_1/s_1, \ldots, X_m/s_m\}, \\ \sigma & := & \{Y_1/t_1, \ldots, Y_n/t_n\}. \end{array}$$

  The *composition* $\theta\sigma$ of θ and σ is obtained by taking the union of

  $$\{X_1/s_1\sigma, \ldots, X_m/s_m\sigma\} \text{ and } \{Y_1/t_1, \ldots, Y_n/t_n\}$$

  after removing all $X_i/s_i\sigma$ such that $X_i = s_i\sigma$, and all Y_i/t_i such that $Y_i \in Dom(\theta)$.

  (Pointed out by Wlodek Drabent.)

- **Page 96:** All occurrences of t' should be replaced by n.

- **Page 236:** The claim that $naive(magic(P))$ terminates whenever $naive(P)$ terminates is wrong! For instance, let P be:

  $$p(X) \leftarrow p(s(X)).$$

- **Solution 7.12:** A correct(?) answer is:

```
msort([],[]).
msort([X], [X]).
msort([X, Y|Xs], Ys) :-
        split(Xs,Split1,Split2),
        msort([X|Split1],Sorted1),
        msort([Y|Split2],Sorted2),
        merge(Sorted1,Sorted2,Ys).

split([],[],[]).
split([X|Y],[X|V],W) :-
        split(Y,W,V).

merge([], [], []).
merge([], [X|Xs], [X|Xs]).
merge([X|Xs], [], [X|Xs]).
merge([X|Xs], [Y|Ys], [X|Zs]) :-
        X<Y,
        merge(Xs, [Y|Ys], Zs).
```

```
merge([X|Xs], [Y|Ys],[Y|Zs]) :-
        X>=Y,
        merge([X|Xs], Ys, Zs).
```

(Error pointed out by Jørgen Fischer Nilsson and Morten Lindegaard.)

- **Page 166:** All occurrences of *prod_rule*/1 should read *prod_rule*/2.
  (Pointed out by Jørgen Fischer Nilsson and Morten Lindegaard.)
- **Solution 6.5:** "$\geq$" should read "$\leq$".
  (Pointed out by Jørgen Fischer Nilsson and Morten Lindegaard.)
- **Page 252:** The definition of a function is incorrect. Should read "...if whenever $f(z, x)$ and $f(z, y)$ then $x = y$.
  (Pointed out by Walter Vieira.)